

South Mountain Community College

Course Catalog Archive

2024-2025

This document is an archival record of the course catalog for the 2024-2025 academic year as of August 2024. It is a printable option of the online course catalog for accreditation organizations, agencies and college offices for data collection, evaluation purposes and referencing.

All courses are subject to change throughout the catalog year. Current course information, including descriptions, outlines, competencies, and credits can be found on the following website, which is the official repository for all MCCCDC credit courses: Center for Curriculum and Transfer Articulation

<https://curriculum.maricopa.edu/course>

The Maricopa County Community College District (MCCCDC) is an EEO/AA institution and an equal opportunity employer of protected veterans and individuals with disabilities. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, age, or national origin. A lack of English language skills will not be a barrier to admission and participation in the career and technical education programs of the District.

The Maricopa County Community College District does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs or activities. For Title IX/504 concerns, call the following number to reach the appointed coordinator: (480) 731-8499. For additional information, as well as a listing of all coordinators within the Maricopa College system, visit <http://www.maricopa.edu/non-discrimination>.

Maricopa Community Colleges' Course Subjects
[Comprehensive List of Active Subjects for Credit Curriculum](#)

Subject	Subject Description	Subject	Subject Description
AAA	Advancing Academic Achievement	AVC	Art and Visual Communication
ABA	Arizona Builders Alliance	AVT	Avionics Technology
ABC	Associated Builders and Contractors	BAM	Baccalaureate Artificial Intelligence Machine Learning
ABS	Applied Biological Sciences	BAW	Beauty and Wellness
ACC	Accounting	BHS	Behavioral Health Services Technology
ACT	Aircraft Construction Technologies	BIO	Biology
ACU	Accounting Upper-Division	BLT	Building Safety and Construction Technology
AEN	Alternative Energy	BME	Biomedical Equipment Technology
AES	Aerospace Studies	BPC	Business-Personal Computers
AET	Aeronautics	BUS	Business Upper-Division
AFR	African American Studies	CAD	Computer-Aided Drafting
AGB	Agribusiness	CAN	Cannabis Business
AGL	Agricultural Landscape	CAP	Counseling and Applied Psychology
AGS	Agricultural Science	CCS	Chicana and Chicano Studies
AHU	Arabic Humanities	CET	Civil Engineering Technology
AIM	Artificial Intelligence and Machine Learning	CFS	Child/Family Studies
AIR	Airline Operations	CHA	Community Health Advocate
AIS	American Indian Studies	CHI	Chinese
AIT	Automated Industrial Technology	CHM	Chemistry
AJS	Administration of Justice Studies	CIA	Crime and Intelligence Analysis
ALT	Academic Literacy	CIS	Computer Information Systems
AMS	Automated Manufacturing Systems	CLD	Cloud Computing
AMT	Aircraft Maintenance Technology	CNS	Construction
APT	Automotive Performance Technology	CNT	Cisco Network Technology
ARB	Arabic	COM	Communication
ARC	Architecture	CON	Construction
ARH	Art Humanities	COV	Covey
ART	Art	CPD	Counseling and Personal Development
ASB	Anthropology	CRA	Clinical Research Associate
ASD	Addictions and Substance Use Disorders	CRC	Clinical Research Coordinating
ASE	Automotive Service	CRE	Critical Reading
ASL	American Sign Language	CRP	Carpentry: Apprenticeship
ASM	Anthropology	CRW	Creative Writing
AST	Astronomy	CSC	Computer Science
ATC	Air Traffic Controllers	CSI	Credit Services Industry

Subject	Subject Description
ATP	Automation Technology
AUT	Automotive Technology
CTE	Career and Technical Education
CTR	Court Reporting
CTT	Caterpillar Technician Training
CUL	Culinary Arts
CWE	Career Work Experience
DAE	Dental Assisting Education
DAH	Dance Humanities
DAN	Dance
DFT	Drafting Technology
DHE	Dental Hygiene Education
DIE	Diesel/Heavy Equipment Technology
DMI	Diagnostic Medical Imaging
DMS	Diagnostic Medical Sonography
ECE	Engineering Science
ECH	Early Childhood Education
ECN	Economics
EDA	Education of Adult Learners
EDT	Endoscopy
EDU	Education
EEC	Endorsement for Early Childhood
EED	Early Education
EEE	Electrical Engineering
EEG	Electroneurodiagnostic Technology
EEP	Early Education Professions
EFE	Education Field Experiences
ELA	Electrician: Apprenticeship
ELC	Electricity
ELE	Electronic
ELN	eLearning
ELT	Electronics Technology
EMT	Emergency Medical Technology
ENG	English
ENH	English Humanities
ENV	Environmental Sciences

Subject	Subject Description
CSM	Customer Service Management
CSR	Customer Service Representative
ESL	English as a Second Language
ETH	Ethnic Studies
ETL	Excellence/Teaching/Learning
EUT	Electric Utility Technology
EXS	Exercise Science
FAC	Facilities Management
FCS	Family and Consumer Science
FLA	Foreign Language Acquisition
FMP	Film and Media Production
FMT	Film, Media, and Theatre
FON	Food and Nutrition
FOR	Forensic Science
FRE	French
FSC	Fire Science Technology
FST	Food Science and Technology
FYE	First Year Experience
GBS	General Business
GCU	Cultural Geography
GER	German
GIS	Geographic Information Science
GLG	Geology
GPH	Physical Geography
GRK	Greek
GST	Game Studies
GTC	General Technology
HBR	Hebrew
HCC	Health Core Curriculum
HCE	Health Care Education
HCR	Health Care Related
HCS	Hospital Central Service
HES	Health Science
HFA	Heat and Frost Technology
HIM	Health Information Management
HIS	History

Subject	Subject Description
EPD	Education Professional Development
EPS	Entrepreneurial Studies
EQS	Equine Science
HSE	Health Sciences Education
HSM	Health Service Management
HST	Histologic Technology
HTM	Healthcare Technology Management
HUM	Humanities
HVA	Heating, Ventilating and Air Conditioning
HWC	Health and Wellness Coaching
IBS	International Business
ICE	Imaging Continuing Education
IEC	Independent Electrical Contractors
IFS	Information Studies
IGS	Integrated Studies
IMC	Interstate Mechanical Contractors
IND	Industry
INS	Insurance Studies
INT	Interior Design
IPH	Integrated Public Health
IPP	Interpreter Preparation Program
IRW	Ironworking: Apprenticeship
ITA	Italian
ITD	Infant/Toddler Development
ITH	Italian Humanities
ITS	Information Technology Security
JPH	Japanese Humanities
JPN	Japanese
JRN	Journalism
LAS	Paralegal Studies
LAT	Latin
LBA	Laboratory Assisting
LDR	Leadership
LET	Law Enforcement Technology
MAS	Medical Assisting
MAT	Mathematics

Subject	Subject Description
HON	Honors
HRC	Healthcare Regulatory Compliance
HRM	Hotel Restaurant Management
MHL	Music: History/Literature
MIS	Military Science
MIT	Manufacturing Industrial Technology
MKT	Marketing
MMT	Multimedia Technology
MNG	Management Upper-Division
MNT	Micro and Nano Technology
MPT	Manufacturing Production Technology
MRT	Medical Radiography/Radiologic Technology
MSP	Mortuary Science Program
MST	Microsoft Technology
MTC	Music: Theory/Composition
MUC	Music: Commercial/Business
MUE	Music: Education
MUP	Music: Performance
MWR	Millwright: Apprenticeship
NAV	Navajo
NCE	Nursing: Continuing Education
NET	Networking Technology
NMS	New Media Studies
NUC	Nuclear Medicine Technology
NUR	Nursing Science: Basic
NVH	Navajo Humanities
OAS	Office Automation Systems
OPT	Optical Systems
OSH	Occupational Safety and Health
OTA	Occupational Therapy Assistant
PAD	Public Administration
PAR	Paralegal Studies
PED	Physical Education
PHI	Philosophy
PHS	Physical Science
PHT	Pharmacy Technology

Subject	Subject Description
MCO	Mass Communications
MDL	Medical Laboratory Science
MEC	Mechanical Apprenticeship
MGT	Management
PNT	Painting/Decorating: Apprenticeship
PON	PeriOperative Nursing
POR	Portuguese
POS	Political Science
PPT	Power Plant Technology
PSA	Public Safety Administration
PSG	Polysomnographic Technology
PSY	Psychology
PTA	Physical Therapy Assisting
QCT	Quality Control Technology
QST	Queer Studies
RAD	Radiologic Technology
RBT	Robotics Technology
RDG	Reading
REA	Real Estate
REC	Recreation
REL	Religious Studies
RES	Respiratory Care
RPM	Recreation Program Management
RUS	Russian
RVT	Recreational Vehicle Technology
SBS	Small Business Management
SBU	Society and Business
SCT	Sustainability Career and Technical
SEM	Secondary Basic Emergency Medical Technology
SFS	Secondary Fire Science Technology
SGT	Surgical Technology
SLC	Studies in Language and Culture
SLP	Speech Language Pathology
SOC	Sociology
SPA	Spanish
SOS	Sustainability

Subject	Subject Description
SPE	Special Education
SPH	Spanish Humanities
SPT	Sports
SSH	Sustainability/Social Sciences and Humanities
STO	Storytelling
PHY	Physics
PIM	Pima
PLB	Phlebotomy
PME	Paramedicine
SUN	SundtCorp
SUS	Sustainability/Natural Sciences
SWU	Social Work
TDR	Trade Related
TEC	Textiles and Clothing
THE	Theatre
THF	Theatre and Film
THO	Theatre Occupational
THP	Theatre Performance/Production
TLT	Telecommunications Technology
TOO	Tohono O'odham
TQM	Total Quality Management
TRS	Translation and Interpretation
UAS	Unmanned Aircraft Systems
UCS	Utilities Customer Service
UTP	Utilities Technology Partnerships
VET	Veterinary Technology
WAC	Writing Across Curriculum
WED	Wellness Education
WFR	Workforce Re-Entry
WKO	Work Orientation
WLD	Welding Technology
WRT	Water Resource Technology
WST	Women's Studies
YAQ	Yaqui Indian History and Culture
YOG	Yoga

Special Course Types

Cooperative Education Courses

Cooperative Education courses combine classroom theory with supervised work experience. Students have the opportunity to earn college credit or planned growth in a job that is related to their career goals. A joint agreement is set up among the employer, the college and the student to facilitate the process. At Scottsdale Community College, Cooperative Education is available to students in nearly every discipline and is required in certain occupational programs. Students meet with the program director meets with students to determine their eligibility and assists students to locate suitable positions which relate to their field of study. A student's present job may also qualify. Each student is assigned to a faculty-coordinator who monitors the student's progress by making on-site visits to the place of employment.

Qualifications for participation include:

1. Completion of at least 12 college credits.
2. At least a 2.6 Grade Point Average (GPA)
3. Current enrollment in at least one class related to the student's major field of study.
4. Obtain a position that directly relates to the student's academic and career goals if current job does not meet this requirement.
5. Must have authorization to work in the U.S.

Determination of College Credit

1. Completion of a minimum of 80 hours of work per semester for each credit to be earned, with a maximum of four (4) credit hours per semester. A student may accumulate a total of six (6) credit hours. However, the number of credits which can be applied toward a degree may be limited by individual departmental requirements.
2. Successful achievement of one learning objective for each credit to be earned.
3. Completion of Final Report, Employer Evaluation of Student Performance and documentation of completed learning objectives.
4. Students receive a letter grade for the Cooperative Education experience. The grade is based on specific criteria and is awarded by the faculty-coordinator to whom the student is assigned.

Application Process

For information on the application process, students must contact the [SMCC Academic Divisions](#) of the course prefix/subject in which they wish to receive credit. The prefix for the credits for which the student registers is determined by the academic department (see example below):

XXX296WC	Cooperative Education	1 Credit	5 Periods
XXX296WC	Cooperative Education	2 Credits	10 Periods
XXX296WC	Cooperative Education	3 Credits	15 Periods

Tuition for the Cooperative Education credits is the same as for other academic credits.

Veterans and Financial Aid Benefits

Veterans and financial aid recipients must also have written departmental approval for any courses not listed as electives or core courses within a specific program. Failure to do so may result in a pro rata reduction in financial assistance.

Internship Courses

An approved organization for SMCC students will host an intern working to complete the agreed upon learning objectives. A Faculty Advisor will assist the student, ensuring a quality paid experience and partner with the site to complete purposeful learning and working objectives. The experience should be approved by an SMCC Faculty Advisor, intentional and serve to enhance a student's academic, career, and personal development through mentoring. SMCC students will register for the internship course at the beginning of the semester (80 hours = 1 credit, 160 hours = 2 credits, 240 hours= 3 credits).

Special Project Courses

Special projects are available in a variety of disciplines and provides opportunities for individualized learning experiences for students. The prefix for the credits for which the student registers is determined by the academic department (see example below):

XXX298AA	Special Projects	1 Credit	1 Period
XXX298AB	Special Projects	2 Credits	2 Periods
XXX298AC	Special Projects	3 Credits	3 Periods

Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.

Special Topics Courses

These courses provide a flexible option for a discipline to offer classes on a variety of different contemporary and/or special interest topics that are beyond the scope of current offerings. Special Topics courses may provide continuing education/professional development opportunities for students and professionals in the field. The different credit variants allow faculty to select a course with contact hours appropriate to the breadth and depth of the selected topic. The prefix for the credits for which the student registers is determined by the academic department (see example below):

XXX294AA	Special Topics	1 Credit	1 Period
XXX294AB	Special Topics	2 Credits	2 Periods
XXX294AC	Special Topics	3 Credits	3 Periods

Volunteerism: Service Learning Courses

Service-learning courses afford opportunities for students to apply classroom learning to real life situations while addressing needs of local agencies in a volunteer capacity. These experiences create context and relevance for students' programs of study as well as fostering problem-solving skills and effective teamwork. They provide opportunities for civic engagement, character evolution and increased awareness of their community. The prefix for the credits for which the student registers is determined by the academic department (see example below):

XXX282AA	Volunteerism: Service Learning	1 Credit	1 Period
XXX282AB	Volunteerism: Service Learning	2 Credit	2 Periods
XXX282AC	Volunteerism: Service Learning	3 Credit	3 Periods

Learning Modalities

South Mountain Community College offers a wide variety of classes in many subjects and also provides a choice of different levels, formats, and types of classes to fit your schedule and learning style. eLearning options available for SMCC students include: online, hybrid and web-enhanced face-to-face classes.

In-Person

Face-to-face course instruction is provided at a specific location on a specific day and time. Class may also be web-enhanced in which learning outside of class uses Canvas, Maricopa Open Educational Resource Learning System (MOER), or other online tools

Hybrid

Course content is delivered at a specific location on a specific day and time (as with in-person classes), and part of the course is also completed online without a set time to attend. This mixed format offers a combination of face-to-face classroom meetings and the opportunity to work independently.

Live Online

Course content is delivered at a specific location on a specific day and time (as with in-person classes), and part of the course is also completed online. **(Synchronous - At scheduled times)**

Online

Course content is delivered entirely online and is accessed through a learning management system without a set time to attend. Students should have independent access to the Internet. In-person testing may be required. **(Asynchronous - Not at scheduled times)**

Field Based

Course content is delivered in person at a location relevant to the course content (e.g., hospital, hiking trail, etc.); student is physically present and typically receives hands-on instruction.

Private Instruction

Course content is delivered individually between instructor and student consisting of one-on-one meetings at set dates, times, and locations; normally, student is physically present and typically receives hands-on instruction (e.g. musical instrument instruction, voice instruction).

Course	Term	Title	Cross Reference	Description	Requisite	Course Note	Sub Type	Cred Prd Load	Ld Frm
AAA104	2013 Spring	Visualization in Activated Learning		Techniques for using mental imagery in the activated learning process. Processes include mental rehearsal, relaxation, and affirmation during self-instruction, test taking, interpersonal relationships, and sports	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
AAA105	2013 Spring	Peak Performance in Activated Learning		Techniques which enable the individual to achieve levels of peak performance using the activated learning process. Includes methods for developing a high level of motivation and self-discipline to achieve peak performance in areas such as sports, public speaking, and job productivity	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
AAA115	2007 Fall	Creating College Success	CPD115	Strategies to create success in college. Methods for selecting and developing effective academic strategies, increasing self-awareness and developing self-management strategies. Elements of college resources and relationships with others explored in support of students' educational experience	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
AAA150	2017 Spring	Strategies for College Success	CPD150	Focus on increasing student success through college orientation and personal growth, study skills development, and educational and career planning.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
AAA150AC	2019 Fall	Educational and Career Planning	CPD150AC	Emphasis on increasing student success through educational and career planning.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
AAA298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z

				learning to be combined to maximize student development.					
AAA298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
AAA298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
ABA101	2018 Fall	Hand and Power Tools		Selection, use, maintenance and safety procedures for common hand and power tools used in the construction industry.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.0 1.0	T
ABA102	2004 Fall	Electrical Fundamentals		Fundamentals of electricity including electrical hazards, Occupational Safety and Health Administration (OSHA) regulations, units of measurements and using Ohm's law. Circuit characteristics and the use of Kirchoff's voltage and current laws to calculate voltage drop, current and resistance. Operation and use of specific meters. Includes an introduction to the National Electrical Code (NEC)	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ABA103	2004 Fall	Hand Bending of Electrical Conduit		Conduit bending and installation. Techniques for using hand operated	Prerequisites: None.		Occ	LEC 0.5	S

				and step conduit benders. Cutting, reaming and threading conduit				0.5 0.5	
ABA104	2003 Summer I	Raceways, Boxes, Fittings, Anchors/Supports		Types and applications of conduit, raceways, wireways and ducts. Types, applications and wiring techniques for conductors. Hardware and systems used to mount and support boxes, receptacles and other electrical components	Prerequisites: Registered Apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.5 1.5 1.5	S
ABA106	2012 Spring	Introduction to Materials Handling		Introduction to materials handling equipment and appropriate use for common job-site tasks. Recognize hazards associated with materials handling and proper techniques and procedures.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 0.5 0.5 0.5	S
ABA112	2018 Fall	Electrical I		Theories and concepts in electrical safety basics and OSHA 10 certification. Introductory concepts in construction math, hand and power tools, drawings, rigging, and materials handling. Emphasis on communication and employability skills.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ABA114	2018 Fall	Electrical II		Fundamentals of the electrical trade, residential electrical services and test equipment. Emphasis on safety, electrical circuits, theory, National Electrical Code, device boxes. Use and selection of hand bending, raceways, fittings, conductors, cables. Interpretation of electrical drawings.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ABA120	2005 Spring	Carpentry Fundamentals		Overview of the carpentry trade. Apprenticeship programs and responsibilities of the apprentice. Types and uses of nails, fasteners and adhesives. Types of wood, lumber and manufactured wood products	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
ABA121	2005 Spring	Floor and Wall Systems		Framing systems, floor construction, center beam and post support systems. Construction of sills, joists and bridging. Subflooring, mechanical connectors and the use of prefabricated joists. Wall construction, stud walls, panelized walls, masonry	Prerequisites: (Registered apprentice status and a grade of C or better in ABA120) or permission of the Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	S

				walls, post and beam walls, use of metal studs and drywall construction.					
ABA122	2018 Fall	Electrical III		Theory and application of alternating current, lighting, conduit bending, pull and junction boxes.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ABA124	2018 Fall	Electrical IV		Principles of conductor installations, cable trays, conductor terminations and splices. Emphasis on grounding, bonding, circuit breakers, and fuses. Fundamental concepts of control systems.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ABA130	2003 Summer I	Installation of Electric Services		Electric services for commercial and industrial installations. Blueprints, diagrams and electrical calculations. Grounding, connecting three phase services and the installation of panelboards, switches and load centers	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
ABA135	2010 Spring	Cast-In-Place Stairs		Cast-In-Place and Precast stair installation techniques, forming, erecting and safety procedures. Review American Concrete Institute (ACI) Codes and standard specifications.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
ABA136	2010 Spring	Communications in Construction	IND136	Communication in the construction industry. Positive direct communication, written communication, active listening, understanding, negotiation, and dealing with difficult people. Communication skills at all organizational levels, with groups, combining oral and written communication for maximum effectiveness.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ABA150	2004 Spring	Advanced Calculations for Electricians		Advanced mathematical calculations in the electrical industry. Powers and roots in watts, voltage, current and resistance. Metric and engineering units. English and metric systems for length, area, volume and mass, and energy and temperature measurements. Ratios, proportions,	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.5 1.5 1.5	S

				formulas, symbols and representation. Trigonometry and the Pythagorean theory. Plane and rotating vectors. Basic functions of the scientific calculator for electricians					
ABA179	2009 Spring	Installing and Sizing Water Supply Piping		Connecting piping to a water main. Plumbing connections to buildings and air and hydrostatic testing of water supply piping. Operation and installation of water heaters. Types, operation and installation of water meters. Installation of water supply systems to given structures. Effects of valves, fittings and piping on water pressure. Calculations of pressure drop and sizing procedures for water supply piping. Principles of back siphonage and backflow prevention	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 3.0 3.0 3.0	S
ABA192	2018 Fall	Plumbing Level I		History of plumbing, modern plumbing, safety, human relations, and construction career opportunities. Hand and power tool safety, use, and maintenance. Plumbing drawings, components, and symbols. Materials, schedules for plastic, copper, and cast-iron. Fittings, valves, hangers, and supports. Measuring, cutting, reaming, and joining pipe. Safety precautions for installation, operation and maintenance. Fixtures and faucets. Drain, waste, and vent systems. Water distribution systems.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
ABA204	1999 Fall	Contactors and Relays		Operating principals of contactors and relays. Function in an electrical system. Operation and installation of specific contactors and relays. Interpretation of wiring diagrams. Connect and test a simple control circuit	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ABA207	2010 Spring	Construction Trades: Green Environment		Daily activities at work and at home that affect green environment. Leadership in Energy and Environmental Design (LEED) rating process. Carbon footprint and ways to reduce it. Construction of buildings that affect green environment.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S

				Application of principles of green building rating system.					
ABA222	2018 Fall	Introduction to Welding, Brazing and Cutting		Arc welding theory and safety hazards. AC, DC and AC-DC welding machines. Use of electrodes and safety requirements for arc-welding. Basic welding techniques and gas metal-arc and gas tungsten-arc welding processes. Brazing and cutting using an oxyacetylene torch.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 3.0 3.0	T
ABA232	2018 Fall	Electrical V		The course content includes Load Calculations - Branch and Feeder Circuits, Conductor Selection and Calculations, Overcurrent Protection, Raceways/Wiring/Devices and Boxes, Voice/Data and Video.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ABA234	2018 Fall	Electrical VI		Theories and concepts in distribution equipment, transformers, and commercial electrical services. Emphasis on motor calculations and voice/data and video. Operation of motor controls.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ABA242	2018 Fall	Electrical VII		Principles of course load calculations, feeder and services and specialty transformers. Selection of standby and emergency systems. Emphasis on basic electronic theory, fire alarm systems and health care facilities.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ABA244	2018 Fall	Electrical VIII		Principles of heating, ventilation, and air conditioning (HVAC) controls and heat tracing. Use and control of freeze protection. Basics in motor operation and maintenance. Focus on medium-voltage terminations/splices and special locations. Fundamentals of Crew Leadership.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ABA251	2003 Summer I	High Voltage Termination and Splicing		Terminations and splices in high voltage systems (600+ volts). Identifying and splicing specific types of cables and making terminations. Includes using splicing kits and following manufacturer's specifications. Testing techniques and calculations	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S

ABA255	2004 Fall	Commercial, Industrial and Special Lighting		Operating characteristics of incandescent, fluorescent and high intensity discharge lamps. Lighting controls and fixture installations. Blueprint reading exercise for commercial and industrial installations. Lighting requirement calculations. National Electrical Code (NEC) requirements for specialty lighting fixtures	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 0.5 0.5 0.5	S
ABA298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
ABA298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
ABA298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z

ABC118	2018 Fall	OSHA Standards and Regulations	PNT118	Provisions of and implementation of Occupational Safety and Health Administration (OSHA) Act in the work place. Rights and responsibilities under the OSHA Act. Appeals process, record keeping, and voluntary protection programs. OSHA's construction and general industry standards. Overview of the requirements of the more frequently referenced standards.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.5 1.5 1.5	T
ABC119	2003 Spring	Basic Safety	MEC119	Overview of safety rules and procedures for working on construction job sites	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
ABC120	2020 Fall	Basic Calculations for Construction	MEC120 PNT120	Addition, subtraction, multiplication and division of whole, decimal, fraction and metric numbers. Percentage and fraction conversions. Metric units of length, weight, volume and temperature. Metric system as it relates to the construction trade. Basic algebra and geometry operations and equations. Area and volume calculations of shapes.	Prerequisites: None.		Occ	L+L 1.5 1.5 1.5	T
ABC121	2014 Fall	Introduction to Hand and Power Tools	MEC121 PNT121	Overview of the use, maintenance and safety procedures for common hand and power tools.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
ABC122	2022 Fall	Rigging Safety and Equipment	MEC122	Rigging safety, equipment and inspection. Includes crane hand signals, common rope knots, types of derricks and cranes and safety procedures for rigging and moving materials and equipment.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
ABC123	2018 Fall	Introduction to Construction Drawings		Basic concepts of construction drawings, including terms and symbols. Drawing interpretation, use of drawing dimensions and recognition of drawing classifications.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 0.5 0.5 0.5	T

ABC124	2003 Summer I	Conduit Bending		Types of conduit benders and bends. Conduit bending procedures and use of bends in conduit systems	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
ABC126	2009 Spring	Electrical Test Equipment		Selection, inspection, use and maintenance of common electrical test equipment	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
ABC130	2018 Fall	Conductor Installation/Termination		Transportation, storage and setup of cable reels, methods of rigging and procedures for installing conductors using cable pulls in raceways and cable trays. Also methods of terminating and splicing conductors	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.0 1.0	T
ABC131	2018 Fall	Cable Tray Installation		National Electrical Manufacturer's Association (NEMA) and National Electrical Code (NEC) requirements for cable tray modified installation and cable installation procedures.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 0.5 0.5 0.5	T
ABC132	2018 Fall	Circuit Breakers and Fuses		National Electrical Code (NEC) requirements, Ground Fault Circuit Interrupters (GFCI), overcurrents, fuse sizing, safety techniques and short-circuit calculations.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.0 1.0	T
ABC133	2018 Fall	Basic Lighting		Principles of illumination and specific light sources. Includes practical applications for residential, commercial and industrial installations	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.0 1.0	T
ABC135	2005 Spring	Fundamentals of Concrete		Materials used to make concrete, including specific types of cement, aggregate, admixtures and reinforcing materials. Handling procedures for concrete, conveying and placing concrete and finishing techniques for concrete slab. Construction of foundations and formwork	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
ABC136	2014 Fall	Roof Systems		Defining roof terminology. Identifying and understanding specific roof	Prerequisites: (Registered		Occ	LEC 1.0	S

				systems. Using the framing square and essex scale to calculate and measure specific types of rafters. Transcribing and transferring measurements onto rafters. Using "speed square" to determine measurements for specific types of rafters. Defining unequal roof pitch. Identifying specific types of plank and beam roofs and roof trusses used in the industry today.	apprentice status and a grade of C or better in ABC/MEC/PNT120) or permission of the Apprenticeship Coordinator.			1.0 1.0	
ABC142	2014 Fall	Alternating Current		Production of electricity, including; current, voltage, induction, mutual inductance and capacitance. Calculations using Ohms Law. Operation of a three phase system.	Prerequisites: (Registered apprentice status and a grade of C or better in ABC/MEC/PED120) or permission of the Apprenticeship Director.		Occ	LEC 1.0 1.0 1.0	S
ABC143	2004 Fall	Motors: Theory and Application		Overview of electric motors including types, operation, and applications. Assembly and disassembly. Mounting and connections according to National Electrical Code (NEC). Also troubleshooting, installation and handling	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	S
ABC144	2003 Summer I	Grounding		Types of grounding and proper installation of grounds and grounding. OSHA and National Electrical Code (NEC) requirements specific to grounding. Purpose and operation of Ground Fault Circuit Interrupters (GFCI). Effects of soils and environment. Selection of grounds and grounding material for specific situations. Testing grounds with a "megger"	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
ABC221	2018 Fall	Motors and Motor Controls		Electrical symbols, line diagrams and logic. Contactors and starters, control devices, reversing circuits and power distribution systems. Electronic control devices, programmable controllers, reduced voltage starters, accelerating and decelerating	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T

				methods and circuits. Preventive maintenance and trouble shooting					
ABC222	2004 Fall	Hazardous Locations-Electrical		Hazardous location classifications. Equipment approved for use in specific hazardous locations. Wiring methods	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
ABC226	2004 Fall	Raceways, Wiring Devices, Boxes and Fittings		Sizing, selecting, and installing raceways, junction boxes, outlet boxes and wiring devices. Calculating fill requirements according to National Electrical Code (NEC) regulations. Calculating bending radii in boxes and cabinets. Types and purpose of wiring devices and calculating maximum loads on such devices	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.5 1.5 1.5	S
ABC230	2014 Fall	Stair Construction		Stair parts, materials and types. Stair dimensions and practical techniques for stair layout. Rough forming methods.	Prerequisites: (Registered apprentice status and a grade of C or better in ABC/MEC/PNT120) or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
ABC231	2005 Spring	Exterior Wall Finishes		Exterior wall finish work; placement and hanging of windows, siding and flashing for walls. Installation of floors, chimneys and insulation included	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 3.0 3.0 3.0	S
ABC256	2018 Fall	Basic Plumbing		Plumbing fixtures, drainage fixture unit ratings, and installation procedures. Includes procedures for installing fixtures, water heaters, shower and bath units, and dishwashers. Safety stressed.	Prerequisites: None.		Occ	L+L 4.0 4.0 4.0	T
ABC298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				aspects of independent study and individualized learning to be combined to maximize student development.					
ABC298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
ABC298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
ABO103	2022 Fall	Introduction to Auto Body Repair		An introduction to basic auto body repair skills in dent removal. This course includes body filler application and sanding, plastic repair, metal repair, welding, plasma cutting, collision estimating, and air conditioning refrigerant recovery.	Prerequisites: None.		CLK	156	
ABO104	2022 Fall	Introduction to Automotive Refinishing		An introduction to basic refinishing skills with dual and single stage paints. This course includes spray equipment setup, panel prep and tape, paint correction with cut and buffing, scratch repair and proper blending techniques, basic knowledge of toners and paint mixing.	Prerequisites: None.		CLK	156	
ABO203	2022 Fall	Advanced Automotive Body Repair		An advanced course in non-structural auto body repair. This course includes disassembly of a vehicle,	Prerequisites: None.		CLK	156	

				development of a collision repair plan, and repair. Includes body filler application and sanding, plastic repair, metal repair, and welding.					
ABO204	2022 Fall	Advanced Refinishing Fundamentals		An advanced course in vehicle refinishing and reassembly. This course includes spray equipment setup, vehicle prep and tape, paint correction with cut and buffing, scratch repair and proper blending techniques, knowledge of toners and paint mixing.	Prerequisites: None.		CLK	156	
ABS171	2023 Fall	Introduction to Good Manufacturing Practices(GMP)-Regulated Manufacturing		Course is designed to provide individuals with an overview of Good Manufacturing Practices (GMP), their application in a variety of industries and the opportunities for in such fields.	Prerequisites: None.	ABS/BIO171 may include required field trips. ABS/BIO171 may be repeated for a total of six (6) credits.	Occ	LEC 3.0 3.0 3.0	S
ABS173	2023 Fall	Basic Instrumentation and Lab Math		Introductory course covering basic equipment, measurements, and calculations used in biotechnology laboratories.	Prerequisites: None. BIO156 or BIO181 recommended.		Occ	LEC 1.0 1.0 1.0	S
ABS174	2023 Fall	BioSafety		General laboratory safety, hazardous chemical use and disposal, biohazardous material use and disposal, biosafety procedures, and radiation safety.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
ABS175	2023 Fall	Research Methods in Biology		Fundamentals of planning and conducting biological experiments, including ones that simultaneously vary multiple experimental variables. Subsequent analysis, interpretation, and reporting of results.	Prerequisites: None. BIO156 or BIO181 recommended.		Occ	L+L 1.0 2.0 2.0	T
ABS194AA	2024 Spring	Special Topics in Applied Biological Sciences		Exploration of the foundation and application of a current topic in biosciences.	Prerequisites: Permission of Instructor.		Occ	LEC 1.0 1.0 1.0	S
ABS194AB	2024 Spring	Special Topics in Applied Biological Sciences		Exploration of the foundation and application of a current topic in biosciences.	Prerequisites: Permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S

ABS194AC	2024 Spring	Special Topics in Applied Biological Sciences		Exploration of the foundation and application of a current topic in biosciences.	Prerequisites: Permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
ABS274	2023 Fall	Introduction to Wildlife Management		Introduction to the field of wildlife biology/management and the legal, cultural, ecological, and population dynamics of wildlife biology and management. Covers wildlife management objectives, management techniques, research techniques, and the organizational environment that wildlife biologists work in; provides an overview of careers in the field and guidance in planning a career.	Prerequisites: High school biology with a grade of C or better or a grade of C or better in BIO100 or BIO181 or permission of Instructor.		Occ	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
ABS283	2024 Summer	Bioinformatics and Scientific Computing		Introduction to bioinformatics, including history, concepts, major genetic databases, access tools and programming software. Methodologies to extract meaning from biological sequences using sequence analysis, data visualization and statistics.	Prerequisites: A grade of C or better in [(BIO156 or BIO181) and (MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, OR an appropriate district placement for MAT15+ or higher)], or permission of Instructor or Department/Division Chair. Concurrent enrollment in, or previous completion of, BIO208 is strongly suggested but not required.	Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]	Occ	L+L 3.0 4.0 4.0	T
ABS294AA	2024 Spring	Special Topics in Applied Biological Sciences-Advanced		Exploration of a current topic in the biosciences and its advanced applications.	Prerequisites: Permission of Instructor.		Occ	LEC 1.0 1.0 1.0	S
ABS294AB	2024 Spring	Special Topics in Applied Biological Sciences-Advanced		Exploration of a current topic in the biosciences and its advanced applications.	Prerequisites: Permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S

ABS294AC	2024 Spring	Special Topics in Applied Biological Sciences-Advanced		Exploration of a current topic in the biosciences and its advanced applications.	Prerequisites: Permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
ACC105	1990 Spring	Payroll, Sales and Property Taxes		Tax reporting for payroll, sales, and personal property	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ACC107	2018 Fall	Bookkeeping Theory and Practice		Fundamental accounting practices; application to retail stores, professional firms, and personal service operations.	Prerequisites: None.		Occ	L+L 4.0 5.0 5.0	T
ACC109	2020 Fall	Accounting Concepts		Introduction to accounting with emphasis on analysis and applications of financial information.	Prerequisites: None. GBS151 and reading ability equivalent to RDG100 or RDG100LL suggested but not required.		Occ	LEC 3.0 3.0 3.0	S
ACC110	2018 Fall	Understanding and Using Accounting Systems		Develops basic comprehension of the balance sheet, income statement, and equity and cash flow statements. Explores usage of specialized journals and subsidiary ledgers in a computerized system. Studies the impact of various transactions on an enterprise, including payroll, receivables, payables, inventory, cash and credit card receipts	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
ACC111	1994 Fall	Accounting Principles I		Fundamental theory of accounting principles and procedures	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ACC112	1994 Fall	Accounting Principles II		Continuation of the fundamental theory of accounting principles and procedures, including interpretation of general purpose financial statements.	Prerequisites: A grade of C or better in ACC111 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
ACC115	2020 Fall	Computerized Accounting		Understanding of fundamental accounting principles and mastery of an accounting information systems including the general ledger, accounts receivable, accounts payable and payroll.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T

ACC121	2022 Spring	Individual Tax Preparation		Theory and practice of accounting for individual taxation.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
ACC211	2016 Summer	Financial Accounting		Introduction to theory and practice in the preparation and interpretation of general purpose financial statements.	Prerequisites: None.	Course Attribute(s): Arizona Shared Unique Number SUN#: ACC 2201	Occ	LEC 3.0 3.0 3.0	S
ACC212	2011 Fall	Managerial Accounting		Development and analysis of accounting information for managerial planning and control	Prerequisites: A grade of C or better in (ACC111 and ACC112) or ACC211 and (CIS105 or permission of Department or Division).	Course Attribute(s): Arizona Shared Unique Number SUN#: ACC 2202	Occ	LEC 3.0 3.0 3.0	S
ACC215	2019 Fall	Governmental and Not-For-Profit Accounting		Theories and procedures of accounting for governmental and not-for-profit organizations.	Prerequisites: A grade of C or better in ACC112 or ACC211, or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
ACC216	2009 Fall	Fraud Examination		Fundamental theory of fraud examination methodology to detect and prevent accounting fraud.	Prerequisites: A grade of C or better in (ACC230 or ACC112 or ACC211) or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
ACC219	2022 Spring	Intermediate Accounting I		Continuation of the theory and practice of financial accounting, applicable to assets, liabilities, equity related problems of income determination and financial reporting.	Prerequisites: A grade of C or better in ACC212 or ACC240 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
ACC220	2022 Spring	Intermediate Accounting II		Continuation of the theory and practice of financial accounting, applicable to assets, liabilities, equity determination of asset values, liabilities, and related problems of	Prerequisites: A grade of C or better in ACC219 or permission of		Occ	LEC 3.0 3.0 3.0	S

				income determination, special topics and financial reporting.	Department or Division.				
ACC221	2022 Fall	Tax Accounting		Theory and practice of accounting for personal, corporate, and non-corporate taxation.	Prerequisites: A grade of C or better in ACC111 or ACC211 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
ACC222	1995 Fall	Payroll Accounting		Payroll records for businesses required by federal and state laws	Prerequisites: A grade of C or better in ACC111 or ACC211 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
ACC224	2022 Spring	Tax Practice Administration and Business Entity Analysis		Federal income tax representation, practices, and procedures, including trust and estate income tax, exempt organizations, and retirement plans.	Prerequisites: A grade of C or better in ACC121 or ACC221.		Occ	LEC 3.0 3.0 3.0	S
ACC230	2016 Summer	Uses of Accounting Information I		Introduction to the uses of accounting information for internal and external purposes with emphasis on financial statement analysis.	Prerequisites: A grade of C or better in ACC111 or ACC211 or (ENG101 and MAT151 and CRE101) or appropriate test scores on the District English, Reading and Math placement exams.		Occ	LEC 3.0 3.0 3.0	S
ACC240	2016 Summer	Uses of Accounting Information II		Introduction to the uses of accounting information for internal and external purposes with emphasis on analysis for use by management.	Prerequisites: A grade of C or better in ACC230.		Occ	LEC 3.0 3.0 3.0	S
ACC250	2018 Fall	Introductory Accounting Lab		Procedural details of accounting for the accumulation of information and generation of reports for internal and external users.	Prerequisites: None.		Occ	LAB 1.0 3.0 3.0	T
ACC260	2017 Summer	Certified Bookkeeper (CB) Preparation		Fundamental accounting practices including accrual and deferral adjustments, correcting common transaction recording errors, bank reconciliations and adjusting entries. Includes payroll accounting and related Federal and State payroll law	Prerequisites: A grade of C or better in ACC111 or ACC211 or (bookkeeping experience and		Occ	LEC 3.0 3.0 3.0	S

				requirements. Accounting for depreciation for financial and tax accounting purposes covered. Inventory valuation methods. Includes calculating, recording, and reporting under generally accepted accounting principles (GAAP). Preventive internal control procedures to detect organizational fraud, theft, and embezzlement covered.	permission of Instructor).				
ACC270AA	2016 Spring	Accounting Internship		Accounting work experience in a business or industry. Eighty hours of designated work per credit per semester.	Prerequisites: Permission of Department or Division.	ACC270A A may be repeated for a total of four (4) credits.	Occ	LAB 1.0 1.0 0.0	C
ACC270AB	2016 Spring	Accounting Internship		Accounting work experience in a business or industry. Eighty hours of designated work per credit totaling 160 hours per semester.	Prerequisites: Permission of Department or Division.	ACC270A B may be repeated for a total of four (4) credits.	Occ	LAB 2.0 2.0 0.0	C
ACC270AC	2016 Spring	Accounting Internship		Accounting work experience in a business or industry. Eighty hours of designated work per credit totaling 240 hours per semester.	Prerequisites: Permission of Department or Division.	ACC270A C may be repeated for a total of six (6) credits	Occ	LAB 3.0 3.0 0.0	C
ACC282AA	2016 Summer	Volunteerism Accounting: Service Learning Experience		Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: A grade of C or better in ACC111 or (ACC230 and ACC250) and permission of Instructor.	ACC282A A may be repeated for a total of six (6) ACC282 credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 1.0 1.0 0.0	L
ACC282AB	2016 Summer	Volunteerism Accounting:		Service learning field experience within private/public agencies,	Prerequisites: A grade of C or better	ACC282A B may be	Occ	LAB 2.0	L

		Service Learning Experience		educational institution, and citizen volunteer groups.	in ACC111 or (ACC230 and ACC250) and permission of Instructor.	repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.		2.0 0.0	
ACC282AC	2016 Summer	Volunteerism Accounting: Service Learning Experience		Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: A grade of C or better in ACC111 or (ACC230 and ACC250) and permission of Instructor.	ACC282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 3.0 3.0 0.0	L
ACC296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or		Occ	LAB 1.0 5.0 0.0	Z

					career interest or with permission of Instructor.				
ACC296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 5.0 0.0	Z
ACC296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z

ACC296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
ACC298AA	2016 Summer	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
ACC298AB	2016 Summer	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

ACC298AC	2016 Summer	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
ACT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
ACT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
ACT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z

				combined to maximize student development.					
ACU305	2025 Fall	Accounting Information Systems		Fundamentals of Accounting Information System concepts and applications as they relate to business processes, data analytics, technologies, and controls.	Prerequisites: A grade of C or better in ACC219, or permission of Program Director.		Acad	LEC 3.0 3.0 3.0	S
ACU315	2025 Fall	Cost Accounting		In-depth analysis of accounting information for managerial planning and control with a focus on cost accounting.	Prerequisites: A grade of C or better in ACC212, or permission of Program Director.		Acad	LEC 3.0 3.0 3.0	S
ACU321	2025 Fall	Tax Accounting II		A continuation of theory and practice of accounting for personal, corporate, and non-corporate taxation, with an introduction to state and local tax issues.	Prerequisites: A grade of C or better in ACC221, or permission of Program Director.		Acad	LEC 3.0 3.0 3.0	S
ACU325	2025 Fall	Forensic Accounting		Fundamentals of forensic accounting and fraud investigation. Focus on ethics, integrity, and legal considerations.	Prerequisites: A grade of C or better in ACC219, or permission of Program Director.		Acad	LEC 3.0 3.0 3.0	S
ACU405	2025 Fall	Auditing		Fundamentals of auditing and assurance concepts and applications as they relate to business processes and audit risks. Focus on ethics and legal considerations and auditing processes, including planning, obtaining evidence, and reporting.	Prerequisites: A grade of C or better in ACU305, or permission of Program Director.		Acad	LEC 3.0 3.0 3.0	S
ACU410	2025 Fall	Advanced Accounting I		Advanced analysis of accounting theory and practice. Focus on applying standards relevant to complex business structures, business combinations, consolidations and mergers, investments, segment and interim reporting, and foreign currency transactions.	Prerequisites: A grade of C or better in ACC220, or permission of Program Director.		Acad	LEC 3.0 3.0 3.0	S
ACU411	2025 Fall	Advanced Accounting II		Continued advanced analysis of accounting theory and practice. Focus on applying standards relevant to reorganizations and liquidations, partnerships, not-for-profit entities, state and local governments, and estates and trusts.	Prerequisites: A grade of C or better in ACU410, or permission of Program Director.		Acad	LEC 3.0 3.0 3.0	S

ACU490	2025 Fall	Accounting Capstone		Completion of a comprehensive project incorporating major concepts and related topics within the field of accounting. Students will demonstrate the steps for project identification, related research, analysis, and presentation of information. Project topics will follow an instructor approval process.	Prerequisites: Permission of Program Director or Department/Division Chair.		Acad	L+L 3.0 3.0 3.0	T
AEN102	2017 Summer	Fundamentals of Facility Energy Management		Process of evaluation of types of energy use. Evaluation of the structure, energy transfer, lighting, heating, and cooling systems. Introduction to basic thermal process, including thermal capacity, heat transfer modes, psychometric charts, fan and pump laws, energy storage, and other factors related to HVAC and occupant comfort in commercial facilities. Includes an introduction to energy generation, construction and equipment, and the impact of these factors on cost and economic justification.	Prerequisites: None.		Occ	LEC 4.0 4.0 4.0	S
AEN103	2018 Fall	Hand Tools and Basic Maintenance for Building Energy Technicians		Basic tools and equipment for the building energy technician. Includes an overview of electrical theory and procedures for measurement and evaluation of common electric circuits, specific heating, ventilation, and air conditioning (HVAC) mechanical hardware devices, analysis of building environmental conditions, and safe procedures for starting and stopping equipment and systems. Also addresses basic repair and replacement of electric outlets, fuses, breakers, filters, and necessary diagnostics on related electrical and mechanical items.	Prerequisites: None.		Occ	L+L 4.0 4.0 4.0	T
AEN142	2018 Fall	Introduction to Energy Management		Introduction to building energy management concepts and procedures. Includes the carbon cycle, building envelope and materials of construction in their relation to energy management, occupant	Prerequisites: A grade of C or better in AEN102, AEN103 and CNS182.		Occ	L+L 3.0 3.0 3.0	T

				comfort, and indoor air quality. Major emphasis on identification of building system components, relations, interactions and basic operation, evaluation and reporting of energy trending and consumption, and efficiency.					
AEN190	2018 Fall	Device Interface and Selection		Overview of building management systems, components, and controls. Includes energy consumption basics and measurement in addition to building systems evaluation. Also covers the process for evaluation and documentation of systems as well as recommendations for potential energy conservation.	Prerequisites: A grade of C or better in AEN142 and (MAT112 or MAT122).		Occ	L+L 3.0 5.0 5.0	T
AES101	2023 Fall	Heritage and Values I		Survey course designed to introduce students and cadets to the Department of the Air Force (DAF) and the Air Force Reserve Officer Training Corps (AFROTC). The course allows students and cadets to examine general aspects of the DAF, leadership fundamentals, service benefits, and opportunities for officers. The course also lays the foundation for becoming an Airman or Guardian by outlining our heritage and values. As a foundational course, this course provides a historical perspective such as lessons on war and US military, DAF operations, principles of war, and airpower.	Prerequisites: None.		Acad	LEC 2.0 1.0 0.0 LAB 0.0 1.0 0.0	Z
AES103	2023 Fall	Heritage and Values II		Survey course designed to introduce students and cadets to the Department of the Air Force (DAF) and the Air Force Reserve Officer Training Corps (AFROTC). The course allows students and cadets to examine general aspects of the DAF, leadership fundamentals, service benefits, and opportunities for officers. The course also lays the foundation for becoming an Airman or Guardian by outlining our heritage and values. As a foundational course,	Prerequisites: None.		Acad	LEC 2.0 1.0 0.0 LAB 0.0 1.0 0.0	Z

				this course provides a historical perspective such as lessons on war and US military, DAF operations, principles of war, and airpower.					
AES201	2023 Fall	Team and Leadership Fundamentals I		A survey course designed to provide a fundamental understanding of both leadership and team building. Students and cadets will learn that there are many layers to leadership, including aspects that do not always come to mind. Such things include listening, understanding themselves, being a good follower, and problem solving efficiently. Students and cadets will apply these leadership perspectives when completing team building activities and discussing things like conflict management. Students and cadets should demonstrate basic verbal and written communication skills.	Prerequisites: None.		Acad	LEC 2.0 1.0 0.0 LAB 0.0 1.0 0.0	Z
AES203	2023 Fall	Team and Leadership Fundamentals II		A survey course designed to provide a fundamental understanding of both leadership and team building. Students and cadets will learn that there are many layers to leadership, including aspects that do not always come to mind. Such things include listening, understanding themselves, being a good follower, and problem solving efficiently. Students and cadets will apply these leadership perspectives when completing team building activities and discussing things like conflict management. Students and cadets should demonstrate basic verbal and written communication skills.	Prerequisites: None.		Acad	LEC 2.0 1.0 0.0 LAB 0.0 1.0 0.0	Z
AES294	2016 Fall	Air Force Physical Fitness		Physical training component of Air Force ROTC. Covers topics of immediate or special interest to a faculty member and students.	Prerequisites: None.	AES294 may be repeated for credit. AES294 must be taken concurrent	Acad	L+L 1.0 3.0 0.0	Z

						ly with AES101, AES103, AES201 and AES203.			
AES298AA	2008 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: None.		Acad	LAB 1.0 1.0 0.0	Z
AES298AB	2008 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: None.		Acad	LAB 2.0 2.0 0.0	Z
AES298AC	2008 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: None.		Acad	LAB 3.0 3.0 0.0	Z
AET107	2022 Fall	Private Pilot Ground School		Ground school in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate written examination. Includes aerodynamics,	Prerequisites: None. Corequisites: AET110 or AET112.		Occ	LEC 5.0 5.0 5.0	S

				airplane systems, airports, airspace, communications, Federal Air Regulations, navigation, airplane performance, flight planning, and flight physiology. Requires passing a written exam similar to the FAA Private Pilot written exam.					
AET107HH	2012 Summer II	Private Pilot Ground School: Helicopter		Ground school in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate written examination. Includes aerodynamics, helicopter systems, airports, airspace, communications, Federal Air Regulations, navigation, helicopter performance, flight planning, and flight physiology. Requires passing a written exam similar to the FAA Private Pilot written exam.	Prerequisites: None. Corequisites: AET110HH.		Occ	LEC 5.0 5.0 5.0	S
AET110	2020 Fall	Private Pilot Flight		Flight course in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate practical examination. Includes preflight preparation and planning, ground operations, airport operations, departures, navigation, basic instrument flight, night flight, slow flight, ground reference maneuvers, emergency operations, and arrivals. Approximately 50 hours airplane flight experience at student's expense required. Requires passing check ride similar to the FAA Private Pilot check ride.	Prerequisites: None. Corequisites: AET107.		Occ	LAB 1.0 5.0 5.0	T
AET110HH	2018 Fall	Private Pilot Flight: Helicopter		Flight course in preparation for the Federal Aviation Administration (FAA) Private Pilot Certificate practical examination. Includes preflight preparation, preflight procedures, airport and heliport operations, hovering maneuvers, takeoffs, landings, and go-rounds, performance maneuvers, navigation, emergency operations, night operations, and post-flight procedures. Approximately 75-85 hours helicopter flight experience at student's expense	Prerequisites: None. Corequisites: AET107HH.		Occ	LAB 2.0 5.0 5.0	T

				required. Requires passing check ride similar to the FAA Private Pilot check ride.					
AET112	2022 Spring	Private Pilot Flight - Test Course		Flight course in preparation for transition into continued AET course work. Includes preflight preparation and planning, ground operations, airport operations, departures, navigation, basic instrument flight, slow flight, ground reference maneuvers, emergency operations, and arrivals. Requires passing check ride similar to the Federal Aviation Administration Private Pilot check ride.	Prerequisites: FAA Private Pilot Airplane Single-Engine Land or advanced certification. Corequisites: AET107.	Flight and ground briefing time at student's expense required.	Occ	LAB 1.0 5.0 5.0	T
AET115	1994 Fall	Aviation Meteorology		Meteorology for professional pilots. Includes atmosphere, air mass circulation, cloud type identification, weather hazards, and high altitude, Arctic, and tropical weather systems. Basic forecasting, use of Direct User Access Terminal (DUAT) systems and reading and interpreting weather charts	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AET203	2022 Summer	Basic Airplane Systems		Beginning commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examination. Discussions will include, but not be limited to reciprocating engines, engine systems, airplane systems, altitude systems, and commercial regulations.	Prerequisites: A grade of C or better in (AET207, AET217, and AET210) or permission of Instructor. Corequisites: AET222.		Occ	LEC 3.0 3.0 3.0	S
AET203HH	2012 Summer II	Basic Helicopter Systems		Beginning commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examination. Discussions will include, but not be limited to reciprocating engines, engine systems, helicopter systems, altitude systems, and commercial regulations.	Prerequisites: A grade of C or better in AET207HH, AET217HH and AET210HH or permission of Instructor. Corequisites: AET220HH and AET213HH.		Occ	LEC 2.0 2.0 2.0	S

AET205	1994 Fall	Aircraft Structures, Systems, and Maintenance		Survey of airframe structures, systems, and maintenance regulations for pilots. Includes aircraft and airfoil design and construction, and electrical, instrumentation, and automatic flight control systems. Maintenance privileges and limitations, and forms and records	Prerequisites: Private Pilot Certificate or permission of Instructor.		Occ	LEC 4.0 4.0 4.0	S
AET207	2022 Fall	Attitude Instruments and Navigation		Beginning instrument pilot ground course in preparation for the Federal Aviation Administration (FAA) Instrument Pilot Rating and Instrument Rating written examinations. Includes preflight preparation, flight instruments, basic attitude instrument flying, radio navigation systems, and technically advanced aircraft systems.	Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET210, AET217 and AET220		Occ	LEC 3.0 3.0 3.0	S
AET207HH	2012 Summer II	Attitude Instruments and Navigation: Helicopter		Beginning instrument pilot ground course in preparation for the Federal Aviation Administration (FAA) Instrument Pilot Rating and Instrument rating written examinations. Includes preflight preparation, flight instruments, basic attitude instrument flying, radio navigation systems, and technically advanced helicopter systems.	Prerequisites: A grade of C or better in AET110HH or permission of Instructor. Corequisites: AET210HH and AET217HH.		Occ	LEC 2.0 2.0 2.0	S
AET208	2020 Fall	Aviation Safety		Introduction to aviation safety, including aviation safety programs, risk management, pilot psychology, physiology, human factors, and accident review and investigation.	Prerequisites: A grade of C or better in AET107 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
AET210	2022 Fall	Commercial Flight Lab I		Initial flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on instrument and technically advanced aircraft operations. Student must fly approximately 10 hours at own expense. Requires passing operational stage checks similar to the FAA check rides.	Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET217 and AET220.		Occ	LAB 1.0 5.0 5.0	T
AET210HH	2018 Fall	Instrument Flight: Helicopter		Initial helicopter flight course in preparation for the Federal Aviation Administration (FAA) Instrument	Prerequisites: A grade of C or better in AET110HH or		Occ	LAB 2.0	T

				rating practical examination. Emphasis on helicopter instrument operations. Student must fly approximately 75 hours at own expense. Requires passing operational phase checks.	permission of Instructor. Corequisites: AET207HH and AET217HH.			5.0 5.0	
AET213	2022 Spring	Aerodynamics and Performance		Advanced commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examinations. Includes discussion of aerodynamic factors including lift, weight, drag, and thrust. Discussions will include, but are not limited to aerodynamics, performance, safe and efficient airplane operations, airplane stability and control, stalls, and spins.	Prerequisites: A grade of C or better in AET207, AET217, and AET210. Corequisites: AET221.		Occ	LEC 3.0 3.0 3.0	S
AET213HH	2012 Summer II	Aerodynamics and Performance: Helicopter		Advance commercial pilot ground course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot Certificate and Commercial written examinations. Includes discussion of aerodynamic factors including lift, weight, drag, and thrust. Discussions will include, but are not limited to aerodynamics, performance, and safe and efficient helicopter operations.	Prerequisites: A grade of C or better in AET207HH, AET217HH, and AET210HH. Corequisites: AET220HH and AET203HH.		Occ	LEC 2.0 2.0 2.0	S
AET215	1994 Fall	Aircraft Powerplants		Survey of engines and engine systems for pilots. Includes theory and analysis of reciprocating and turbine aircraft engines. Lubrication, ignition, fuel control, cooling, exhaust, and propellers.	Prerequisites: A grade of C or better in AET205 or permission of Instructor.		Occ	LEC 4.0 4.0 4.0	S
AET217	2022 Fall	Instrument Procedures		Advanced instrument pilot ground school course in preparation for the Federal Aviation Administration (FAA) Instrument pilot rating and Instrument rating written examinations. Includes Federal Aviation Regulations, instrument approach procedures, and instrument enroute considerations. Requires passing written exam similar to the Instrument pilot rating and Instrument rating written exams.	Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET210 and AET220.		Occ	LEC 3.0 3.0 3.0	S

AET217HH	2012 Summer II	Instrument Procedures: Helicopter		Advance helicopter instrument pilot ground school course in preparation for the Federal Aviation Administration (FAA) Instrument pilot rating and Instrument rating written examinations. Includes Federal Aviation Regulations, instrument approach procedures, and instrument enroute considerations. Requires passing written exams similar to the Instrument pilot rating and Instrument rating written exams.	Prerequisites: A grade of C or better in AET110HH or permission of Instructor. Corequisites: AET210HH and AET207HH.		Occ	LEC 2.0 2.0 2.0	S
AET220	2022 Fall	Instrument Flight Lab		Flight course in preparation for the Federal Aviation Administration (FAA) Instrument rating practical examination. Emphasis on instrument operations. Student must fly approximately 40 hours at own expense. Requires passing of stage checks similar to the FAA check ride.	Prerequisites: A grade of C or better in AET110 or permission of Instructor. Corequisites: AET207, AET210 and AET217.		Occ	LAB 1.0 5.0 5.0	T
AET220HH	2018 Fall	Commercial Flight: Helicopter		Advanced flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial and high performance helicopter operations. Student must fly approximately 60 hours at own expense. Requires passing instrument rating and commercial pilot stage checks similar to the FAA check rides.	Prerequisites: A grade of C or better in AET210HH, AET207HH and AET217HH. Corequisites: AET203HH and AET213HH.		Occ	LAB 2.0 5.0 5.0	T
AET221	2022 Spring	Commercial Flight Lab II		Intermediate flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial and solo cross-country flight operations. Student must fly approximately 45 hours at their own expense. Maneuvers and procedures during dual instruction are designed to be performed with flight instructor guidance. Requires passing commercial pilot stage checks similar to the FAA check ride.	Prerequisites: A grade of C or better in AET207 and AET210 or by permission of Instructor. Corequisites: AET213.		Occ	LAB 1.0 5.0 5.0	T
AET222	2022 Spring	Commercial Flight Lab III		Advanced flight course in preparation for the Federal Aviation	Prerequisites: A grade of C or better		Occ	LAB 1.0	T

				Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial operations. Student must fly approximately 45 hours at their own expense. Maneuvers and procedures are designed to be performed with little flight instructor guidance. Requires commercial pilot stage checks similar to the FAA check ride.	in AET221 and AET213. Corequisites: AET203.			5.0 5.0	
AET225	2020 Fall	Advanced Aircraft Systems		Survey of advanced aircraft systems to include electrical, automatic flight control, pressurization, cabin atmosphere, ice control, rain control, fire detection and extinguishing. Includes theory and analysis of turbine aircraft engines. Introduction to turbine engine systems to include lubrication, ignition, fuel control, cooling, exhaust, and propellers. Includes overview of maintenance publications, forms and records.	Prerequisites: Private Pilot Certificate or permission of Instructor.		Occ	LEC 4.0 4.0 4.0	S
AET227	2017 Fall	Certified Flight Instructor: Airplane, Single Engine Land Ground School		Ground school in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor and Fundamentals of Instruction written examinations. Includes fundamentals of instruction, aerodynamics, airplane performance, systems, operations, weight and balance, weather, federal regulations, navigation, maneuvers, pilot physiology, ethics, and aeronautical decision making. Requires passing written exams similar to the FAA Certified Flight Instructor: Airplane, and Fundamentals of Instruction written exams.	Prerequisites: A grade of C or better in AET240 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET230.		Occ	LEC 5.0 5.0 5.0	S
AET227HH	2012 Summer II	Certified Flight Instructor: Helicopter Ground School		Ground school in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor and Fundamentals of Instruction written examinations. Includes fundamentals of instruction, aerodynamics, helicopter performance, systems, operations, weight and balance,	Prerequisites: FAA Commercial Pilot Certificate. Corequisites: AET230HH.		Occ	LEC 4.0 4.0 4.0	S

				weather, federal regulations, navigation, maneuvers, pilot physiology, ethics, and aeronautical decision making. Requires passing written exams similar to the FAA Certified Flight Instructor: Helicopter, and Fundamentals of Instruction written exams.					
AET229	2020 Fall	Crew Resource Management		Crew communications, teamwork, leadership, "followership," decision-making, and situational awareness; also the benefits of diversity, and the role diversity plays in the modern aerospace industry. Emphasis on utilization of all available resources in order to conduct a safe and efficient flight.	Prerequisites: A grade of C or better in AET217 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
AET230	2022 Fall	Certified Flight Instructor: Airplane, Single Engine Land Flight Lab		Flight course in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor: Airplane practical examination. Emphasis on demonstration and analysis of flight maneuvers. Includes preflight, ground operations, airport operations, takeoffs, climbs, flight fundamentals, stalls, spins, slow flight, basic instrument operations, performance maneuvers, ground reference maneuvers, emergency operations, approaches, landings, and post-flight procedures. Requires approximately 25 hours of flight that includes high performance operations at student's expense. Also requires passing check ride similar to the FAA Certified Flight Instructor check ride.	Prerequisites: A grade of C or better in AET240 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET227.		Occ	LAB 1.0 3.0 3.0	T
AET230HH	2018 Fall	Certified Flight Instructor: Helicopter		Flight course in preparation for the Federal Aviation Administration (FAA) Certified Flight Instructor: Helicopter practical examination. Emphasis on demonstration and analysis of flight maneuvers. Includes preflight procedures, airport and heliport operations, hovering maneuvers, takeoffs, landings, and go-arounds, fundamentals of flight, performance	Prerequisites: FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET227HH.		Occ	LAB 1.0 3.0 3.0	T

				maneuvers, emergency operations, special operations, and postflight procedures. Requires approximately 60 hours of flight at student's expense. Also requires passing check ride similar to the FAA Certified Flight Instructor check ride.					
AET237	1995 Fall	Multiengine Airplane Pilot Ground School		Aeronautical knowledge necessary to meet requirements for a multiengine airplane rating including orientation, aerodynamics, airplane systems, airplane performance, flight planning, and emergency procedures.	Prerequisites: A grade of C or better in AET220 or FAA Commercial Pilot Certificate with instrument rating. Corequisites: AET240.		Occ	LEC 2.0 2.0 2.0	S
AET239	2022 Spring	Commercial Flight Lab IV		Final flight course in preparation for the Federal Aviation Administration (FAA) Commercial Pilot practical examination. Emphasis on commercial operations. Student must fly approximately 20 hours at their own expense. Maneuvers and procedures are designed to be performed without flight instructor guidance. Requires passing commercial pilot stage check similar to the FAA check ride.	Prerequisites: A grade of C or better in (AET203 and AET222), or by permission of Instructor.		Occ	LAB 1.0 5.0 5.0	T
AET240	2022 Fall	Multiengine Airplane Pilot Flight Lab		Flight course in preparation for the Federal Aviation Administration (FAA) Multi-engine Airplane practical examination. Approximately 18 hours of flight experience at the student's expense and passing check ride similar to the FAA Multi-engine check ride are required.	Prerequisites: A grade of C or better in AET239 or FAA Commercial Pilot Certificate with Single Engine Land and Instrument rating. Corequisites: AET237.		Occ	LAB 1.0 1.5 1.5	T
AET257	2018 Fall	Readings in Aviation		Critical inquiry of a particular aviation theme from a wide variety of sources. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. International data communication facilities and equipment made available for student use.	Prerequisites: A grade of C or better in ENG102 or ENG111 and permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

AET258	2013 Summer I	Certified Flight Instructor: Instrument Airplane Ground School		Aeronautical knowledge and practical teaching ability necessary to obtain an Instrument Flight Instructor Certificate with an Airplane-Single-Engine rating and necessary to satisfactorily pass the Flight Instructor Instrument knowledge test.	Prerequisites: Valid FAA Commercial Pilot Certificate or Airline Transport Pilot Certificate with the appropriate category and class of airplane used in the course, instrument rating, and Flight Instructor Certificate-Airplane. Corequisites: AET270.		Occ	LEC 3.0 3.0 3.0	S
AET270	2018 Fall	Certified Flight Instructor: Instrument Airplane Flight Lab		Flight experience in an airplane to meet flight proficiency and aeronautical experience requirements necessary to add an Instrument Airplane Rating to an existing Flight Instructor-Airplane certificate.	Prerequisites: Valid FAA Commercial Pilot Certificate or Airline Transport Pilot Certificate with the appropriate category and class of airplane used in the course, instrument rating, and Flight Instructor Certificate-Airplane. Corequisites: AET258.		Occ	LAB 1.0 3.0 3.0	T
AET296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with		Occ	LAB 1.0 5.0 0.0	Z

					permission of Instructor.				
AET296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
AET296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
AET296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and	Prerequisites: Completion of at least		Occ	LAB 4.0	Z

				employers to accomplish an outcome related to the career objectives of the students.	twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.			20.0 0.0	
AET298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
AET298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
AET298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an	Prerequisites: Permission of		Occ	LAB 3.0	Z

				atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			3.0 0.0	
AFR110	2009 Summer I	Introduction to African-American Studies		Introduction to the study of the African-American experience. Interdisciplinary approach includes historical underpinnings; population and cultural characteristics; social, economic, and political issues; and implications for the future	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C]	Acad	LEC 3.0 3.0 3.0	S
AFR200	2025 Fall	Introduction to Africana Studies	HIS200	Survey of the social, economic, political, environmental, and cultural developments of various African communities from the beginning of human civilization to the present, including the development of the African diaspora as well as the historical and cultural impacts of African interactions with other global communities.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
AFR202	2017 Spring	Ethnic Relations in the United States	ASB202 CCS202	Basic concepts and processes, including historic overview, of interethnic relations in the United States: culture, race, ethnicity, ethnocentrism, prejudice, discrimination, racism, assimilation, acculturation, and individual and group responses to interethnic contact. Cultural knowledge and intercultural communication skills and perspectives as fundamental tools for successful management of social relations in a multicultural world.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Historical Awareness - [H] General Education Designation: Social	Acad	LEC 3.0 3.0 3.0	S

						and Behavioral Sciences - [SB]			
AFR203	2024 Fall	African-American History to 1865	HIS203	History and cultural heritage of African-Americans from ancestral origins in Ancient Africa through the experience of chattel slavery in the Americas to eventual emancipation and participation in the American Civil War.	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Social-Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
AFR204	2023 Fall	African-American History 1865 to Present	HIS204	The multifaceted history and cultural heritage of African-American communities since the Civil War, presented within the broader context of U.S. history. This course explores the social, economic, political, and cultural history of African-American communities, including the historical and cultural impacts of slavery and discrimination, and the collective struggle for freedom, equality, and self-determination throughout U.S. history.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
AFR207	2008 Fall	Black Women	WST207	Analysis and discussion of critical issues for Black women in America today	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
AFR210	2025 Fall	Multicultural Representation in the History of STEM	AIS/CCS/ETH210	Aims to fill a gap by exploring the perspectives, experiences, and contributions of individuals from various cultural backgrounds in the study of science, technology, engineering, and mathematics (STEM). Analyzes and synthesizes how different cultures have shaped scientific knowledge, examining the	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

				impact of diversity on innovation and problem-solving, and addressing barriers faced by underrepresented groups in STEM fields.					
AGB130	2004 Fall	Establishing and Running an Agribusiness		Basic principles used in establishing and running an Agribusiness. Emphasis on business requirements to maintain a business enterprise in Arizona	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AGB132	2016 Spring	Agribusiness and Management		Application of management principle skills in day-to-day operations for decision-making techniques base on collection, use and analysis of financial, employee, and customer data to determine and evaluate the daily operations of an agribusiness venture.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AGB139	2018 Fall	Agribusiness Computer Operations		Agribusiness operations for solving, forecasting and projecting agribusiness problems, agribusiness communications, accounting systems and database use.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
AGB140	2018 Fall	Commercial Floral Design		Fundamentals of commercial floral design. Includes instruction and hands-on training in fresh, dried, and silk plants, flowers, and greens; materials; supplies; gift items; and industry conditions, standards, and trends. Covers design principles, identification, selection, care, maintenance, handling, and use of floral design material, ordering, pricing, recordkeeping, computer usage, and customer relations.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
AGB142	2018 Fall	Floriculture		Principles and species of floriculture. Includes instruction in cultural and production requirements of cut flowers and foliage. Covers general production information and basic plant physiology principles, propagation, production temperatures, plant nutrients, pest management, and greenhouse construction and operations.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
AGB144	2018 Fall	Agriculture Processing		Agricultural processing and the meat industry as a business enterprise.	Prerequisites: None.		Occ	L+L 3.0	T

				Carcass evaluation, grading, judging for cut ability and quality, cut identification, meat cutting, wrapping, freezing, and storing.				5.0 5.0	
AGB229	2007 Fall	Landscape Management and Leadership		Covers landscape and nursery management concepts and applications for business, industry, and government organizations	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AGB231	2016 Spring	Marketing of Agricultural Products		Principles of agricultural marketing including consumer demand, economic system fundamentals, functions and methods of marketing agricultural commodities, market planning, and promoting and selling in the agricultural domain.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AGB260	2018 Fall	Youth Leadership Development		Characteristics of effective Career and Technical Student Organization (CTSO) officers, leadership styles and strategies for the management and organization of youth groups in agriculture. Includes instruction and hands-on training in speech/workshop development, budget and activity planning and the use of parliamentary procedure.	Prerequisites: None.		Occ	L+L 4.0 6.0 6.0	T
AGB261	2018 Fall	Advanced Youth Leadership Development		Characteristics of effective Career and Technical Student Organization (CTSO) officers, leadership styles and strategies for the management and organization of youth groups in agriculture. Includes instruction and hands-on training in speech/workshop development, budget and activity planning and the use of parliamentary procedure.	Prerequisites: None.		Occ	L+L 4.0 6.0 6.0	T
AGB290	2018 Fall	Internship		Supervised field training for Agribusiness students with local industry businesses.	Prerequisites: Student shall be in final semester before graduation and permission of Department or Division.		Occ	LAB 3.0 6.0 6.0	T
AGB296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6		Occ	LAB 1.0 5.0 0.0	Z

				related to the career objectives of the students.	grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
AGB296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
AGB296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or		Occ	LAB 3.0 15.0 0.0	Z

					career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
AGB296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
AGB298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

AGB298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
AGB298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
AGL181	2018 Fall	Landscape Construction Techniques		The methods used in site preparation, installation of edgings, construction of walks, patios and decks, installation of sprinkler systems, rock scapes and the planting of trees, shrubs, ground covers, and lawns.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
AGL184	2018 Fall	Landscape Drafting and Design I		Basic principles of landscape design, including drafting and design techniques commonly used in the field of landscaping. Emphasis on simple working drawings and detailed views, symbols, lettering, and drafting standards.	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
AGL188	2018 Fall	Arizona Landscape Design		Designed for residential homeowner and beginning professional. Emphasis on plant material groupings and basic design principles. History of landscape use, special features of hardscapes, irrigation systems, and lawn-to- desert planting conversion techniques.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T

AGL189	2018 Fall	Landscape Design I		Introduction to landscape design with an emphasis on residential and small scale projects. Application of design processes from inventory and analysis through design and development including program, measured base, study diagrams, rendered and colored plans, and sectional elevations. Architectural communication developed through hand sketch and hand drafting techniques with practice in client interview and design presentation.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
AGL190	2018 Fall	Landscape Design II		Advanced study of the principles, processes, and practice of Landscape Design, with an emphasis on residential and small scale design. Design problem-solving, use of landscape elements such as paving, fencing, small structures, low voltage lighting, plants, water and fire features. Construction documents will be produced including plans, estimates, details, and specifications. Regulatory agencies and other affective influences will be explained. Development of personal design philosophy and career exploration.	Prerequisites: A grade of C or better in AGL189 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AGL269	2018 Fall	Computer Aided Landscape Design	CAD269	Using AutoCAD to create landscape design drawings and wire frames in Sketchup for elevations, sections and perspective sketches.	Prerequisites: A grade of C or better in (AGB139 or CAD100 or CAD101) and AGL189 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AGL296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or		Occ	LAB 1.0 5.0 0.0	Z

					permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
AGL296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
AGL296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled		Occ	LAB 3.0 15.0 0.0	Z

					in at least one class which is related to students major or career interest or with permission of Instructor.				
AGL296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
AGL298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
AGL298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
AGL298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
AGS164	2021 Fall	Plant Growth and Development		Principles of growth in relation to seed germination, emergence, growth and reproduction processes of plants and the environmental influences on plant growth processes.	Prerequisites: None.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 4.0 4.0	T
AGS165AA	2021 Fall	Fall Sustainable Crop Production		Study of the importance of Fall-planted crops for food, feed, and fiber. Cultural practices for raising the major crops in the State of Arizona, including planting, environmental modifications, harvesting, handling and quality control with an emphasis on sustainability.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AGS164 or permission of Instructor.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AGS165AB	2021 Fall	Spring Sustainable Crop Production		Study of the importance of Spring-planted crops for food, feed, and fiber. Cultural practices for raising the major crops in the State of Arizona, including planting, environmental modifications, harvesting, handling and quality control with an emphasis on sustainability.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AGS164 or permission of Instructor.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AGS166	2021 Fall	Aquaponics		Establishment, care, and selection of facilities for commercial production of animals and plants in a water-based closed system.	Prerequisites: None.		Occ	LEC 3.0 2.0 2.0 LAB	T

								0.0 3.0 3.0	
AGS168	2018 Fall	Grounds Equipment Management		Selection, use and maintenance of grounds equipment, including both manual and power equipment.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
AGS170	1992 Fall	Pesticides		Chemistry and classification of pesticides. Interpret the use of pesticide labels	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
AGS171	1992 Fall	Insect Identification		Concepts of insect identification	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
AGS172	1992 Fall	Household Pests		Problems associated with household pests	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
AGS173	1992 Fall	Wood Destroying Pests		Problems associated with wood destroying pests	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
AGS174	1992 Fall	Regulations: Federal and State		Federal and state pesticide regulations and guidelines for licensing pest control use	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
AGS175	1992 Fall	Pesticide Safety and Use of Equipment		Federal and state pesticide safety regulations and use of equipment	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
AGS176	1992 Fall	Environment and Toxicology of Pesticides		Environmental concepts, endangered species and toxicology associated with the use of pesticides	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
AGS177	1992 Fall	Aquatic Pest Control		Aquatic ecosystems, pest organisms and their control	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
AGS178	1992 Fall	General Pest Control		Arthropods and other pest organisms and their control	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
AGS179	1992 Fall	Terrestrial Weed Control		Terrestrial weeds and their control	Prerequisites: None.		Occ	LEC 0.5	S

								0.5 0.5	
AGS182	2001 Summer I	Gardening Practices and Techniques		Cultural practices of vegetables, fruits and ornamental plants as they relate to organic and inorganic gardening	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
AGS182AA	2022 Fall	Gardening Practices and Techniques		Cultural practices of vegetables, fruits and ornamental plants as they relate to organic and inorganic gardening.	Prerequisites: None.	AGS182A A may be repeated for credit.	Occ	LEC 3.0 1.0 1.0 LAB 0.0 4.0 4.0	T
AGS183	2001 Summer I	Urban Plant Identification and Use		Identification, growth, cultural requirements, uses, maintenance, and care of landscape trees, shrubs, vines and ground covers commonly used in Arizona	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AGS183AA	2001 Summer I	Urban Plant Identification and Use: Trees		Emphasis on trees commonly used in cityscapes in the Southwest. Review of their origin, cultural requirements, uses, required maintenance, benefits and disadvantages. Identification, planting procedures, water and nutritional requirements are covered	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AGS183AB	2001 Summer I	Urban Plant Identification and Use: Shrubs		Emphasis on shrubs commonly used in cityscapes in the Southwest. Review of their origin, cultural requirements, uses, required maintenance, benefits and disadvantages. Identification, planting procedures, water and nutritional requirements are covered	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AGS183AC	2001 Summer I	Urban Plant Identification and Use: Vines, Flowers, Groundcovers		Emphasis on groundcovers, annuals, perennials and vines commonly used in cityscapes in the Southwest. Review of their origin, cultural requirements, uses, required maintenance, benefits and disadvantages. Identification, planting procedures, water and nutritional requirements covered	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AGS186	2018 Fall	Greenhouse Management and Construction		Principles and practices of greenhouse operation; control of environmental factors and cultural	Prerequisites: None.		Occ	LEC 3.0 2.0	T

				practices affecting the production of greenhouse crops				2.0 LAB 0.0 3.0 3.0	
AGS186AA	1995 Fall	Greenhouse Management and Construction		Principles and practices of greenhouse operation; control of environmental factors and cultural practices affecting the production of greenhouse crops	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AGS187	1995 Fall	Indoor Foliage Plants		Environmental and nutritional requirements for foliage plants used for interior decoration. Includes identification, nomenclature and uses	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AGS188	2001 Fall	Arid Landscape Plants		Provides information on currently propagated Xerophytes available in southern Arizona. Shows how each can be applied to specific desert landscape situations. Considers identification, cultural requirements, and physical characteristics related to landscape design	Prerequisites: None.		Occ	LEC 3.0 6.0 5.1	S
AGS190	2000 Fall	Arid Land Plants Identification and Use		Covers xerophytes common in southern Arizona and their applications to specific desert landscape situations. Identification, cultural requirements, and physical characteristics related to landscape design, including both mature plants and live containerized material	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AGS192	2021 Fall	Urban Plant Care		Establishment, care and preservation of ornamental trees, shrubs, vines, and ground cover plants used in landscape for human well-being and pleasure.	Prerequisites: None.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AGS192AA	2001 Fall	Urban Plant Care: Site Analysis, Plant Selection and Requirements		Establishment of ornamental trees, shrubs, vines, and ground cover plants used in landscape for human well-being and pleasure	Prerequisites: None.		Occ	LEC 1.0 1.67 1.46	S
AGS192AB	2001 Fall	Urban Plant Care: Maintenance of Urban Plants		Care of ornamental trees, shrubs, vines, and ground cover plants used in landscape for human well-being and pleasure	Prerequisites: None.		Occ	LEC 1.0 1.67 1.46	S

AGS192AC	2001 Fall	Urban Plant Care: Diagnosing and Curing Plant Problems		Preservation of ornamental trees, shrubs, vines, and ground cover plants used in landscape for human well-being and pleasure	Prerequisites: None.		Occ	LEC 1.0 1.67 1.46	S
AGS217	2022 Fall	Introduction to Hydroponics and Controlled Environment Agriculture		Introduction to hydroponics and controlled environment agriculture. Includes a history of hydroponics and basic plant physiology and anatomy. Study of general cultural practices, plant protection, conventional and organic hydroponic production systems. pollination, fertilization and bee management. Provides an overview of plant nutrition and disorders, irrigation systems and nutrients transplant production. Covers greenhouse site selection, structures and control systems, fruit harvest; food handling, safety and marketing and economics of a hydroponic business.	Prerequisites: A grade of C or better in AGS164, or permission of Instructor.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 4.0 4.0	T
AGS255	2018 Fall	Plant Tissue Culture		Plant tissue culture techniques for cloning, reproduction, and manufacturing including media mixing, cell growth and development, aseptic transfer, manipulation, observation, and documentation	Prerequisites: A grade of C or better in AGS164.		Occ	L+L 3.0 5.0 5.0	T
AGS260	2018 Fall	Soils		Fundamental properties of the physical, chemical, and biological relation of soil to plant growth. Evaluation of the human impact on soil health.	Prerequisites: A grade of C or better in CHM130 or permission of Instructor.	Course Attribute(s): General Education Designatio n: Natural Sciences (Quantitati ve) - [SQ]	Occ	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
AGS261	1998 Fall	Soil Fertility And Management		Relationship of soils, crops, and climatic factors to economic use of commercial fertilizer	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AGS262	2021 Fall	Irrigation Design, Installation, Operation, and Trouble Shooting		Design, installation, maintenance and troubleshooting of sprinklers, drip, and flood systems. Use of time clocks, pumps, filters, backflow devices, and other equipment to deliver water to the landscape. Types	Prerequisites: None.		Occ	LEC 3.0 2.0 2.0 LAB 0.0	T

				of water and their use in the landscape.				3.0 3.0	
AGS264	2018 Fall	Irrigation and Water Management		Irrigation and drainage problems relating to pumps, motors, pipe lines, ditches and wells in the Southwest. Installation of sprinkler, drip and subirrigation, time clock installation and repair. Land measurement and principles of land leveling	Prerequisites: None.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AGS265	2023 Fall	Sustainable Crop Production		Study of the importance of crops for food, feed, and fiber. Cultural practices for raising the major crops in the State of Arizona, including planting, environmental modifications, harvesting, handling and quality control with an emphasis on sustainability.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AGS164 or permission of Instructor.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AGS266	1998 Fall	Urban Insect Control		The interrelationship of plant organisms, animals and environments with insects as affected by soils, temperature, water and agricultural chemicals	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AGS267	2018 Fall	Weeds and Plant Diseases of Arizona		Weed identification, relationship to competition, cultural practices, prevention and chemical usage for control. General outline of plant autonomy and physiology relating to chemical usage of selectivity. Diseases of plants, their life cycles, biological interrelationships, identification, and control.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
AGS268	2021 Fall	Integrated Pest Management in the Cultivated Environment		Identification and management of pests of the garden, farm and landscape in the arid west. Special emphasis is given to safe handling of pesticides.	Prerequisites: None.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 4.0 4.0	T
AGS282AA	2013 Summer I	Service-Learning Experience in Agriculture		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	AGS282A A may be repeated for a total of six (6) credit	Occ	LAB 1.0 1.0 0.0	L

						hours. Standard grading available according to procedures outlined in catalog.			
AGS282AB	2013 Summer I	Service-Learning Experience in Agriculture		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	AGS282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 2.0 2.0 0.0	L
AGS282AC	2013 Summer I	Service-Learning Experience in Agriculture		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	AGS282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 3.0 3.0 0.0	L
AGS284	1995 Fall	Lawn and Turf Care		Factors that affect the establishment and maintenance of turf grasses. Includes budgets, schedules and selection of equipment	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AGS285	2018 Fall	Propagation of Horticultural Plants		Principles and processes of propagation of crops using seed, budding, grafting, and cuttings in	Prerequisites: None.		Occ	LEC 3.0 2.0	T

				greenhouse structures and open ground				2.0 LAB 0.0 3.0 3.0	
AGS285AA	2018 Fall	Propagation of Horticultural Plants Structures Media and Management		Design, maintenance and repair of greenhouse structures. Principles of plant propagation media and procedures. The processes involved in nursery management, including plant care, display, and marketing	Prerequisites: None.		Occ	LEC 1.0 0.67 0.67 LAB 0.0 1.0 1.0	T
AGS290	1997 Fall	Internship		Supervised field training for Urban Horticulture students with local industry businesses.	Prerequisites: Student shall be in final semester before graduation and permission of Department or Division.		Occ	LAB 3.0 6.0 0.0	P
AGS296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
AGS296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average		Occ	LAB 2.0 10.0 0.0	Z

					and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
AGS296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
AGS296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals		Occ	LAB 4.0 20.0 0.0	Z

					(students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
AGS298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
AGS298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
AGS298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z

				combined to maximize student development.					
AHU245	2013 Spring	Arabic Culture and Islam		A survey of Arab heritage in the Arab world (Middle East). Cultural and social institutions and their contribution to the development of the region and its heritage.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
AIM100	2020 Fall	Introduction to Artificial Intelligence		Basic concepts and applications of artificial intelligence (AI), including AI project cycles. Focus on issues surrounding AI including ethics, bias, culture, regulations, and professional expectations.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AIM110	2020 Fall	Introduction to Machine Learning		Introduction to machine learning concepts and Python applications, including data acquisition, supervised and unsupervised learning, and data modeling.	Prerequisites: A grade of C or better in AIM100, CIS156 and MAT206.		Occ	L+L 3.0 4.0 4.0	T
AIM111	2025 Fall	Introduction to Data Science		Introduction to the basics of data science, including data handling, problem framing in a data-centric context, the foundational techniques of exploratory data analysis (EDA), data visualization, and data ethics. Students will gain practical experience in using various data science libraries and tools through hands-on exercises and projects.	Prerequisites: A grade of C or better in (CSC101 and AIM100) or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
AIM210	2020 Fall	Natural Language Processing		Fundamental concepts in Natural Language Processing (NLP) and text processing. Focus on knowledge and skills necessary to create a language recognition application.	Prerequisites: A grade of C or better in AIM110.		Occ	L+L 3.0 4.0 4.0	T

AIM220	2020 Fall	Artificial Intelligence for Computer Vision		Understand and apply the basic techniques to process images using OpenCV and Python libraries.	Prerequisites: A grade of C or better in AIM110.		Occ	L+L 3.0 4.0 4.0	T
AIM230	2020 Fall	Artificial Intelligence for Business Solutions		Fundamentals of artificial intelligence (AI) and machine learning to support business solutions.	Prerequisites: A grade of C or better in AIM210 and AIM220.		Occ	L+L 3.0 4.0 4.0	T
AIM240	2020 Fall	Artificial Intelligence Capstone Project		Focus on how a social issue is explored, brought through the Artificial Intelligence (AI) Project cycle, and delivered as a solution using the different domains of AI, including computer vision and natural language processing.	Prerequisites: A grade of C or better in AIM210 and AIM220.		Occ	L+L 3.0 4.0 4.0	T
AIM250	2025 Fall	Machine Learning I		Examination of statistical machine learning algorithms and Python applications with an introduction to deep learning. Emphasis on data input, algorithm selection, hyperparameter tuning, and model evaluation and selection.	Prerequisites: A grade of C or better in [AIM111, (MAT230 or MAT231), MAT225, and MAT206] or permission of Program Director.		Occ	L+L 3.0 4.0 4.0	T
AIR160	2023 Fall	Reservation/Booki ng Procedures		Overview of reservation/booking procedures. Includes use of availability displays, seating assignments, booking procedures, and fare rules as well as fare pricing and selling. Communication skills also covered.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AIR161	2023 Fall	Airline Reservations Systems		Practical application of a travel booking procedures using a computerized reservations system. Covers codes, Passenger Name Record, booking, and reservations.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AIR160 or permission of Instructor.		Occ	L+L 2.0 3.0 3.0	T
AIR163	2023 Fall	Advanced Airline Reservations		Rules, restrictions, and procedures for handling special reservations situations and managing codeshare accounts and award plans. Also includes international travel procedures and partner carriers.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AIR160 or permission of Instructor.		Occ	L+L 2.0 3.0 3.0	T

AIR165	2023 Fall	Overview of Flight Schedules/Itineraries		Basic reservation information including flight schedules, itineraries, and fares. Handling travel agent calls also covered.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AIR170	2009 Summer I	International Air Transport Association Geography		Overview of world geography according to the International Air Transport Association (IATA). Includes world traffic area divisions, sub areas and office responsibilities. Also covers atlas reading including location of countries, major cities and grids in addition to use of city codes.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AIR171	2009 Summer I	International Air Transport		International air reservations procedures. Includes Passenger Name Record (PNR) creation and modification as well as use of availability displays and international itineraries. Covers preferred programs and partnerships.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AIR172	2009 Summer I	International Fares		Overview of international fares. Includes fare basis codes, combinability and construction. Also covers transpacific routing and electronic tickets as well as procedures for completing international reissues.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AIR173	2018 Fall	International Air Transport Lab		Practical application of international air reservations procedures. Includes Passenger Name Record (PNR) creation and modification as well as use of availability displays and international itineraries.	Prerequisites: None.		Occ	LAB 2.0 6.0 6.0	T
AIS101	2013 Summer I	Survey of American Indian Issues		Introduction to critical issues related to American Indian peoples. Examines cultural, political, economic, educational, social, and environmental issues. Focuses on contemporary issues and factors influencing American Indian communities.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Social and Behavioral	Acad	LEC 3.0 3.0 3.0	S

						Sciences - [SB]			
AIS103	2019 Summer	Introduction to Indigenous Cultures		Introduction to political, economic and social structures of indigenous peoples. Examines the impact on indigenous peoples of contact with non-indigenous cultures.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
AIS105	2013 Summer I	Introduction to American Indian Studies	SOC105	Introduction to political, economic, and social structures of American Indian Nations. Provides overview of American Indian tribal cultures prior to contact, the impact of European contact, and the influence of western social systems on tribal nations.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
AIS110	2006 Fall	Navajo Government		Addresses and examines major historical developments of the Navajo People with a focus on government, law, society, livelihood, tradition, and culture. Includes the major components and operation of Navajo government and related tribal laws, such as Title II and Title VII of the Navajo Nation Code, as well as the significance of the Treaty of 1868. Federal Indian policies and their impact on Navajo society and government, the importance of federal and tribal citizenship and related federal and tribal laws, and the role of the Navajo clanship system and other relevant cultural concepts addressed	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Historical Awareness - [H]	Acad	LEC 3.0 3.0 3.0	S
AIS112	1999 Spring	American Indian Policy	SOC112	Reviews United States government policies and their impact on American Indian sovereignty. Examines historic, legal, economic, and social issues regarding Indian policies and how they impact Indian Nations and individual Indians. Studies historical as well as contemporary policies created by the Federal Government that define the trust relationship between the United States government and Indian Nations	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
AIS113	2023 Fall	Proposal Writing		Provides an overview of funding sources for grants. Reviews techniques and skills necessary to	Prerequisites: A grade of C or better		Acad	LEC 3.0	S

				develop successful proposals. Focuses on the design and writing of a complete grant proposal related to a selected problem or issue.	in ENG101 or ENG107.			3.0 3.0	
AIS140	2023 Fall	American Indian History	HIS140	Survey of American Indian history with emphasis on the last 200 years. Focuses on cultural, economic, political and social continuity and changes. Topics include how federal policies impacted and were shaped by Indigenous peoples and how Indigenous individuals, communities, and nations have maintained cultural identity and sovereignty.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
AIS141	2003 Spring	Sovereign Indian Nations	SOC141	Explores the sovereign status of American Indians as it relates to social relationships, traditions, and culture of American Indians. Reviews historic relations with non-Indian societies, the development of federal Indian law, tribal governments and their functions. Examines treaty rights, environmental issues, public policy, economic development, other current issues, and contemporary social problems	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Cultural Diversity - [C] General Education Designatio n: Historical Awarenes s - [H] General Education Designatio n: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
AIS160	2017 Summer	American Indian Law	SOC160	Analyzes the legal system of the United States Government as it applies to American Indian Nations. Examines how United States legal institutions have impacted Indian sovereignty. Units of analysis include the development of Indian law, United States Supreme Court decisions, Congressional Acts, treaty rights and	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Cultural Diversity - [C] General	Acad	LEC 3.0 3.0 3.0	S

				the development of tribal governments. Focuses on legal institutions that have abridged the property rights of Indian Nations.		Education Designation: Historical Awareness - [H]			
AIS170	2023 Spring	American Indian History of the Southwest	HIS170	Covers history of American Indian Peoples of the Southwestern United States from pre-European contact era to the present. Includes historical events, the development and implementation of non-Indigenous policies and their impact on American Indian Peoples in these areas, and contemporary issues of importance.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
AIS201	2023 Fall	Indigenous Nation Building		Discussion of the relationship between general management issues and their specific application to tribal government situations. Special consideration given to application of management theory and to the unique status and situation of tribal governments.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
AIS203	2023 Fall	Fundamentals of Economic Development for Indigenous Nations		Provides a practical understanding of the economic development process. Examines ways in which development can be initiated and financed. Focuses on how budget systems can be used as management tools. Reviews fundamentals of proposal writing and budget management for grants.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
AIS210	2025 Fall	Multicultural Representation in the History of STEM	AFR/CCS/ETH210	Aims to fill a gap by exploring the perspectives, experiences, and contributions of individuals from various cultural backgrounds in the study of science, technology, engineering, and mathematics (STEM). Analyzes and synthesizes how different cultures have shaped scientific knowledge, examining the impact of diversity on innovation and problem-solving, and addressing barriers faced by underrepresented groups in STEM fields.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

AIS213	2013 Summer I	American Indian Religions	REL203	An examination of the historical and cultural background of diverse lifeways and worldviews belonging to the peoples indigenous to the North American continent over time, including a study of modern day American Indian beliefs and practices.	Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
AIS261	2024 Fall	Indigenous Women's Literature of the Americas	ENH/WST261	Explores contemporary voices of Indigenous women authors and artists in the Americas as expressed in poetry, fiction, nonfiction, drama, and oral traditions. Focuses on themes relevant to Indigenous women and examines the trends and movements within Indigenous peoples and women's literary history. Examines themes relevant to Indigenous women such as racial and gender oppression, reservation life, acculturation, and their sociopolitical activism in the Americas.	Prerequisites: A grade of C or better in ENG101 or ENG107.		Acad	LEC 3.0 3.0 3.0	S
AIS282AA	2008 Spring	Volunteerism for Indigenous Studies		Service-learning field experience within private/public agencies, educational institutions, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	AIS282AA may be repeated for a total of six (6) credit hours.	Acad	LAB 1.0 1.0 0.0	L

AIS282AB	2008 Spring	Volunteerism for Indigenous Studies		Service-learning field experience within private/public agencies, educational institutions, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	AIS282AB may be repeated for a total of six (6) credit hours.	Acad	LAB 2.0 2.0 0.0	L
AIS296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
AIS296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or		Acad	LAB 2.0 10.0 0.0	Z

					career interest or with permission of the Instructor.				
AIS296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
AIS296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z

AIS298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
AIS298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
AIS298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
AIT100	2022 Fall	Industrial Safety		Introductory course in workplace safety training, including an overview of critical safety policies, procedures, and practices that help prevent injuries and keep the workplace safe and productive.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AIT101	2022 Fall	Introduction to Industrial Automation		Introductory course in manufacturing automation systems and technologies. Includes safety practices, quality measurement, print	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	T

				reading, machine operation, hand tool usage, and maintenance operations.				LAB 0.0 2.0 2.0	
AIT105	2022 Fall	Modern Maintenance Operations		Introductory course into the practice of modern maintenance operations. Includes: safely and correctly using maintenance tools (e.g., hand tools, power tools), measuring instrumentations (e.g., tape, caliper, micrometer) and reading various engineering documents (e.g., blueprints, flowcharts, parts diagrams). Use and convert units in System International (SI) and imperial. Basic discussion of industrial safety procedures, machine operations, troubleshooting, failure analysis, modern maintenance principles, rigging, workplace organization, and records keeping.	Prerequisites: None.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AIT110	2022 Fall	Mechanical Power Transmission Systems		Introductory course in how to transmit, measure, calculate, and work safely with rotational mechanical equipment. Hands-on assembly, alignment, maintenance, and troubleshooting of mechanical power transmission systems and components e.g., belts, bearings, chains, dynamometers, gears, pulleys, couplings, bushings, and sprockets. Introduction to lubricant and grease types, their standards, safety, and application.	Prerequisite: None.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AIT112	2025 Spring	Natural Gas Pipeline Operations		Introduction to the fundamentals of the natural gas pipeline operations. Includes topics such as damage prevention, emergency response, valve operation, and testing of facilities. This course prepares students for the Non-Joiner Operator Qualification in the natural gas pipeline industry.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AIT113	2025 Spring	Natural Gas Pipe Joiner		Principles and practices of plastic pipe joining in the natural gas industry. Includes pipe joining	Prerequisites: None.		Occ	LEC 3.0	S

				techniques such as solvent cements, heat fusions, mechanical saddle fittings, and compression couplings. This course prepares students for Pipe Joiner Qualification in the natural gas industry.				3.0 3.0	
AIT115	2022 Fall	Hydraulic Systems		Introductory course in the principles of hydraulic system operation, components construction, maintenance, troubleshooting, and operation, as well as the role of the individual components in an operating hydraulic system. Includes hydraulic fitting and seals, accumulators, cylinders, directional control valves (DVC), relief valves, check valves, pumps, filters, hoses, and a variety of hydraulic control circuits.	Prerequisites: None.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AIT117	2024 Fall	Introduction to Data Center Operations		Provides the foundational aspects of data center fundamentals, data center compliance, operations, and physical infrastructure. Introduces mission critical operations (MCOs) as they apply to data centers. Includes an overview of the physical components of a data center, its interoperability, and the usage of data center equipment.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
AIT120	2022 Fall	Pneumatic Systems		Introductory course in the principles of pneumatic system operation, components construction, maintenance, troubleshooting, and operation, as well as the role of the individual components of an operating pneumatic system. Includes pneumatic fitting, seals, accumulators, actuator/cylinders, Directional Control Valves (DCV), manifolds, relief valves, check valves, pumps, filters, regulators, dryers, and common pneumatic control circuits.	Prerequisites: None.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AIT123	2021 Spring	J-STD Soldering Certification		This course will prepare the successful student to receive the "Certified IPC Specialist" (CIS) certification from The Institute for Interconnecting and Packaging	Prerequisites: Permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

				Electronic Circuits (IPC) in "Requirements for Soldered Electrical and Electronic Assemblies" (IPC J-STD-001). Topics covered and skills to be demonstrated are: soldered wires and terminals, through hole connections, surface mount components, and inspection. Certification is verified by a certified IPC trainer (CIT).					
AIT124	2021 Spring	Composites		Basic composite materials, construction, and repair. Manufacturing methods and equipment. Assessment and repair of composite structures using vacuum bagging and other approved procedures. Corrosion control, electrical bonding, materials substitutions, machining of composite components, mold fabrication. Hot bond repair of composite components including complex shapes and varied materials.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
AIT125	2022 Fall	DC and AC Components and Circuits		An introductory course in Alternating Current (AC) and Direct Current (DC) electric theory. Includes electric circuits using resistors, capacitors and inductors. Also includes solenoids, relays, transformers, basic DC and AC motors, circuit protection devices and a variety of switches.	Prerequisites: None.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AIT126	2025 Spring	Energy Industry Fundamentals		Various types of energy and their conversion to useable energy such as electrical power. How generated electrical power is transmitted and distributed to the point of use.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AIT127	2025 Spring	Power Plant Components		Theory, construction and application of basic power plant mechanical components. Basic concepts of electrical fundamentals and electronics discussed.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
AIT128	2019 Summer	A-620 Cable and Wire Harness Assembly Certification		This course will prepare the successful student to receive the "Certified IPC Specialist" (CIS) certification from The Institute for Interconnecting and Packaging	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T

				Electronic Circuits (IPC)/Wire Harness Manufacturer's Association (WHMA) in "Requirements and Acceptance for Cable and Wire Harness Assemblies" (IPC/WHMA-A-620 Certification). Topics covered and skills to be demonstrated are: soldered terminations, crimp terminations, insulation displacement terminations (IDC), splices, connectorization, marking/labeling, coaxial cable assemblies, electrical shielding, wire marking and labeling, and testing methodologies. Certification is verified by a certified IPC trainer (CIT).					
AIT130	2019 Fall	Maintenance Piping		Overview of the area of maintenance of piping systems for manufacturing or industrial facilities. Preparation to sit for the NIMS Duty Area 9: Maintenance Piping Certification Exam.	Prerequisites: None.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AIT132	2022 Spring	Industrial Technology for the Semiconductor Industry		Introduction to semiconductor manufacturing concepts, processes, and hands-on application. Includes electrical theory, circuits, schematics, hand tools, safety, clean room protocols, model based problem solving, lean manufacturing, vacuum technology, and troubleshooting.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
AIT205	2022 Fall	Power Electronics and Variable Frequency Drives		Introductory course in AC and DC power electronic theory. Includes power supplies, power conditioning, solid-state power devices, and power control circuits. Also includes proximity sensors, analog thermal sensors, control feedback loops, and the setup and operation of Variable Frequency Drives (VFDs).	Prerequisites: A grade of C or better in AIT125, or permission of Instructor.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AIT210	2022 Fall	Programmable Logic Controller Programming and Troubleshooting		Introductory course in Programmable Logic Controller (PLC) Ladder Logic programming and troubleshooting PLC connected components and systems. Also includes basic Human	Prerequisites: A grade of C or better in AIT125, or permission of Instructor.		Occ	LEC 3.0 2.0 2.0 LAB	T

				Machine Interface (HMI) navigation, connecting to a PLC, and program downloading.				0.0 3.0 3.0	
AIT212	2025 Spring	Valve Maintenance II		Fundamentals of hand lapping. Dexter and Unislip resurfacing tools. Valve packing: purpose, components and specifications. Valve survey data sheet. Procedure for field manufacture of die-formed packing rings. Function of the Optical Flat. Valve inspection. Gaskets and torquing techniques.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AIT213	2025 Spring	Pumps II		Rotary, reciprocating and centrifugal pump operation. Positive displacement and metering pump operation. Diaphragm pulsafeeder operation. Disassembly, inspection and reassembly of radially and axially split centrifugal pumps. Troubleshooting and lab safety.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AIT215	2022 Fall	Process Control Systems		Introductory course in Process Control Systems design, operation, and tuning of Proportional, Integral, Derivative (PID) controllers for regulating flow, temperature, pressure, and level of industrial process variables. Includes manual control, feedback control, automated controls, analysis process setup, operate, and troubleshooting processes of control systems. Also includes typical Pipe and Instrument Diagram (P&IDs) symbols and tags along with the development of a basic P&ID drawing.	Prerequisites: A grade of C or better in AIT125, or permission of Instructor.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 4.0 4.0	T
AIT225	2022 Fall	Industrial Motors and Motor Control		An introductory course in DC, single-phase AC, and 3-phase AC electric motors and motor control circuits. Includes electric motor control circuit components, motor control circuit applications, sequence circuits, and timer circuits.	Prerequisites: A grade of C or better in AIT125, or permission of Instructor.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AIT227	2024 Fall	Power Distribution Systems		Introduces transmission and distribution of electrical power. Includes application of transformers,	Prerequisites: A grade of C or better in AIT125.		Occ	LEC 3.0 2.0	T

				distribution and over-current protection devices, switchboards, feeders, bus-ways, motor control centers, generators, and troubleshooting techniques associated with these systems and devices.				2.0 LAB 0.0 3.0 3.0	
AIT250	2019 Fall	Automated Industrial Technology Capstone		An examination of the integration of mechanical, hydraulic, pneumatic, electrical, piping, electronic control, and process control systems. Experience in designing, building, maintaining, troubleshooting, and repairing such integrated systems will be gained.	Prerequisites: A grade of C or better in AIT225, or permission of Instructor or Corequisites: AIT225.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AIT270	2022 Spring	Robotics I		Fundamental principles of working safely with robots, and applications and trends in industrial robotics. Includes types of robots, axes and coordinate systems, programming and operating robots. Incorporates end effectors and collaborative robots.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AIT100 or permission of Instructor.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 2.0 2.0	T
AIT275	2024 Fall	Robotics II		Intermediate principles of working safely with robots; robot auxiliary, subsystems, and components. Includes robot maintenance, troubleshooting and repair. Integrates a basic robot design project.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AIT270.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 2.0 2.0	T
AIT276	2020 Fall	Robotics Operations and Programming		This course is intended for an operator, technician, or programmer who must setup, record and/or troubleshoot programs on a Handling Tool software package. The course covers the Robot Operations intermixed with the tasks required to set up the Handling Tool application, test run, and refine the program and production setup.	Prerequisites: A grade of C or better in (ATP190, ATP201, and ATP205) or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AIT280	2022 Fall	Industry 4.0 and Industrial Control Systems		Introductory course in Industry 4.0, physical processes within factories, and the virtualization techniques and intelligent decision making capabilities. Includes Cyber-Physical	Prerequisites: A grade of C or better in AIT125, or permission of Instructor.		Occ	LEC 3.0 2.0 2.0 LAB	T

				Systems (CPS), Supervisory Control and Data Acquisition (SCADA), Distributed Control Systems (DCS), Smart Factories, lean manufacturing, and the Internet of Things (IOT). Also includes an introduction and setup of SCADA software.				0.0 3.0 3.0	
AIT285	2022 Fall	Sensors and Data Acquisition		Introductory course in sensors and data acquisition. Includes sensor types, function, installation, adjustment, and maintenance. Also includes a brief overview of sensor signal conditioning, data acquisition configuration, chart recorder operation, and data storage.	Prerequisites: A grade of C or better in AIT125, or permission of Instructor.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
AIT291	2019 Fall	Automated Industrial Technology Internship		Supervised work experience in production environments. Includes experiences in maintenance, troubleshooting, repair of production environment and specific manufacturing processes. Also includes experiences in problem solving; working as a team; soft skills; time and resource management; and exposure to specific manufacturing processes.	Prerequisites: A grade of C or better in AIT225, or permission of Instructor or Corequisites: AIT225.		Occ	LAB 3.0 6.0 0.0	C
AIT298AA	2022 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
AIT298AB	2022 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				aspects of independent study and individualized learning to be combined to maximize student development.					
AIT298AC	2022 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
AJS100	2016 Summer	Police Academy Preparation		Preparation for individuals entering a police academy as well for those who are in the beginning stages of preparing for a career in law enforcement. Includes principles of policing and job responsibilities. Covers expectations of recruits in the areas of academics, physical fitness, mental and emotional preparation. Emphasis on professional and ethical behavior.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
AJS101	2025 Fall	Introduction to Criminal Justice		An introduction to crime and society's responses to it. Examines the nature and causes of crime, the criminal law, constitutional safeguards, and the organization and operation of the criminal justice system including the police, courts, jails, prisons, probation and parole departments, and community corrections agencies. Covers the history of the criminal justice system, terminology and career opportunities.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS107	2024 Fall	Patrol Procedures		Specialized areas of the patrol function, including responding to crowds, riots, bomb threats, intoxication, hazardous materials, fires, and domestic disputes.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS109	2020 Fall	Substantive Criminal Law		Covers philosophy of legal sanctions and historical development from the	Prerequisites: None.		Occ	LEC 3.0	S

				common law to modern American criminal law, classifications of crimes, elements of and parties to crimes, general definition of crimes, common defenses utilized. Includes specific offenses and the essential elements of each offense.				3.0 3.0	
AJS110	1997 Fall	Law and Legal Review I		In-depth study of the Arizona laws governing arrest by peace officers, as well as, an intensive study of the Arizona substantive criminal law code (ARS Title 13). Focuses on specific sections of ARS Title 4 and ARS Title 8, as they apply to peace officers in Arizona. Partially fulfills the Arizona POST (Peace Officer Standard and Training) Board requirements for Proficiency Skills Academy attendance	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS112	2018 Fall	Wellness for Law Enforcement Officers		The value of physical fitness in law enforcement and the basic elements of strength training, aerobic conditioning, flexibility, nutrition, and back injury prevention	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
AJS113	2023 Fall	Criminal Justice Crime Control Policies and Practices		Focus on changing the distribution of crime opportunities rather than offender motivation. Topics include application of situational crime prevention strategies, problem-oriented crime control approaches, hot spots policing, and crime prevention through environmental design.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS115	2020 Fall	Community Emergency Response Team (CERT): Level I	FSC115	Basic skills, including instruction in teamwork and disaster simulations, needed to help oneself, family, and neighbors in the event of a community disaster in accordance with the Federal Emergency Management Agency (FEMA) guidelines.	Prerequisites: None.		Occ	LEC 1.5 1.5 1.5	S
AJS116	2009 Fall	Crime Prevention		Examines the principles and skills associated with crime prevention. Analyzes the appropriate techniques and strategies police agencies use to operate crime prevention programs.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

AJS119	2018 Fall	Computer Applications in Justice Studies		Provides literacy in microcomputer applications in major areas of the criminal justice system. Examines availability and uses of current software packages in criminal justice work. Provides hands-on experience with appropriate integrated software packages pertaining to justice studies.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
AJS123	2024 Fall	Ethics and the Administration of Justice		Introduces and explores ethical issues and the justice system. Focuses on ethics and the law, the police, courts and corrections. Reviews ethical theory, concepts and practices as they relate to administration of justice. Explores issues of how media/social media shape ethics. Encourages critical thinking and value decision making in criminal justice system situations.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS124	2025 Fall	Correctional Institutions		An examination of correctional institutions with an emphasis on security measures, inmate classification, culture, employment, education, treatment programs, and institutional planning.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS131	2025 Fall	Police Management Techniques I		Police supervisory techniques related to employee grievances, internal investigations, counseling personnel, discipline, organization, and coordination, as well as communication and leadership styles.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS132	2025 Fall	Police Management Techniques II		Supervision in a law enforcement organization including accountability, transparency, leadership and management of personnel issues.	Prerequisites: A grade of C or better in AJS131 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
AJS137	2021 Fall	Public Safety Dispatcher: Basic		Designed to provide in-depth orientation and standardized training of public safety dispatchers within the law enforcement community and familiarize the student with the skills and information important to functioning in a competent, ethical, and professional manner.	Prerequisites: None.		Occ	LEC 5.0 5.0 5.0	S

AJS139	2020 Fall	Emergency Response to Terrorism	FSC139	Fundamentals of emergency response to suspected terrorist events. Historical perspective of terrorist activities and methods by which responders can identify and protect themselves and the public from these threats. Coordination of responding agencies.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS140AA	1999 Fall	Patrol Rifle Concepts		Pre-law enforcement employment course relating to how rifles are used in the patrol function	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AJS146	2021 Fall	Disaster Recovery Operations	FSC146	Specialized knowledge and skills for the emergency manager in developing programs and activities associated with disaster recovery assistance and mitigation actions that reduce losses from future disasters.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS147	2020 Fall	Emergency Preparedness	FSC147	Emergency preparedness related to natural and manmade disasters. Planning concepts and the planning process; awareness and education programs and strategies for the general community as well as business and industries.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS148	2020 Fall	Fundamentals of Emergency Management	FSC148	Emergency management systems including career opportunities, function, tasks and responsibilities of the emergency management program manager, role of the emergency manager in mitigation, preparedness, response, and recovery. Past civil defense and current emergency management systems since evolution from World War II.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS149	2020 Fall	Hazard Mitigation	FSC149	Knowledge and skills required to develop programs to reduce losses from future disasters, emergencies, and other extreme events caused by natural and man-made hazards.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS150	1995 Spring	Defensive Tactics		Skills in the protection against persons armed with dangerous and deadly weapons, demonstration and drill in a limited number of holds and come-alongs, and restraint of prisoners and the mentally ill.	Prerequisites: None.	AJS150 may be repeated for a total of three	Occ	LEC 1.0 1.0 1.0	S

						(3) credit hours			
AJS151	2018 Fall	Firearms I		Moral aspects, legal provisions, safety precautions and restrictions covering the use of firearms, and the firing of sidearms.	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
AJS152	1996 Summer I	First Aid		Methods for providing emergency medical care to victims of accidents or illness and related safeguards. Includes legal and civil issues, basic functions and major organs of the human body, injury management, resuscitation, movement and extrication of victims	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS153	2025 Fall	Firearms II/Handguns		Advanced familiarization with handguns. Variations of basic shooting stance. Legal and moral repercussions of self-defense. Includes range practice.	Prerequisites: A grade of C or better in AJS151 or equivalent certified firearms training as reviewed by the Department.		Occ	L+L 1.0 1.0 1.0	T
AJS154	2025 Fall	Firearms III/Long Weapons		Familiarization with different types of long weapons and associated ammunition. Emphasis on safety techniques for use and storage of weapons. Limited use of range for practice.	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
AJS155	2018 Fall	Concealed Weapons Carry		Training in safe handling and use of handguns. Examines legal provisions related to carrying a concealed weapon; legal and moral implications of self-defense	Prerequisites: None.		Occ	L+L 2.0 2.0 2.0	T
AJS156	2018 Fall	Home and Vehicle Personal Defense		Development of personal safety plans, confrontation avoidance, and effective self-defense tactics. Legal and safe use of firearms. Includes range practice	Prerequisites: A grade of C or better in AJS151 or permission of Instructor.		Occ	L+L 1.0 1.0 1.0	T
AJS162	2025 Fall	Domestic Violence		Explores domestic violence as a social problem within the United States from historical, cultural, political, legal, and law enforcement perspectives. Provides an overview of theories, definitions and causes of, and interventions for domestic violence involving spousal, elder and child abuse along with teen dating	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				violence. Examines the dynamics and effects of domestic violence. Addresses research issues and contemporary domestic violence policy.					
AJS170	2025 Fall	Fire and Arson Investigation for Law Enforcement		An examination of fire and arson investigative techniques along with the motives and pathology of the arsonist and the chemistry of fire. Other topics include documenting the scene, evidence, eliminating accidental causes and surveillance.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS191	2007 Summer I	Hate Crimes		Explores the causes, incidence rates and forms of hate crimes in the United States and other countries. Studies hate crime laws and the Constitution. Examines the impact of hate crimes on society, culture and the law. Considers societal responses to combat and prevent hate crimes	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS192	2025 Fall	Serial Killers and Mass Murderers		The study of serial killers, mass murderers and their victims. Examines the history and frequency of these crimes, profiles the killers and their victims, explores theories of causation, and discusses the problems and techniques of investigation, prosecution, punishment, and prevention.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS195	2025 Fall	International and Domestic Terrorism		An overview of the history, structure, goals, and activities of domestic and international terrorist groups. Explores theories explaining terrorism and reviews methods used to combat it.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS198AB	2023 Fall	Special Topics in the Administration of Justice		Explores special topics related to the administration of justice with an emphasis on current issues.	Prerequisites: None.	AJS198A B may be repeated for a total of nine (9) credit hours.	Occ	LEC 1.0 1.0 1.0	S
AJS198AF	2023 Fall	Special Topics in the Administration of Justice		Explores special topics related to the administration of justice with an emphasis on current issues.	Prerequisites: None.	AJS198A F may be repeated for a total of nine (9)	Occ	LEC 3.0 3.0 3.0	S

						credit hours.			
AJS200	2018 Summer	Current Issues in Criminal Justice		Examines current issues, techniques and trends in the Criminal Justice System.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS201	2018 Fall	Rules of Evidence		A practical insight into the rules of evidence to include how to recognize evidence: the general rules governing admissibility of evidence; the hearsay rule and its exceptions; the use of documentary evidence, written memoranda, photographs, recordings and electronic surveillance; corpus delicti; opinion evidence, circumstantial evidence, evidential privileges.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS205	2019 Summer	Effective Communication and Report Writing in Criminal Justice		Overview of effective communication for criminal justice agencies. Covers the communication process and flow. Written communication emphasized with report writing, including characteristics of reports and field notes, and the importance and uses of each. Form, style, and procedures for writing various reports, including elements of composition, required substance, proper and improper conclusions, and descriptions of persons and property.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS210	1995 Fall	Constitutional Law		An examination of the U.S. Constitution as it relates to the law enforcement function. Includes statutory law and judicial decisions governing the areas of arrest, search and seizure, interrogations and confessions, self-incrimination and other constitutional guarantees. Required in AJS curriculum	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS211	2025 Fall	Police Planning		An analysis of the process of planning, and a descriptive study of logical and systematic approaches to strategic, short-range, operational, organizational and tactical planning within a law enforcement organization.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

AJS212	2023 Fall	Juvenile Justice Procedures		Examines the nature and extent of juvenile delinquency to the present. Including but not limited to the history, jurisdictions, terminology, procedures, and institutions of the juvenile justice system.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS213	2025 Fall	Evidence Technology: Fingerprints		Covers the fundamental principles of fingerprints, including the history of fingerprint classification, the biology of friction ridge skin, pattern analysis, comparison, and identification as well as their application in significant court cases. Also includes techniques for obtaining inked prints and developing and preserving latent prints.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS213AB	2023 Fall	Fingerprint Classification I		Identification of typelines, deltas, and cores. Rules for classification of loops, whorls, and arches.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AJS214	2024 Fall	Evidence Technology/Photo graphy		The use of photography and other aids in identification and preservation of evidence such as fingerprints, footprints, and impressions. Techniques in crime scene and traffic accident photography.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS215	2000 Fall	Criminalistics: Physical Evidence		The scientific analysis and examination of physical evidence with emphasis on scientific investigation, recognition, collection, and preservation of evidence. Topics include fingerprints, shoe prints, tool marks, firearms identification, paint chips and arson	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS216	2000 Fall	Criminalistics: Biological Evidence		The scientific analysis and examination of biological evidence with emphasis on collection and preservation of evidence. Topics discussed include blood, drugs, blood alcohol, hairs and fibers, and topics of special interest in criminalistics	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS218	1995 Fall	Special Investigations: Drugs		Advanced course in the specialized investigation area of drug enforcement. Emphasis on the pharmacological propertiew of abused drugs, field testing, evidence requirements and specialized	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				investigation techniques utilized in narcotic and dangerous drug investigations					
AJS219	2025 Fall	Crime Scene Technology: Physical Evidence		Scientific analysis and examination of physical evidence with emphasis on scientific investigation, recognition, collection, and preservation of evidence. Fingerprints, shoe prints, tool marks, firearms identification, paint chips and arson.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
AJS220	2022 Spring	Transnational Organized Crime		The study of organized crime on a domestic and global scale. Examines the history, structure, and activities of domestic and transnational organized crime groups. Explores domestic and global responses to transnational organized crime, along with accompanying challenges and future implications.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS223	2016 Spring	Forensic Pathology: Death Investigation		An examination of the medical investigation of sudden, unnatural, unexplained or violent deaths. Explains the legal and medical roles of death investigators and medical examiners. Additional topics include the autopsy, documenting and evaluating the body, routine and special investigative techniques, and death event reconstruction.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS225	2023 Fall	Criminology		Study of deviance, society's role in defining behavior; theories of criminality and the economic, social, and psychological impact of crime; relationships between statistics and crime trends. Examines crime victimization and the various types of crime and categories of offenders. Required in the AJS curriculum.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS230	2025 Spring	The Police Function		An examination of the history, organization, procedures, and methods of operation of public policing in the United States. Career opportunities and current challenges in law enforcement presented.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

AJS240	2023 Fall	The Correction Function		Examines the history and development of correctional theories and institutions.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS241	2000 Fall	Police Photography		Emphasis on proper procedure for photographing crime scenes, accident scenes, and laboratory specimens. Discussion of photographic techniques, equipment, lighting techniques, aerial photography, video and motion pictures, macro and micro photography, filters, and preparation for court presentation using selected simulations	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS243	2006 Spring	Crime Scene Reconstruction		Examines techniques used to reconstruct the physical actions that occurred at a crime or accident scene. Involves the use of physical, testimonial, and documentary evidence, knowledge of criminal modus operandi and the scientific method, including deductive and inductive logic. Includes analysis of case studies.	Prerequisites: A grade of C or better in AJS215 or AJS216 or AJS219 or AJS275 or FOR105 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
AJS255	2024 Fall	Mental Health Conditions and the Criminal Justice System		An introduction to methods police, court, and correctional personnel employ specific to those with mental health conditions. Covers various types of mental health conditions and police emergency responses to persons in crisis. Examines how criminal and civil courts intersect with persons diagnosed with mental disorders; includes diversion programs and the correctional response both within the community and under confinement.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS256	2020 Fall	Law Enforcement Firearm Instructor	LET256	A train the trainer course for police firearm instructors. Covers instructional techniques for the pistol, revolver, and shotgun.	Prerequisites: AzPost (Peace Officer Standard and Training) Certified Police General Instructor or permission of Department or Division.	AJS/LET2 56 may be repeated for Credit.	Occ	LEC 5.0 5.0 5.0	S

AJS256AA	2020 Fall	Law Enforcement Patrol Rifle Instructor	LET256AA	Techniques on proper manipulation and marksmanship skills needed by a patrol officer/deputy in the use of the patrol rifle, and techniques of teaching those skills to other officers/deputies.	Prerequisites: AzPOST (Peace Officer Standard and Training) certified law enforcement firearms instructor or permission of Instructor.	AJS/LET256AA may be repeated for Credit.	Occ	LEC 3.0 3.0 3.0	S
AJS258	2023 Fall	Victimology and Crisis Management in Public Safety	EMT/FSC258	Victimology, the criminal justice system, techniques of crisis intervention and management, and the importance of a multicultural and global perspective. Includes violent crimes, sexual assault, family violence, post-traumatic stress disorder, the role of substance abuse, developing effective coping skills of victims and responders, appropriate community resources, and the cultural responsiveness of the justice system.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS260	2022 Fall	Procedural Criminal Law		Concerned with the understanding of procedural criminal law. Examines the processes and procedures followed by law enforcement, attorneys, and the courts in the apprehension and prosecution of criminal offenders. Examines the rationale underlying major court holdings impacting the criminal justice process, the procedural requirements that stem from these holdings and their effect on the daily operations of the criminal justice system.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS269AA	2025 Spring	Internship		Supervised field training for pre-service administration of justice students with an approved criminal justice agency.	Prerequisites: Student sponsored by criminal justice agency, permission of Program Director or Division Chair required.	Students are required to complete a minimum of twenty (20) hours while participating in the internship	Occ	LAB 1.0 1.25 0.0	C

						at the criminal justice agency. AJS269A A may be repeated for a total of three (3) credit hours.			
AJS269AB	2025 Spring	Internship		Supervised field training for pre-service administration of justice students with an approved criminal justice agency.	Prerequisites: Student sponsored by criminal justice agency, permission of Program Director or Division Chair required.	Students are required to complete a minimum of forty (40) hours while participating in the internship at the criminal justice agency. AJS269A B may be repeated for a total of four (4) credit hours.	Occ	LAB 2.0 2.5 0.0	C
AJS269AC	2025 Spring	Internship		Supervised field training for pre-service administration of justice students with an approved criminal justice agency.	Prerequisites: Student sponsored by criminal justice agency, permission of Program Director or Division Chair required.	Students are required to complete a minimum of sixty (60) hours while participati	Occ	LAB 3.0 4.0 0.0	C

						ng in the internship at the criminal justice agency. AJS269A C may be repeated for a total of six (6) credit hours.			
AJS270	2025 Fall	Community Relations		Examination of community problems; community action programs and trends; human behavior, conflict and communication; and the relationship between the criminal justice system and community.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS275	2025 Fall	Criminal Investigation I		Introduction to the theory of criminal investigation. Examines crime scene procedures, case preparation, interviewing, identification, and basic investigative techniques.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AJS276	2021 Summer	Terrorism Liaison	FSC276	Provides knowledge and skills required for the Terrorism Liaison Officer (TLO) role to coordinate and communicate with various fire, police, and military agencies in managing threat vulnerability and other emergency disasters.	Prerequisites: Permission of Program Director.	AJS/FSC276 is not open to the public.	Occ	L+L 4.0 4.0 4.0	T
AJS277	2021 Summer	Threat Vulnerability Assessment	FSC277	Provides a historical perspective of threats and the activities and methods used by first responders to identify and mitigate future threats. Introduces and examines threat vulnerability of critical infrastructure within jurisdictions. Provides assessment techniques for responding agencies.	Prerequisites: Permission of Program Director.	AJS/FSC277 is not open to the public.	Occ	L+L 1.0 1.0 1.0	T
AJS278	2021 Fall	Hostile Intent and Intervention Training	FSC278	Provides knowledge and skills required to detect and anticipate terrorist activities as a member of a Hostile Intent and Intervention Team (HIIT).	Prerequisites: Permission of Program Director.	AJS/FSC278 is not open to the public.	Occ	L+L 2.0 2.0 2.0	T

AJS279	2021 Fall	Field Intelligence Team Training	FSC279	Provides knowledge and skills required for situational awareness of suspicious activities and the deployment of first responders for mitigation and investigation for the Field Intelligence Team (FIT).	Prerequisites: Permission of Program Director.	AJS/FSC279 is not open to the public.	Occ	L+L 3.0 3.0 3.0	T
AJS280	2022 Spring	Terrorism Hazmat First Responder Training	FSC280	Provides knowledge and skills to understand the chemistry of reactive and unstable hazardous materials, the toxicology of dangerous chemicals, and the measures taken to protect the safety of responders, the community, and the environment of chemical accidents. Also includes an introduction to field sampling of unknown substances for the Field Intelligence Team (FIT) and the Hostile Intent and Intervention Team (HIIT).	Prerequisites: Permission of Program Director.	AJS/FSC280 is not open to the public.	Occ	L+L 4.0 4.0 4.0	T
AJS282AA	2023 Fall	Service-Learning Experience in Adminstration of Justice Studies		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	AJS282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 1.0 1.0 0.0	L
AJS282AB	2023 Fall	Service-Learning Experience in Adminstration of Justice Studies		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	AJS282A B may be repeated for a total of six (6) credit hours. Standard grading available according to	Occ	LAB 2.0 2.0 0.0	L

						procedure s outlined in catalog.			
AJS282AC	2023 Fall	Service-Learning Experience in Adminstration of Justice Studies		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	AJS282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 3.0 3.0 0.0	L
AJS290AH	2018 Fall	Use of Force		Examines issues related to the use of force by and against police officers. Explores police use of force decision- making options. Reviews recent changes in Arizona law relative to police officers	Prerequisites: Permission of Department or Division.		Occ	L+L 0.5 0.5 0.5	T
AJS290AI	1996 Fall	Theories of Criminal Behavior		Theories of human behavior and crime. Biological, sociological, and psychological approaches to the theories of criminal behavior	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AJS290AU	1995 Fall	Child Abuse Investigation		Definition and investigation of the causes and effects of child abuse	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AJS290AW	1995 Fall	Narcotics and Dangerous Drugs		Pharmacological effects of the use and abuse of drugs, including a description of common abuse patterns and investigative techniques used in the enforcement of drug laws	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AJS290AZ	1995 Fall	Police Interrogation Techniques		Proper interview and interrogation techniques, including a discussion of the constitutional rights of the defendant and applicable court decisions	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AJS290BB	2023 Fall	Police Report Writing		Writing clear, concise, complete, and accurate reports with an emphasis on sentence structure, paragraph	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S

				construction, grammar, punctuation, and spelling.					
AJS290BE	1996 Fall	Probation and Parole		Current issues in probation and parole, including sentencing, parole revocation, and administrative procedure	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AJS290BH	2025 Fall	Sex Crimes Investigation		Investigative procedures employed by the police and courtroom procedures utilized by the prosecuting attorney in sex-related crimes.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AJS290BJ	1995 Fall	Accident Investigation I		Skills and concepts necessary to conduct an adequate traffic accident investigation	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AJS290BN	2025 Fall	Courtroom Testimony Seminar		Courtroom demeanor and protocol. Role and primary functions of witness and legal counsels.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AJS290BU	2004 Fall	Family Violence		Family violence issues as they relate to the criminal justice response	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AJS290BV	2004 Fall	Victim Assistance		An overview of victim issues emphasizing strategies used to reduce the trauma associated with crime. Includes description of counseling methods, referral procedures, intervention techniques, and community resources	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
AJS296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to		Occ	LAB 1.0 5.0 0.0	Z

					students major or career interest or with permission of Instructor.				
AJS296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
AJS296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z

AJS296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
AJS298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
AJS298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

AJS298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
ALT100	2020 Fall	Academic Literacy Through Integrated Reading and Writing		Develops academic language skills and critical reading skills for organizing, analyzing, and retaining material through complementary reading and writing assignments. Prepares students for college level reading and writing intensive courses as well as career-related reading and writing tasks.	Prerequisites: An appropriate District placement.		Acad	LEC 4.0 4.0 4.0	S
AMS298AA	2006 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
AMS298AB	2006 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

AMS298AC	2006 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
AMT124	2020 Fall	Aircraft Forms and Regulations, Weight and Balance, Drawings, and Ground Operations		Federal Aviation maintenance publications, forms and records. Overview of technician's privileges and limitations. Perform aircraft weight and balance, aircraft ground operations and fuel servicing techniques. Drawings, symbols and schematic diagrams.	Prerequisites: Admission to the Aircraft Maintenance Technology program.		Occ	L+L 5.0 9.0 9.0	T
AMT126	2020 Fall	Fundamentals of Mathematics and Electricity		Mathematical computation of fundamental electrical circuit parameters. Basic definitions, laws, and concepts. Schematic, wiring, and parts placement diagrams. Test and troubleshoot electrical and electronic components and circuits.	Prerequisites: Admission to the Aircraft Maintenance Technology program.		Occ	L+L 9.0 12.0 12.0	T
AMT128	2020 Fall	Fundamentals of Aviation Physics, Corrosion Control, Materials and Processes, Fluid Lines and Fittin		Basic concepts of motion, fluid dynamics, heat and sound, aerodynamics, aircraft structure and theory of flight. Fluid lines and fittings, component identification, function, inspection, and installation. Cleaning and corrosion control, materials and processes, non-destructive testing, and precision measurement techniques.	Prerequisites: Admission to the Aircraft Maintenance Technology program.		Occ	L+L 5.0 9.0 9.0	T
AMT220	2018 Fall	Fundamentals of Aircraft Wood Structures, Covering and Finishing, and Bonded Structures		Theories and techniques of aircraft wood structures. Inspection, test and repair of aircraft fabric and wood structures. Aircraft structural design and methods of working with selected materials. Characteristics of composites, inspections and repairs	Prerequisites: Admission to the program.		Occ	L+L 3.0 6.0 6.0	T

AMT222	2018 Fall	Atmosphere Control, Fire Detection, Ice and Rain Protection Systems		Operation and maintenance of aircraft auxiliary systems. Inspection, servicing, troubleshooting and repair of environmental control, ice and rain control, fire protection and warning systems	Prerequisites: Admission to the program.		Occ	L+L 4.0 6.0 6.0	T
AMT224	2018 Fall	Aircraft Sheet Metal		Inspection, fabrication, and repair techniques of aircraft structural and nonstructural components. Sheet metal heat-treating techniques	Prerequisites: Admission to the program.		Occ	L+L 5.0 11.0 11.0	T
AMT226	2018 Fall	Aircraft Landing Gear, Hydraulic, Pneumatic, Fuel, Position and Warning Systems		Identification, inspection, repair, and troubleshooting techniques of aircraft landing gear, hydraulic, fuel, pneumatic, and position and warning system components	Prerequisites: Admission to the program.		Occ	L+L 7.0 12.0 12.0	T
AMT228	2018 Fall	Aircraft Electrical Systems, Instruments, Fuel Indicating, Communication and Navigation Systems		Proper operation, inspection, servicing and troubleshooting of DC(Direct Current) and AC(Alternating Current) sources, systems, and components. Mechanical and electrical sensing and information display systems. Fuel indicator system inspections, repairs, and troubleshooting. Transmitter and receiver fundamentals. Avionics installation, inspection and testing	Prerequisites: Admission to the program.		Occ	L+L 7.0 12.0 12.0	T
AMT230	2018 Fall	Airframe Assembly, Inspection and Welding		Aircraft assembly and rigging. Flight control balancing and rigging. Airframe inspection techniques, reporting procedures, and aircraft jacking. Welding techniques, theory, and materials identification	Prerequisites: Admission to the program.		Occ	L+L 6.0 11.0 11.0	T
AMT263	2018 Fall	Aircraft Turbine Engines		Historical development and application of turbine engines. Theory of thrust and the design and environmental factors which influence thrust. Turbine engine troubleshooting, inspection, service, repair and overhaul. Operational characteristics and engine test techniques on the aircraft and in test cells	Prerequisites: Admission to the program.		Occ	L+L 5.0 9.0 9.0	T
AMT264	2018 Fall	Aircraft Reciprocating Engines		Historical development and application of reciprocating engines, theory, design, and operations. Techniques used in troubleshooting,	Prerequisites: Admission to the program.		Occ	L+L 7.0 11.0 11.0	T

				overhaul, inspection, and repair of opposed and radial engines					
AMT266	2018 Fall	Engine Fuel Systems, Fuel Metering and Induction System		Inspection, servicing, troubleshooting, overhaul, and repair of aircraft fuel systems and components, fuel metering devices, injection systems, turbochargers, and superchargers. Induction system principles of operation and design	Prerequisites: Admission to the program.		Occ	L+L 6.0 9.0 9.0	T
AMT268	2018 Fall	Engine Electrical, Ignition and Starter Systems		Inspect, service, troubleshoot, overhaul, and repair of engine electrical, ignition, starter systems, and components	Prerequisites: Admission to the program.		Occ	L+L 6.0 12.0 12.0	T
AMT270	2018 Fall	Engine Instruments, Fire Protection and Lubrication, Cooling and Exhaust Systems		Operation, maintenance, servicing, inspection, repair, and troubleshooting of engine instruments, fire detection and extinguishing, engine lubrication, cooling, and exhaust systems	Prerequisites: Admission to the program.		Occ	L+L 5.0 8.0 8.0	T
AMT272	2018 Fall	Propeller Systems and Engine Inspections		Historical development, operation, disassembly, inspection, repair, and maintenance of propellers. Reciprocating and turbine engine inspection and documentation	Prerequisites: Admission to the program.		Occ	L+L 4.0 8.0 8.0	T
AMT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
AMT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				learning to be combined to maximize student development.					
AMT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
APT101	2018 Spring	Automotive Service Operations		Theory and operation of basic automotive systems. Basic principles of working in an automotive service area. Management-employee relations, resume writing, interviewing, shop practices, flat-rate system, equipment care, and basic hand tools.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
APT111	2017 Spring	Internal Combustion Engines Theory		Study of construction and operating principles of internal combustion engines and related lubrication, cooling, fuel, and electrical systems.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
APT131	2018 Fall	Automotive Manual Power Trains		Designed for beginning automotive students. Operation, diagnosis, service, and repair of the automotive power train. Includes manual transmissions and transaxles, clutches, front and rear drive axles, drive shafts, differentials and transfer case.	Prerequisites: None.		Occ	LEC 6.0 3.0 3.0 LAB 0.0 7.0 7.0	T
APT141	2018 Fall	Alignment, Steering, and Suspension		Designed for beginning automotive students. Fundamental principles of steering and suspension systems. Includes two- wheel and four-wheel alignment procedures. Emphasis on diagnosis, testing, service, and replacement of steering and suspension components.	Prerequisites: None.		Occ	LEC 6.0 3.0 3.0 LAB 0.0 7.0 7.0	T
APT151	2018 Fall	Automotive Brake Systems		Designed for beginning automotive students. Fundamentals of drum, disc, ABS and hybrid regenerative	Prerequisites: None.		Occ	LEC 4.0 2.0 2.0	T

				braking theory. Includes training in diagnosis, testing, service, and repair.				LAB 0.0 5.0 5.0	
APT161	2018 Fall	Auto Electrical/Electronic Systems I		Designed for beginning automotive students. The principles of electricity including Ohm's Law, circuit principles and wiring diagrams. Skill development will include diagnosis, testing, service and repair of batteries, starting systems, charging systems, lighting systems, horns, wipers, defoggers, door locks, power mirrors, power windows, power seats and the use of Digital Multi Meters (DMM) will be addressed in this course.	Prerequisites: None.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 5.0 5.0	T
APT171	2018 Fall	Automotive Air Conditioning		Designed for beginning automotive students. Theory and principles of ventilation, heating, automotive refrigeration, vacuum-electric controls, and automatic temperature control systems. Includes training in diagnosis, testing, service and repair.	Prerequisites: None.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 5.0 5.0	T
APT181	2018 Fall	Engine Performance and Diagnosis I		Designed for beginning automotive students. Engine construction and operating principles, including lubrication, cooling, induction, exhaust, fuel, and ignition systems. Includes training in diagnosis, testing, service, and repair.	Prerequisites: None.		Occ	LEC 6.0 3.0 3.0 LAB 0.0 7.0 7.0	T
APT262	2018 Fall	Auto Electrical/Electronic Systems II		Designed for experienced students. This course develops knowledge of body control modules including skill development, diagnosis, testing, service, and repair of the following systems - advanced lighting circuits, vehicle stability control, traction control, basic and advanced climate control systems, integrated safety systems, collision avoidance systems, start-stop technology, hybrid technology, mobile connectivity, use	Prerequisites: A grade of C or better in APT161 or permission of Instructor.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 5.0 5.0	T

				of Digital Multi Meters (DMM) and automotive oscilloscopes.					
APT282	2018 Fall	Engine Performance and Diagnosis II		Designed for the experienced engine performance student. This course will include training in fuel systems, emission systems, ignition systems, turbocharging, computerized engine controls and engine driveability. Also, training in diagnosis, testing, service, repair, and documenting for customer understanding using the 3C's which are Concern, Cause and Correction will be addressed in this course.	Prerequisites: A grade of C or better in APT181 or permission of Instructor.		Occ	LEC 6.0 3.0 3.0 LAB 0.0 7.0 7.0	T
ARB101	2020 Fall	Elementary Arabic I		Introduction to the basic alphabet, grammar, pronunciation and vocabulary of the Arabic language. Listening, speaking, reading and writing skills.	Prerequisites: None.		Acad	L+L 5.0 5.0 5.0	T
ARB102	2020 Fall	Elementary Arabic II		A continuation of ARB101. Continued study of grammar and vocabulary, with emphasis on pronunciation and speaking skills.	Prerequisites: A grade of C or better in ARB101. Completion of prerequisites within the last three years is required.		Acad	L+L 5.0 5.0 5.0	T
ARB115	2005 Spring	Beginning Arabic Conversation I		Conversational Arabic with emphasis on basic sentence structure, pronunciation and vocabulary. Designed to develop speaking and listening abilities with less emphasis on grammar	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ARB201	2020 Fall	Intermediate Arabic I		Review of essential grammar of the Arabic language and study of the Arabic culture. Continued practice and development of reading, writing, and speaking skills. Emphasis on both fluency and accuracy in the spoken language.	Prerequisites: A grade of C or better in ARB102 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	L+L 5.0 5.0 5.0	T
ARB202	2020 Fall	Intermediate Arabic II		Advanced grammatical structures in Arabic. Further development of language skills with emphasis on speaking the language.	Prerequisites: A grade of C or better in ARB201 or permission of Department or Division. Completion		Acad	L+L 5.0 5.0 5.0	T

					of prerequisites within the last three years is required.				
ARB296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
ARB296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z
ARB296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and	Prerequisites: Completion of at least		Acad	LAB 3.0	Z

				employers to accomplish an outcome related to the career objectives of the students.	twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.			15.0 0.0	
ARB296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z
ARB298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z

				type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
ARB298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
ARB298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
ARC100	2018 Fall	Introduction to Environmental Design		A survey of design through historical evaluation of built environments and works of well-known architects. Principles, concepts, and skills associated with designs of actual and imagined ideas and things. Emphasis on social, technical, environmental, and theoretical forces that impacts design	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
ARC120	2018 Fall	Design Fundamentals I		An introduction to architectural drawing and graphic representation methods. Using architectural drawings and graphic representations as visualization, and problem-solving methods. Emphasis on visual communication, and the application	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T

				and development of the visual design via process as well as product.					
ARC121	2018 Fall	Introduction to Architectural Drafting: Manual		Emphasis on basic techniques and principles of manual architectural drafting. Includes hand lettering, line work, dimensioning, multi-view projection, work in plan, section, and elevation views, design standards, wall details, office procedures, and portfolio development	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
ARC140	2018 Fall	Rendering and Portfolio Development		Two-dimensional and three-dimensional drawings and rendering methods, including freehand and/or use of drawing tools for presentation of ideas. Techniques for use of pencil, ink, and colors. Professional formatting of portfolios	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
ARC141	2018 Fall	Architectural CAD I: Introduction		Introduction to Computer Aided Drafting (CAD) for Architecture, Interior Design, and related professions using AutoCAD software. Includes basic operational systems, drawing set-ups, architectural formats, and two-dimensional drawing. Editing commands, annotation, and plotting for the industry also included.	Prerequisites: None.	ARC141 may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 6.0 6.0	T
ARC142	2018 Fall	Architectural CAD II: Plans and Elevations		Computer Aided Drafting (CAD) instruction directed to the creation of fully annotated plan, elevation, and schematic section views including dimensions, notes, symbols, and schedules. Introduction to three-dimensional (3D) CAD using SketchUp.	Prerequisites: A grade of C or better in ARC141 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
ARC143	2018 Fall	Architectural CAD: Extended Study		Reinforcement and extended study of basic two-dimensional computer aided drafting (CAD) skills for Architecture, Interior Design, and related professions using AutoCAD software. Includes sending/receiving drawing files on web; templates/set-ups; dimension/text formats; sheet management; external referencing, design center, basic/extended	Prerequisites: A grade of C or better in ARC141 or permission of Instructor.	ARC143 may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 6.0 6.0	T

				drawing and editing commands, and plotting.					
ARC146	2018 Fall	Architectural Print Reading		Analysis and interpretation of architectural working drawings including written specifications and drawings prepared by consulting engineers.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
ARC148	2007 Fall	Methods and Materials of Construction		Modern methods of construction and materials for residential, multiple, and commercial building, including the four types of structures used: wood, concrete, steel and masonry. Methods of assembly and how different materials can be used to create desired designs. Requirements of most recent building codes and the F.H.A. standards	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ARC150	2018 Fall	Architectural Desktop I		Residential construction drawing using Architectural Desktop (ADT). Includes preliminary workspace setups, configuration procedures, modules operations, and on screen menus applicable for producing components of a building model.	Prerequisites: A grade of C or better in CON130 or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
ARC160	2018 Fall	Site Planning		Emphasis on the basic art of site planning, using professional design techniques and principles of architecture to develop site plans. Selection of materials, awareness of problems, and emphasis on the production of site plan drawings using board and/or computer aided drafting (CAD) skills.	Prerequisites: A grade of C or better in DFT122 or permission of Program Director.		Occ	L+L 3.0 6.0 6.0	T
ARC161	2018 Fall	Residential Architectural Drafting		Basics of residential drafting and documentation topics and techniques. Includes preliminary planning and preparation for residential documentation; use of the local building codes and standards; complete drawing and annotation of a floor plan, reflected ceiling plan, roof plan, a building sections, framing plan, and exterior elevations.	Prerequisites: A grade of C or better in CON130 or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
ARC162	2018 Fall	Advanced Residential		Advanced residential drafting and documentation topics and techniques. Includes site orientation, layout and	Prerequisites: A grade of C or better in ARC161 and		Occ	L+L 3.0	T

		Architectural Drafting		legal description; window and door schedules; interior elevation of kitchen and bath rooms; advanced instruction on framing and structural detail methods; foundation systems, support and layout; and other needed residential details and layouts.	CON230 or permission of Department or Division.			6.0 6.0	
ARC163	2018 Fall	Commercial Architectural Drafting		Fundamental commercial drafting and documentation topics and techniques. Includes preliminary planning and preparation for commercial documentation; use of the local building codes and standards; building methods and materials of commercial structures; complete drawing and annotation of a floor plan, reflected ceiling plan, roof plan, building sections, and exterior elevations.	Prerequisites: A grade of C or better in CON130 or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
ARC164	2018 Fall	Advanced Commercial Architectural Drafting		Further development of advanced commercial drafting and documentation topics and techniques. Covers commercial building materials and methods, specifications, land drawings, foundation plans, interior elevations, and more details specific to commercial buildings.	Prerequisites: A grade of C or better in (ARC163 and CON130) or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
ARC165	2004 Fall	Introduction to Architecture Professional Practice and Ethics		Professional, legal, and ethical issues in architecture practice and services. Includes marketing issues, communications, standards, insurance and bonds, agreements, contracts and contractors, standard American Institute of Architecture (AIA) forms and conditions, selection of contractors, and bidding procedures	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ARC225	2018 Fall	Fundamentals of Architectural Detailing		Introduction to construction /architecture detailing. Examines functional, construction-related, and aesthetic applications of detailing.	Prerequisites: A grade of C or better in CON130 or CON252 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S

ARC226	2018 Fall	Advanced Architectural Detailing		Advanced methods of detailing major construction materials such as wood, steel, and concrete, ranging from simple residential to more complicated commercial structures. Includes detailing foundations, exterior and interior walls, roof and ceiling areas.	Prerequisites: A grade of C or better in CON130 or CON252 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
ARC243	2018 Fall	Architectural CAD III: Site Plans and Sections		Computer-aided drafting (CAD-based) instruction directed to the creation of fully annotated site plans and sectional views. Development of professional quality site plans, wall sections, and building sections working from given residential and commercial layouts. Assignments incorporate applicable codes, construction materials and methods and office practices typical to the local area.	Prerequisites: A grade of C or better in ARC142 or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
ARC244	2018 Fall	Architectural CAD IV: Structural Systems		CAD-based(Computer-Aided Drafting) instruction for layout and completion of fully annotated structural drawings. Focuses on working from residential and commercial layouts to develop professional quality roof, roof framing, floor framing and foundation plans. Emphasis on the use of applicable codes, construction materials and methods, and office practices typical to the local area	Prerequisites: A grade of C or better in ARC142 or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
ARC245	2018 Fall	Architectural CAD V: Mechanical and Electrical Systems		CAD-based(Computer-Aided Drafting) instruction for layout and completion of fully annotated building systems drawings. Focuses on working from residential and commercial layouts to develop professional quality Electrical, Mechanical(HVAC), Plumbing and Reflected Ceiling plans. Emphasis on the use of applicable codes, construction materials and methods, and office practices typical to the local area	Prerequisites: A grade of C or better in ARC142 or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
ARC246	2018 Fall	Architectural CAD VI: Construction Details		Typical southwestern construction systems and details. Creation of personal standard detail files for wood	Prerequisites: A grade of C or better in ARC243 or		Occ	L+L 3.0	T

				frame, concrete masonry, and other specialized construction systems.	permission of Department or Division.			6.0 6.0	
ARC250	2020 Fall	Basic Revit	INT250	Basic skills required to complete architectural drawings with Revit software; simplified overview of the software program and operations gained through completing typical plan, elevation, sectional, and 3D views, using generic walls and related components.	Prerequisites: None. ARC141, or previous AutoCAD/industry experience recommended.	ARC/INT250 may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 6.0 6.0	T
ARC251	2018 Fall	Intermediate Revit		Comprehensive use of Revit Design Development tools through the development of 3-D model(s) in working drawing and rendered formats. Includes completing a set of construction documents from creating walls, incorporating doors, windows, floor, stairs, etc., to adding views and annotation to various sheets and coordinating those sheets within the finished set.	Prerequisites: None. ARC250 or previous architectural and CAD experience strongly recommended.	ARC251 may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 6.0 6.0	T
ARC252	2018 Fall	Advanced Revit		Advanced applications and use of REVIT architectural software in completing assigned projects; focus on customization of the Revit environment and developing Revit families.	Prerequisites: A grade of C or better in ARC251 or permission of Instructor.	ARC252 may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 6.0 6.0	T
ARC255	2018 Fall	Introduction to Revit Structure		Introduction to Revit Structure software, addressing specialized options and processes used in structural engineering offices; includes project modeling, model analysis, reinforcement modeling, detailing, and documentation.	Prerequisites: None. Previous educational/professional experience in architecture or structural engineering strongly recommended.	ARC255 may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 6.0 6.0	T
ARC261	2018 Fall	Architectural CAD 3D I: Introduction		Introduction to construction, manipulating, and rendering three-dimensional (3D) objects and architectural spaces on the computer using AutoCAD software.	Prerequisites: A grade of C or better in ARC141 or equivalent or permission of Department or Division. ARC142 suggested but not required.		Occ	L+L 3.0 6.0 6.0	T

ARC262	2018 Fall	Architectural CAD 3D II: ADT and VIZ		Additional skill development in constructing, manipulating, and rendering three-dimensional (3D) architectural computer models using AutoCAD Architectural Desktop (ADT) and Viz Render (VIZ) software	Prerequisites: A grade of C or better in ARC261 or equivalent or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
ARC265	2020 Fall	Sketchup I: Introduction to Sketchup	INT251	Provides students with introductory level instruction utilizing Sketchup rendering software for school and workplace applications. Addresses basic drawing/rendering commands, accessing external drawing files, and plotting through the creation of both three-dimensional schematic and rendered interior and exterior building views.	Prerequisites: None. Previous CAD experience recommended but not required.	ARC265/INT251 may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 6.0 6.0	T
ARC266	2021 Summer	Sketchup II: Advanced Rendering Techniques	INT267	Provides students with advanced instruction utilizing Sketchup, Google Earth, Sandbox and Podium rendering software for school and workplace applications. Creation of photo-realistic rendered three-dimensional interior and exterior building/site views.	Prerequisites: A grade of C or better in ARC265/INT251 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
ARC270	2018 Fall	Architectural Technology Synthesis		Provides students an opportunity to integrate and synthesize knowledge and skills acquired in prerequisite courses. Includes completion of a full set of working drawings using AutoCAD under supervision comparable to workplace situations. Designed to provide practice in self-checking work, correcting and editing drawings, and assembling a portfolio.	Prerequisites: A grade of C or better in (ARC243 and ARC244 and ARC245) or permission of Instructor.	ARC270 may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 6.0 6.0	T
ARC282AA	2004 Fall	Volunteerism for Architecture: A Service Learning Experience		Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Department or Division.	ARC282A A may be repeated for a total of three (3) credit hours. May not repeat specific assignme	Occ	LAB 1.0 1.0 0.0	L

						nt for more than three (3) credit hours. Standard grading available according to procedures outlined in college catalog.			
ARC282AB	2004 Fall	Volunteerism for Architecture: A Service Learning Experience		Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Department or Division.	ARC282A B may be repeated for a total of three (3) credit hours. May not repeat specific assignment for more than three (3) credit hours. Standard grading available according to procedures outlined in college catalog.	Occ	LAB 2.0 2.0 0.0	L
ARC282AC	2004 Fall	Volunteerism for Architecture: A Service Learning Experience		Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Department or Division.	Standard grading available according to procedures outlined	Occ	LAB 3.0 3.0 0.0	S

						in college catalog.			
ARC290AA	2004 Fall	Architecture Internship		Architecture internship office and field experience with private agencies, public agencies, or citizen volunteer groups.	Prerequisites: A grade of C or better in ARC282++ or permission of Department or Division.	ARC290A A may be repeated for a total of three (3) credit hours. ARC290A A students may not repeat a specific assignment for more than three (3) credit hours. Standard grading available according to procedures outlined in college catalog.	Occ	LAB 1.0 1.0 0.0	P
ARC290AB	2004 Fall	Architecture Internship		Architecture internship office and field experience with private agencies, public agencies, or citizen volunteer groups.	Prerequisites: A grade of C or better in ARC282++ or permission of Department or Division.	ARC290A B may be repeated for a total of three (3) credit hours. ARC290A B students may not repeat a specific assignment for more than three (3) credit	Occ	LAB 2.0 2.0 0.0	P

						hours. Standard grading available according to procedure s outlined in college catalog.			
ARC290AC	2004 Fall	Architecture Internship		Architecture internship office and field experience with private agencies, public agencies, or citizen volunteer groups.	Prerequisites: A grade of C or better in ARC282++ or permission of Department or Division.	Standard grading available according to procedure s outlined in college catalog.	Occ	LAB 3.0 3.0 0.0	P
ARC296WA	2006 Summer I	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
ARC296WB	2006 Summer I	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain		Occ	LAB 2.0 10.0 0.0	Z

					<p>a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.</p>				
ARC296WC	2006 Summer I	Cooperative Education		<p>Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.</p>	<p>Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.</p>		Occ	LAB 3.0 15.0 0.0	Z
ARC296WD	2006 Summer I	Cooperative Education		<p>Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.</p>	<p>Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job</p>		Occ	LAB 4.0 20.0 0.0	Z

					may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
ARC298AA	2006 Summer I	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
ARC298AB	2006 Summer I	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
ARC298AC	2006 Summer I	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z

				combined to maximize student development.					
ARH100	2025 Fall	Introduction to Art		Understanding and enjoyment of visual art through the study of art media, design elements, techniques and processes, and cultural contexts. Building awareness of the meaning, functions, and significance of art.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ARH101	2023 Fall	Art from Prehistory Through Middle Ages		History of art from the Paleolithic period through the Middle Ages.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ARH102	2023 Fall	Art from Renaissance to Modernism		History of art from the Renaissance through Modernism.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ARH109	2024 Fall	History of American Art		Study of the major art historical developments and traditions in the United States from pre-colonial times to the present, including the changing nature of American art and identity in the age of globalization. Consideration of major genres and stylistic characteristics with emphasis on the sociocultural contexts in which art was created and received.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ARH110	2024 Fall	History of Graphic Design		Survey of the history of graphic design from its origins to the present. Traces the characteristics, aesthetics, and relationships between graphic design and society. Includes movements, individual artists, and interpretation. Emphasizes the function of graphic design as a branch of human visual communication.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ARH112	2024 Fall	Introduction to Modern and Contemporary Art		Study of art and theory from the mid-nineteenth century to the present. Focus on European and American modern and contemporary art while considering other regions of the world. Examination of the historical, social, and cultural contexts of artistic developments. Application of various interpretive models to examine modern and contemporary art.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S

ARH115	2023 Fall	History of Photography		Survey of history of photography from beginning to present. Emphasizes the reciprocal relationship between the medium's development and reception, society, and other visual arts. Technical developments, photographic practices, and sociocultural themes are studied.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ARH118	2018 Fall	Introduction to Chinese Art		Explores Chinese philosophy, symbolism, history and religions that underlie the choice of subject matter and life forms in Chinese art. Uses Chinese bamboo brush, ink and rice paper to study Chinese calligraphy and traditional subjects for painting	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Global Awarenes s - [G] General Education Designatio n: Humanitie s, Arts and Design - [HU]	Acad	L+L 3.0 3.0 3.0	T
ARH145	2003 Fall	History of American Indian Art		Survey of American Indian Art from precontact to present. Reviews the impact of these art forms on contemporary American society, other world societies and on the visual arts. Explores characteristics, cultural influences and concerns represented in various art forms past and present. Features field trips to galleries and collections	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Cultural Diversity - [C] General Education Designatio n: Humanitie s, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ARH201	2024 Fall	Art of Asia		Introduction to the origins and historical development of art in Asia, with emphasis on Asia's major sub-	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

				regions including West, Central, East, South, and Southeast.					
ARH202	2023 Fall	Art of Africa, Oceania, and Americas		Study of the material cultures of Africa, America, and Oceania, with an emphasis on diverse worldviews and their expression within a contemporary global context.	Prerequisites: None.	Course Attributes: General Education Designation: Global Awareness - [G] General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ARH203	2005 Spring	Art of Ancient Egypt		The art and culture of ancient Egypt from prehistoric through the Greco-Roman period	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ARH204	2014 Spring	Roman Art and Architecture		Detailed examination of the art and architecture of ancient Rome from the	Prerequisites: None.	Course Attribute(s)	Acad	LEC 3.0	S

				monarchical period to the late empire, with emphasis on the visual culture and artifacts of the civilization.) : General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]		3.0 3.0	
ARH216	2003 Spring	Pre-Columbian Art History		Art of the Americas prior to European contact, focusing on Mesoamerica and the Central Andean region and their respective adjoining areas, with some attention to the U.S. Southwest and Eastern Woodlands Mound Building cultures	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ARH217	1995 Fall	Mexican Art History		Art of Mexico and related cultures, from the prehistoric to the contemporary period	Prerequisites: None.	Course Attribute(s) : General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ARH240	2008 Fall	Art and Architecture of the Islamic World to 1800		Introduction to the principal achievements in art and architecture of the Islamic world circa 650-1800 CE and placing them in social and cultural contexts and consideration of	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

				the historical evolution of Western knowledge and understanding of these works					
ARH250	2016 Spring	Visual Language and Interpretation		Examines the communication of concepts through visual interpretation and expression.	Prerequisites: A grade of C or better in (ART111, ART112, ART131, ART167 and ARH100) or permission of instructor.		Acad	LEC 1.0 1.0 1.0	S
ARH298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
ARH298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
ARH298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

ART105	2018 Fall	Art Beyond the Classroom		Visual arts experience. Includes field trips to galleries, museums, and collections as well as art lectures, demonstrations, and varied studio experiences.	Prerequisites: None.	ART105 may be repeated for a total of four (4) credit hours.	Acad	L+L 1.0 2.0 2.0	T
ART106	2018 Fall	Gallery Operations		Operation of an art gallery. Includes organization, publicity, evaluation of artwork, selection and installation of exhibits.	Prerequisites: Permission of Instructor.	ART106 may be repeated for a total of six (6) credit hours.	Acad	L+L 3.0 6.0 6.0	T
ART110	2018 Fall	Experimental Chinese Painting		Explores ancient Chinese techniques with rice paper and Chinese ink to create traditional and nontraditional designs. Emphasis on use of Chinese techniques in mixed media works.	Prerequisites: None.	ART110 may be repeated for credit.	Acad	L+L 1.0 2.0 2.0	T
ART111	2018 Fall	Drawing I		Fundamental principles of drawing. Emphasis on composition and facility in objective and expressive representation, using variety of drawing media	Prerequisites: None.	Course Attribute(s): Arizona Shared Unique Number SUN#: ART 1111	Acad	L+L 3.0 6.0 6.0	T
ART112	2018 Fall	Two-Dimensional Design		Study of fundamental elements and principles of two-dimensional design.	Prerequisites: None.	Course Attribute(s): Arizona Shared Unique Number SUN#: ART 1112	Acad	L+L 3.0 6.0 6.0	T
ART113	2018 Fall	Color		Investigation seeking visual solutions to a variety of problems concerning color in two and three dimensions and modes of color appearances, including light and effects in design and theory of design.	Prerequisites: None.		Acad	L+L 3.0 6.0 6.0	T
ART115	2018 Fall	Three-Dimensional Design		Fundamental principles of three-dimensional design.	Prerequisites: None.	Course Attribute(s): Arizona Shared Unique	Acad	L+L 3.0 6.0 6.0	T

						Number SUN#: ART 1115			
ART116	2018 Fall	Life Drawing I		Use of form, structure and anatomy of draped and undraped human figure to develop basic principles of sound draftsmanship	Prerequisites: None.		Acad	L+L 3.0 6.0 6.0	T
ART117	2018 Fall	Life Drawing II		Further study of form, structure, and anatomy of the draped and undraped human figure with emphasis on composition	Prerequisites: A grade of C or better in ART116.		Acad	L+L 3.0 6.0 6.0	T
ART118	2018 Fall	Art Anatomy		Artistic study of the concept of anatomical unity. Principle skeletal and muscular structures affecting surface form of the human figure. Includes drawing project, portfolio, and tests.	Prerequisites: A grade of C or better in ART116 or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART122	2018 Fall	Drawing and Composition II		Emphasis on composition and exploration of drawing media	Prerequisites: A grade of C or better in ART111.		Acad	L+L 3.0 6.0 6.0	T
ART131	2018 Fall	Photography I		Basic photographic principles and techniques. Basic camera functions and controls. Experience in the image-making process by creating and editing photographs for various display environments. Introduction to the photographic aesthetic and photography's role in society.	Prerequisites: None.	ART131 requires a Camera. Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	L+L 3.0 6.0 6.0	T
ART132	2018 Fall	Photography II		Advanced camera and darkroom techniques. Aesthetic awareness with personal expression	Prerequisites: A grade of C or better in ART131 or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART133	2018 Fall	Photography III		Refinement of aesthetic and technical aspects producing convincing images of highest quality	Prerequisites: A grade of C or better in ART132 or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T

ART134	2018 Fall	Photography IV		Emphasis on personal statement and style. Related graphic art forms explored. Development of portfolio	Prerequisites: A grade of C or better in ART133 or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART136	2023 Fall	Documentary Photography		Explore the history and contemporary trends of documentary photography. Students will learn how to research and define a topic, ethics of documentary photography, storytelling, production and post production techniques and distribution methods. Students will create a final documentary portfolio.	Prerequisites: A grade of C or better in ART131, or ART142, or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART137	2023 Fall	Alternative Photographic Processes		This course focuses on the 19th-century photographic processes including new picture-making technologies. Discussing the history of photography in relation with techniques taught in class. Students encouraged to explore historical processes in combination with contemporary technologies. Through technical demonstrations, hands-on workshops, and technical assignments, students develop a working knowledge of a range of processes while developing their own visual language.	Prerequisites: None.		Acad	L+L 3.0 6.0 6.0	T
ART145	2018 Fall	Digital Storybook	COM145 STO145	Enables students to find and develop a narrative representing an aspect of their personal histories. Use of digital technology to produce and archive a storybook.	Prerequisites: None.		Acad	L+L 1.0 2.0 2.0	T
ART151	2019 Spring	Sculpture I		Exploration of sculptural form and expression in clay, plaster, stone, wood and metal.	Prerequisites: None.		Acad	L+L 3.0 6.0 6.0	T
ART152	2018 Fall	Sculpture II		Emphasis on control of sculptural media	Prerequisites: A grade of C or better in ART151.		Acad	L+L 3.0 6.0 6.0	T
ART153	2019 Fall	Woodworking I		Fundamental woodworking techniques to produce creative functional and sculptural, three-dimensional objects.	Prerequisites: None.		Acad	L+L 3.0 6.0 6.0	T

ART154	2019 Fall	Woodworking II		Advanced design, joinery, fixture building, and woodworking techniques. Application of design principles.	Prerequisites: A grade of C or better in ART153.		Acad	L+L 3.0 6.0 6.0	T
ART155	2018 Fall	Glass Fusing and Slumping I		Introduction to the basics involved in glass fusing and slumping. The concepts of glass, glass fusing, and glass slumping will be covered with hands-on experience using a variety of techniques to create finished glass projects such as jewelry, dishes, frames, and door bells.	Prerequisites: None.	ART155 may be repeated for a total of twelve (12) credits	Acad	L+L 3.0 6.0 6.0	T
ART156	2018 Fall	Glass Fusing and Slumping II		Further study in the area of glass fusing and slumping. Advanced techniques including Pate-de-Verre, Pattern Bars, watchbands, bracelets, and patterned dishes.	Prerequisites: A grade of C or better in ART155.	ART156 may be repeated for a total of twelve (12) credits	Acad	L+L 3.0 6.0 6.0	T
ART158	2018 Fall	Introduction to Glass Blowing		Introduction to the basics involved in free hand blowing glass. The concepts of hot glass, glass shaping, and glass blowing will be covered with hands-on experience using a variety of techniques to create finished glass projects such as spheres, cones, cups, and other hollow glass objects.	Prerequisites: None.	ART158 may be repeated for a total of twelve (12) credits.	Acad	L+L 3.0 6.0 6.0	T
ART159	2018 Fall	Intermediate Glass Blowing		Further study in the area of glass blowing. Advanced techniques including traditional techniques as well as further investigation into color, form, and scale.	Prerequisites: A grade of C or better in ART158.	ART159 may be repeated for a total of twelve (12) credits.	Acad	L+L 3.0 6.0 6.0	T
ART160	2018 Fall	Advanced Glass Blowing		Further study in the area of glass blowing with emphasis on advanced techniques and design considerations, such as sculpting, larger scale projects, working in multiples, and further refinement of technical skill.	Prerequisites: A grade of C or better in ART159.	ART160 may be repeated for a total of fifteen (15) credit hours.	Acad	L+L 3.0 6.0 6.0	T
ART161	2018 Fall	Ceramics I		Introduction to ceramic materials and techniques of hand construction, decorating, glazing and throwing on potters' wheel	Prerequisites: None.		Acad	L+L 3.0 6.0 6.0	T

ART162	2018 Fall	Ceramics II		Major emphasis on wheel throwing, glaze making and decorating techniques	Prerequisites: A grade of C or better in ART161.		Acad	L+L 3.0 6.0 6.0	T
ART165	2018 Fall	Watercolor Painting I		Transparent and Gouache watercolor painting.	Prerequisites: A grade of C or better in (ART111 and ART112) or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART166	2018 Fall	Watercolor Painting II		Painting in water soluble media. Emphasis on individual techniques and design.	Prerequisites: A grade of C or better in ART165.		Acad	L+L 3.0 6.0 6.0	T
ART167	2023 Spring	Painting I		Exploration of technical and expressive possibilities of various media in painting.	Prerequisites: A grade of C or better in (ART111 and ART112) or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART168	2018 Fall	Painting II		Continued refinement of painting skills and investigation of new possibilities in painting	Prerequisites: A grade of C or better in ART167 or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART171	2018 Fall	Jewelry I		Fundamentals of jewelry making. Covers hand formed methods, including cutting, shaping, forging, soldering, and lost wax technique	Prerequisites: None.		Acad	L+L 3.0 6.0 6.0	T
ART172	2018 Fall	Jewelry II		Further refinement of personal expression using techniques and design concepts of ART171	Prerequisites: A grade of C or better in ART171.		Acad	L+L 3.0 6.0 6.0	T
ART211	2018 Fall	Drawing and Composition III		Advanced development of drawing skill with emphasis on compositional theory	Prerequisites: A grade of C or better in ART122 or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART216	2018 Fall	Life Drawing III		Advanced creative study from model in various painting and drawing media	Prerequisites: A grade of C or better in ART117 or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART217	2018 Fall	Life Drawing IV		Further development of skills in expressive drawing materials and	Prerequisites: A grade of C or better in ART216 or		Acad	L+L 3.0	T

				techniques as applied to finished drawings of the human form	permission of Instructor.			6.0 6.0	
ART222	2018 Fall	Drawing and Composition IV		Further study of drawing techniques with emphasis on individual problems and techniques	Prerequisites: A grade of C or better in ART211 or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART234	2023 Fall	Color Photography		Basic principles of color theory, camera and input and output techniques using analog or digital photography.	Prerequisites: A grade of C or better in ART131, or AVC142, or permission of Instructor.	Film or digital camera is required.	Acad	L+L 3.0 6.0 6.0	T
ART241	2018 Fall	Intaglio		Introduction to traditional concepts and techniques for Intaglio printmaking. Deals with black and white printing; includes brief introduction to color printing. Covers various tools and materials used in Intaglio	Prerequisites: A grade of C or better in ART111 and ART113.		Acad	L+L 3.0 6.0 6.0	T
ART242	2018 Fall	Lithography		Provides introduction to concepts and techniques of Lithography, both in plate and stone methods. Focus on black and white Lithographic drawing techniques. Introduction in color printing given	Prerequisites: A grade of C or better in ART111 and ART113.		Acad	L+L 3.0 6.0 6.0	T
ART250	2024 Fall	Introduction to Printmaking		Introduction to concepts and techniques involved in the Fine Art field of Printmaking.	Prerequisites: A grade of C or better in ART111 or ART112.		Acad	L+L 3.0 6.0 6.0	T
ART251	2018 Fall	Sculpture III		With emphasis on attention to individual problems and techniques	Prerequisites: A grade of C or better in ART152.		Acad	L+L 3.0 6.0 6.0	T
ART252	2018 Fall	Sculpture IV		Advanced sculpture problems and professional practices	Prerequisites: A grade of C or better in ART251.		Acad	L+L 3.0 6.0 6.0	T
ART253	2018 Fall	Woodcut		Focuses on relief method of printing, utilizing the techniques of Woodcut. Deals specifically with black and white images. Study of printing materials and tools, papers and printing methods. Relief printing in color introduced. Traditional forms of	Prerequisites: A grade of C or better in ART111 and ART113.		Acad	L+L 3.0 6.0 6.0	T

				Woodcut, also an overview of innovative techniques in the field					
ART255	1994 Fall	Art Marketing		Career goals, presentation of artist and art work (portfolio, resume, business cards, catalog), pricing and selling works, networking, establishing a studio, promotion and publicity, writing press releases, proposal writing, business ethics, artist rights, copyright law, contracts and agreements, royalties, record keeping, and communication skills	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ART255AA	1994 Fall	Self Promotion		Career goals, presentation of artist, communication skills, keeping files and records, developing self-promotional materials	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
ART255AB	2016 Summer	The Portfolio		Choosing the right pieces to include, presenting art work, developing the portfolio.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
ART255AC	1994 Fall	Marketing Fine Art		Exhibitions and galleries, establishing a studio, alternative markets	Prerequisites: A grade of C or better in ART255AB or permission of Instructor.		Acad	LEC 1.0 1.0 1.0	S
ART256	2018 Fall	Glass Fusing and Slumping III		Further study in the area of glass fusing and slumping with emphasis on advanced techniques and design considerations, such as, plates designed using different techniques, weaving or strip glass, and combining previous techniques to create projects.	Prerequisites: A grade of C or better in ART156.	ART256 may be repeated for a total of fifteen (15) credits.	Acad	L+L 3.0 6.0 6.0	T
ART257	2018 Fall	Glass Fusing and Slumping IV		Further study of advanced glass fusing and slumping including problems, professional practices, personal expression and experimental research into various techniques.	Prerequisites: A grade of C or better in ART256.	ART257 may be repeated for a total of fifteen (15) credits.	Acad	L+L 3.0 6.0 6.0	T
ART258	2018 Fall	Papermaking		Introduction to concepts and techniques of Fine Art Papermaking. Basic overview of historical origins of craft and importance of modern papermaking to fine arts	Prerequisites: A grade of C or better in ART111 and ART113.		Acad	L+L 3.0 6.0 6.0	T

ART259	2018 Fall	Monoprinting		Introduction to concepts and techniques for Monoprintmaking. Deals with la prima technique used in painting in first part of course. Multi-plate printing and how method of printing relates to use of color and separation in second part of course	Prerequisites: A grade of C or better in ART111 and ART113.		Acad	L+L 3.0 6.0 6.0	T
ART261	2018 Fall	Ceramics III		Emphasis on wheel throwing skill and individual style development	Prerequisites: A grade of C or better in ART162.		Acad	L+L 3.0 6.0 6.0	T
ART262	2018 Fall	Ceramics IV		Experimental work in clays and glazes	Prerequisites: A grade of C or better in ART261.		Acad	L+L 3.0 6.0 6.0	T
ART263	2018 Fall	Figure Painting		Study of the nude and clothed figure in painting with special attention upon relevant color palettes, direct and indirect figurative painting techniques, and development of anatomical knowledge and compositional structure. Students will draw upon both historical and contemporary modes of depicting the figure to develop a personalized approach to figure painting. Live models, photographs, drawings, "Planes of the Head" models, and the studio skeleton will be used as the basis of projects.	Prerequisites: A grade of C or better in ART167 or permission of Instructor.	Previous experience drawing from the live model recommended. Oil paint is the preferred medium but students may work in other painting media if they have previous experience. ART263 may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
ART264	2019 Spring	Glass Casting		Further study of glass art with a focus on casting and kiln working, including problems, professional practices, personal expression and experimental application of various techniques.	Prerequisites: A grade of C or better in ART160.	ART264 may be repeated for a total of fifteen	Acad	L+L 3.0 6.0 6.0	T

						(15) credits.			
ART265	2018 Fall	Watercolor Painting III		Continuation of watercolor painting with emphasis on control and expression	Prerequisites: A grade of C or better in ART166.		Acad	L+L 3.0 6.0 6.0	T
ART266	2018 Fall	Watercolor Painting IV		Advanced problems directed toward more personal expression	Prerequisites: A grade of C or better in ART265.		Acad	L+L 3.0 6.0 6.0	T
ART267	2018 Fall	Painting III		Development of materials and techniques of painting. Individual problem-solving	Prerequisites: A grade of C or better in ART168 or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART268	2018 Fall	Painting IV		Advanced problem in painting. Study with greater emphasis on personal expression	Prerequisites: A grade of C or better in ART267 or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART271	2018 Fall	Jewelry III		Emphasis on advanced jewelry design techniques and practices.	Prerequisites: A grade of C or better in ART172.	Further refinement and mastery of the skills and technique s introduced in ART171 and ART172.	Acad	L+L 3.0 6.0 6.0	T
ART272	2018 Fall	Jewelry IV		Emphasis on expanding repertoire of advanced jewelry design techniques and practices.	Prerequisites: A grade of C or better in ART271.	Further refinement and mastery of the skills and technique s introduced in ART271.	Acad	L+L 3.0 6.0 6.0	T
ART275	2018 Fall	Lost Wax Casting I		Introduction to lost wax casting techniques for jewelry and small sculptures. Emphasis on design	Prerequisites: None.		Acad	L+L 3.0	T

				concepts as related to three-dimensional forms				6.0 6.0	
ART276	2018 Fall	Lost Wax Casting II		Advanced course in lost wax casting techniques for jewelry and small sculptures. Emphasis on the continuation of individual expression using the lost wax method	Prerequisites: A grade of C or better in ART275.		Acad	L+L 3.0 6.0 6.0	T
ART277	2018 Fall	Textiles I		Introduction to exploration of textile media.	Prerequisites: A grade of C or better in ART112 or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART282AA	2020 Fall	Service-Learning Experience in Art		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	ART282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
ART282AB	2020 Fall	Service-Learning Experience in Art		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	ART282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L
ART282AC	2020 Fall	Service-Learning Experience in Art		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	ART282A C may be repeated for a total	Acad	LAB 3.0 3.0 0.0	L

						of six (6) credit hours. Standard grading available according to procedures outlined in catalog.			
ART290AA	2018 Fall	Studio Art		Studio course for art majors allowing continuation in a subject field.	Prerequisites: Permission of Instructor.	ART290A A students must have completed advanced courses in the subject field. ART290A A may be repeated for credit.	Acad	L+L 1.0 2.0 2.0	T
ART290AB	2018 Fall	Studio Art		Studio course for art majors allowing continuation in a subject field.	Prerequisites: Permission of Instructor.	ART290A B students must have completed advanced courses in the subject field. ART290A B may be repeated for credit.	Acad	L+L 2.0 4.0 4.0	T
ART290AC	2018 Fall	Studio Art		Studio course for art majors allowing continuation in a subject field.	Prerequisites: Permission of Instructor.	ART290A C students must have completed advanced courses in the subject	Acad	L+L 3.0 6.0 6.0	T

						field. ART290A C may be repeated for credit.			
ART290BC	2018 Fall	Studio Art: Drawing		Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART111 or permission of Instructor.	ART290B C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
ART290CC	2018 Fall	Studio Art: Mixed Media		Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART112 or permission of Instructor.	ART290C C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
ART290DC	2018 Fall	Studio Art: Life Drawing		Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART117 or permission of Instructor.	ART290D C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
ART290EC	2018 Fall	Studio Art: Photography		Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART132 or permission of Instructor.	ART290E C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
ART290FF	2018 Fall	Studio Art: Sculpture		Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART252 or permission of Instructor.	ART290F F may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
ART290GC	2018 Fall	Studio Art: Ceramics		Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART162 or permission of Instructor.	ART290G C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
ART290HC	2018 Fall	Studio Art: Watercolor		Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART166 or permission of Instructor.	ART290H C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
ART290JC	2018 Fall	Studio Art: Color		Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART113 or permission of Instructor.	ART290J C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T

ART290KC	2018 Fall	Studio Art: Glazing Techniques		Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART162 or permission of Instructor.	ART290K C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
ART290LC	2018 Fall	Studio Art: Clay Bodies		Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART162 or permission of Instructor.	ART290L C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
ART290MC	2023 Fall	Studio Art: Digital Photography		Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in AVC143 or permission of Instructor.	ART290M C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
ART290PC	2018 Fall	Studio Art: Painting		Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART168 or permission of Instructor.	ART290P C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
ART290WC	2019 Fall	Studio Art: Woodworking		Studio course for art majors allowing continuation in a subject field.	Prerequisites: A grade of C or better in ART154 or permission of Instructor.	ART290W C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
ART295AC	2018 Fall	Art Workshop/Seminar: Drawing		Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.		Acad	L+L 3.0 6.0 6.0	T
ART295BA	2018 Fall	Art Workshop/Seminar: Sculpture		Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.		Acad	L+L 1.0 2.0 2.0	T
ART295BC	2018 Fall	Art Workshop/Seminar: Sculpture		Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory		Acad	L+L 3.0	T

					and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.			6.0 6.0	
ART295CA	2018 Fall	Art Workshop/Seminar: Life Drawing		Advanced level workshop seminar in art disciplines	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.		Acad	L+L 1.0 2.0 2.0	T
ART295DA	2018 Fall	Art Workshop/Seminar: Photography		Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.		Acad	L+L 1.0 2.0 2.0	T
ART295DB	2018 Fall	Art Workshop/Seminar: Photography		Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.		Acad	L+L 2.0 4.0 4.0	T
ART295DC	2018 Fall	Art Workshop/Seminar: Photography		Advanced-level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.		Acad	L+L 3.0 6.0 6.0	T
ART295EA	2018 Fall	Art Workshop/Seminar: Painting		Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits		Acad	L+L 1.0 2.0 2.0	T

					intermediate level courses in specific field or permission of Department or Division Chair.				
ART295EC	2018 Fall	Art Workshop/Seminar: Painting		Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.		Acad	L+L 3.0 6.0 6.0	T
ART295GA	2018 Fall	Art Workshop/Seminar: Ceramics		Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.		Acad	L+L 1.0 2.0 2.0	T
ART295GB	2018 Fall	Art Workshop/Seminar: Ceramics		Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.		Acad	L+L 2.0 4.0 4.0	T
ART295GC	2018 Fall	Art Workshop/Seminar: Ceramics		Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.		Acad	L+L 3.0 6.0 6.0	T
ART295HC	2018 Fall	Art Workshop/Seminar: Mixed Media		Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level		Acad	L+L 3.0 6.0 6.0	T

					courses in specific field or permission of Department or Division Chair.				
ART295LA	2018 Fall	Art Workshop/Seminar: Glazing Techniques		Advanced level workshop seminar in art disciplines	Prerequisites: Permission of Instructor.		Acad	L+L 1.0 2.0 2.0	T
ART295LB	2018 Fall	Art Workshop/Seminar: Glazing Techniques		Advanced level workshop seminar in art disciplines	Prerequisites: Permission of Instructor.		Acad	L+L 2.0 4.0 4.0	T
ART295LC	2018 Fall	Art Workshop/Seminar: Glazing Techniques		Advanced level workshop seminar in art disciplines	Prerequisites: Permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART295MC	2018 Fall	Art Workshop/Seminar: Clay Bodies		Advanced level workshop seminar in art disciplines	Prerequisites: Permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
ART295NA	2018 Fall	Art Workshop/Seminar: Glass Blowing		Advanced level workshop seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.	ART295NA may be repeated for a total of five (5) credits.	Acad	L+L 1.0 2.0 2.0	T
ASB100	2025 Fall	Introduction to Global Health		Examination of the field of global health from an anthropological perspective, including but not limited to understanding health systems, diverse medical practices, and ideas about health, illness, and the body in cross-cultural contexts. Focus on using critical frameworks to understand the relationships between culture and epidemiology, ecologies, political economies, health equity issues and human rights.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ASB102	2024 Fall	Introduction to Cultural Anthropology		Introduces concepts and methods of cultural anthropology, with illustrative materials from a variety of communities in a globalizing world. Explores the concept of culture and	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0-	S

				examines a variety of cultural and social practices such as subsistence, economics, politics, marriage, kinship, gender and religion.					
ASB202	2017 Spring	Ethnic Relations in the United States	AFR202 CCS202	Basic concepts and processes, including historic overview, of interethnic relations in the United States: culture, race, ethnicity, ethnocentrism, prejudice, discrimination, racism, assimilation, acculturation, and individual and group responses to interethnic contact. Cultural knowledge and intercultural communication skills and perspectives as fundamental tools for successful management of social relations in a multicultural world.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Historical Awareness - [H] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
ASB211	2024 Fall	Women Across Cultures		Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ASB214	2012 Summer I	Magic, Witchcraft and Healing: An Introduction to Comparative Religion		Origins, elements, and forms of religion; a comparative survey of religious beliefs, myths, rituals and symbolism including magic, witchcraft and healing as practiced in selected regions of the world; the place of religion in the total culture	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts	Acad	LEC 3.0 3.0 3.0	S

						and Design - [HU]			
ASB220	2006 Fall	Anthropology Goes to the Movies		Archaeology and anthropology through the lens of popular films of the 20th and 21st Century. Explores the popularity of ancient humans as a topic for film ventures and how accurately they are portrayed. Provides the student with a basic knowledge of anthropology and offers film images of anthropologists and archaeologists and the practice of archaeology and anthropology. Analyzes accuracy of films depicting culture and our human past.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ASB222	2018 Fall	Buried Cities and Lost Tribes: Old World		Introduction to archaeology through discoveries and the researchers who made them. Emphasis on methods of archaeological fieldwork and what these discoveries reveal about humanity, including the nature of archaeological inquiry, the development of human social groups, the changing role of religion in evolving societies, the origins of agriculture, the origins of settled lifeways, the rise of cities and complex societies, political strife across different cultures and the forces which tend to fragment societies. Examples drawn from Africa, Asia, Europe, the Pacific Islands, and Australia	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Social and Behavioral	Acad	LEC 3.0 3.0 3.0	S

						Sciences - [SB]			
ASB223	2014 Summer	Buried Cities and Lost Tribes: New World		Introduction to archaeology through discoveries and the researchers who made them. Emphasis on methods of archaeological fieldwork and what these discoveries reveal about humanity, including the nature of archaeological inquiry, the development of human social groups, the changing role of religion in evolving societies, the origins of agriculture, the origins of settled lifeways, the rise of cities and complex societies, political strife across different cultures and the forces which fragment societies. Examples drawn from North America, Central America, and South America.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ASB226	2012 Spring	Human Impacts on Ancient Environments		Interrelationship between humans and their environments, using archaeological data and case studies beginning with early hominids. Uses of research to identify environmental change and distinguish between climatic and human-induced global change. Explores ways in which prehistoric people caused and responded to environmental changes	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
ASB230	1995 Fall	Principles of Archaeology		Introduction to archaeological methods and theory	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S

ASB231	2018 Fall	Archaeological Field Methods		Excavation of an archaeological site; recording and interpreting data collected during the field experience. Overview of the cultures concerned; contemporary issues in archaeology.	Prerequisites: None.	Course Attribute(s): General Education Designatio n: Natural Sciences (General) - [SG]	Acad	L+L 4.0 6.0 6.0	T
ASB234	2024 Fall	Art and Archaeology of Ancient Egypt		Introduction to the major social, political, religious and economic institutions of Ancient Egypt. The historical events and people that shaped Egyptian civilization.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ASB235	2024 Fall	Southwest Archaeology		Anthropological perspective and comparative study of the cultures of prehistoric native peoples of the North American southwest.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ASB245	2025 Fall	American Indians of the Southwest		Comparative study of the cultures, including the histories and present status, of American Indians of the Southwest.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ASB252	2025 Fall	Sports and Culture		Cross-cultural examination of symbolic and social dimensions of sports, past and present.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ASB253	2024 Fall	Death and Dying Across Cultures		Responses to death and dying in cultures around the world. Explanations for particular cultural responses to death and dying. Examples drawn from ancient and contemporary cultures.	Prerequisites: None. ASB102 suggested but not required.	Course Attribute(s): General Education Designatio n: Global Awarenes s - [G] General Education Designatio n: Humanitie s, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ASB282AA	2013 Fall	Service-Learning Experience in Anthropology		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	ASB282A A may be repeated	Acad	LAB 1.0	L

						for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.		1.0 0.0	
ASB282AB	2013 Fall	Service-Learning Experience in Anthropology		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	ASB282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L
ASB282AC	2013 Fall	Service-Learning Experience in Anthropology		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	ASB282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
ASB298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z

				and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
ASB298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
ASB298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
ASD100	2012 Spring	Foundations of Addictions and Substance Use Disorders		Introduction to the foundations of the alcohol and drug abuse rehabilitation field. Emphasis on the roles and responsibilities of the addictions counselor, ethical issues, pharmacology, family dynamics, dual diagnosis, intervention techniques, self-help groups, levels of care, symptom identification, and conducting alcohol/drug histories. Interactive work stressed.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ASD102	2012 Spring	Communication Skills in Treating Addiction		Further examination and refinement of communication and beginning professional counseling skills as they	Prerequisites: None.		Occ	LEC 3.0	S

				relate to the addicted client and family members. Emphasis on practicing the application of these skills to various situations associated with treatment planning. Recordkeeping/documentation skills emphasized.				3.0 3.0	
ASD110	2012 Spring	Pharmacology of Substances of Abuse and Dependency		Exploration of the pharmacology of substance of abuse and dependency. Examines the effects of psychopharmacological chemicals on human physiology. Emphasis on identification and management of substances of abuse and dependency.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ASD120	2015 Fall	Professional Ethics in Addictions and Substance Use Disorders		Exploration of topics relative to the professional and ethical development of the addictions and substance use disorders counselor, including codes of ethics, confidentiality laws, professionalism and boundary issues, and the meeting of individual counselor needs within the field.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ASD145	2012 Spring	AIDS and Addiction		Exploration of AIDS and its relationship to addiction. Emphasis on myths and realities of AIDS, personal values, feelings, and limitations and treatment goals.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ASD146	2020 Spring	Peer Support Specialist		Introduction to the role and foundational responsibilities of a peer support specialist in the field of addictions and substance use. Explores basic pharmacology, ethics, case management, and crisis management. Recovery-Oriented Systems of Care (ROSC) is emphasized.	Prerequisites: None. Corequisites: ASD147.	ASD146 has not been approved by any state's Department of Health Services / Department of Behavioral Services (DHS) and may not lead to certification	Occ	LEC 4.0 4.0 4.0	S

						n as a Peer Support Specialist/ Recovery Support Specialist by DHS. Completion of ASD146 and ASD147 may lead to certification as a National Certified Peer Recovery Support Specialist by the National Certification Commission for Addiction Professionals (NCCAP) or in Peer Recovery by the International Certification & Reciprocity Consortium (IC&RC).			
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ASD147	2020 Spring	Peer Support Specialist Practicum		Peer support specialist preparation related to addictions and substance use disorders. Opportunity for students to use their developed knowledge and skills in an applied setting with supervision.	Prerequisites: None. Corequisites: ASD146.	ASD147 requires completion of 200 hours of practice experience. Course has not been approved by any state's Department of Health Services / Department of Behavioral Services (DHS) and may not lead to certification as a Peer Support Specialist/ Recovery Support Specialist by DHS. Completion of ASD146 and ASD147 may lead to certification as a National Certified Peer Recovery	Occ	LAB 3.0 5.0 5.0	T
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						Support Specialist by the National Certification Commission for Addiction Professionals (NCCAP) or in Peer Recovery by the International Certification & Reciprocity Consortium (IC&RC).			
ASD148	2020 Spring	Introduction to the Science of Prevention		Overview of the science underlying evidence-based prevention interventions and strategies and the effective application of these approaches in prevention practice.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ASD149	2020 Spring	Physiology and Pharmacology for Prevention		Overview of the physiology and pharmacology of psychoactive substances and their effects on the brain to affect mood, cognition, and behavior and the consequences of such use on the individual, family, and community.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ASD150	2012 Spring	Principles of Self-Help Groups		Overview of the fundamental principles, concepts and historical antecedents of the various self-help groups. Emphasis on the self-help groups of Alcoholics Anonymous, Al-anon, Alateen, Narcotics Anonymous, Co-dependents Anonymous, and Adult Children of Alcoholics.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S

ASD151	2020 Spring	Prevention Interventions and Policies		Overview of primary evaluation methods used to measure evidence-based prevention interventions and gives guidance in applying them to "real-world" prevention settings.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ASD152	2020 Spring	Family-Based Prevention Interventions		Overview of the family as the primary socialization agent of children, the science behind family-based prevention interventions, and the application of such evidence-based approaches to help prevent the onset of substance use in children.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ASD153	2020 Spring	School-Based Prevention Interventions		Overview of the role of the school in society, the science behind school-based prevention interventions, and the application of such evidence-based approaches in school settings around the world.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ASD154	2020 Spring	Workplace-Based Prevention Interventions		Overview of the role of work and the workplace in society, how stressors and other work-related influences affect risk of substance use, the science behind workplace prevention interventions, and the application of such evidence-based approaches in work settings around the world.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ASD155	2020 Spring	Environment-Based Prevention Interventions		Overview of the science underlying evidence-based substance use prevention using environmental interventions, involving policy, and community-wide strategies.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ASD156	2020 Spring	Media-Based Prevention Interventions		Overview of the science underlying the use of media for substance use prevention interventions.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ASD157	2020 Spring	Community-Based Prevention Implementation Systems		Overview of the science underlying the systems approach to prevention interventions and guidance for developing such approaches, as well as exemplars of evidence-based drug use prevention systems.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ASD158	2020 Spring	Gambling Disorders Prevention		Overview of gambling disorders prevention. Emphasis on current prevention research. Also includes information on gambling prevention resources.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S

ASD159	2020 Spring	Adolescent Substance Use Prevention		Adolescent substance use prevention issues. Emphasis on current and developing adolescent prevention information. Covers common adolescent substance use characteristics and prevention strategies.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ASD160	2020 Spring	Behavioral Addictions Prevention		Overview of behavioral addictions prevention issues. Emphasis on current research. Also includes community resources information.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ASD161	2012 Spring	Beginning Clinical Documentation Skills		Overview of addictions and substance use disorders counseling, interviewing, and documentation. Includes record keeping and documentation skills. Alcohol and drug abuse counselor core functions emphasized.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ASD165	2012 Spring	Theories and Techniques in the Treatment of Addictions		Overview of counseling theories including the application to addictions and substance use disorders groups. Recordkeeping skills and beginning counseling skills emphasized.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
ASD220	2012 Spring	Family Dynamics and Addiction		Analysis of the impact of addictions on all the members of a family. Interviewing, assessment and therapeutic approaches particularly useful for these family members presented.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ASD226	2012 Spring	Counseling Multicultural and Diverse Populations		Exploration of influences of culture and diversity on addictions and substance abuse. Emphasis on recovery and therapeutic relationships.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ASD236	2012 Spring	Relapse, Recovery, and Addiction		Review of the bio-psycho-social processes of recovery and relapse in addictions. Exploration into those factors that both contribute to and inhibit recovery and relapse.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
ASD245	2012 Spring	Co-Occurring Disorders		Examines co-occurring disorders from the bio-psycho-social model. Includes causes, consequences, assessment, and treatment, emphasizing the psychoeducational model of treatment.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S

ASD250	2012 Spring	Group Interventions		Focus on group dynamics and group process as they relate to addictions and substance use disorders. Exploration of group developmental stages, family intervention models, various counseling approaches/techniques and their application to therapeutic, education and family groups.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ASD275	2012 Spring	Advanced Theory and Techniques in the Treatment of Addiction Disorders		Capstone course for level two certificate in addictions and substance use disorders program. Focus on counseling theories and techniques used by counselors as they relate to the client and family members.	Prerequisites: A grade of C or better in ASD220, ASD226, ASD245 and ASD250 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
ASD280	2018 Fall	Addictions and Substance Use Disorders Practicum		Opportunity for advanced students to use his/her developed knowledge and skills in an applied setting with supervision.	Prerequisites: A grade of C or better in ASD275 or permission of Department or Division.	ASD280 may be repeated for a total of twelve (12) credit hours.	Occ	LAB 6.0 18.0 18.0	T
ASD285	2012 Spring	Addictions Seminar		Special topics in addictions and substance use disorders with an emphasis on current issues not covered in other addictions and substance use disorders courses.	Prerequisites: None.	ASD285 may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285AA	2012 Spring	Treatment for Stimulant Use Disorders Seminar		Stimulant use disorder treatment issues. Emphasis on current and developing treatment information. Covers common stimulant abuse characteristics and treatment strategies. Also includes community resource information.	Prerequisites: None.	ASD285A A may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285BB	2012 Spring	Adolescent Substance Abuse Treatment Seminar		Adolescent substance abuse treatment issues. Emphasis on current and developing treatment information. Covers common adolescent substance abuse characteristics and treatment strategies. Also includes community resource information.	Prerequisites: None.	ASD285B B may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285CC	2012 Spring	Addiction Review Seminar		A brief review of current addiction issues. Emphasis on current and	Prerequisites: None.	ASD285C C may be	Occ	LEC 1.0	S

				developing treatment information. Covers common alcohol and drug addiction characteristics and treatment strategies. Also includes community resource information.		repeated for a total of four (4) credit hours.		1.0 1.0	
ASD285DD	2012 Spring	Motivation for Change in Substance Abuse Treatment Seminar		Issues regarding motivational change in substance abuse treatment. Emphasis on current and developing treatment information. Covers common motivational change techniques. Also includes community resource information.	Prerequisites: None.	ASD285D D may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285EE	2012 Spring	Domestic Violence and Substance Abuse Seminar		Domestic violence and substance abuse treatment issues. Emphasis on current and developing domestic violence and substance abuse information. Covers techniques, strategies, and treatment modalities for domestic violence and substance abuse patients. Also includes community resource information.	Prerequisites: None.	ASD285E E may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285FF	2012 Spring	Street Drugs Seminar		Street drug issues. Emphasis on current and developing street drug information. Covers techniques strategies and treatment modalities for street drug abuse patients. Also includes community resource information.	Prerequisites: None.	ASD285F F may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285GG	2012 Spring	Addictive and Medical Plants Seminar		Addictive and medical plant issues. Emphasis on current and developing addictive and medical plant information. Covers addictive and medical plant typology. Also includes community resource information.	Prerequisites: None.	ASD285G G may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285HH	2012 Spring	Intervention and Treatment for Addictions and Substance Use Disorders Seminar		Brief interventions and treatment for addictions and substance use disorders. Emphasis on current and developing intervention and treatment information. Covers treatment and intervention techniques for use with addictions and substance use disorders. Also includes community resource information.	Prerequisites: None.	ASD285H H may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285II	2012 Spring	Multicultural Aspects		Multicultural aspects of counseling in addictions and substance use	Prerequisites: None.	ASD285II may be	Occ	LEC 1.0	S

				disorders. Emphasis on current and developing treatment information. Covers common aspects of multicultural characteristics and treatment strategies. Also explores ethical counselor/client relationships.		repeated for a total of four (4) credit hours.		1.0 1.0	
ASD285JJ	2012 Spring	Clinical Supervision Training of Supervisors		Clinical supervision training of supervisor issues. Emphasis on current and developing treatment information. Also includes community resource information.	Prerequisites: None.	ASD285JJ may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285KK	2012 Spring	Recovery-Oriented Systems of Care Seminar		Overview of recovery-oriented systems of care programs. Covers research, development, and characteristics of programs in addition to applicable federal mandates.	Prerequisites: None.	ASD285K K may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285LL	2012 Spring	Gambling Addiction Seminar		A brief review of gambling addiction issues. Emphasis on current research, intervention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	ASD285L L may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285MM	2012 Spring	Sexual Addiction Seminar		A brief review of sexual addiction issues. Emphasis on current research, intervention, and treatments in the field. Also includes community resources information.	Prerequisites: Student must be 18 years or older.	ASD285M M may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285NN	2016 Fall	Eating Disorders Seminar		An overview of issues associated with eating disorders. Emphasis on current research, intervention, prevention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	ASD285N N may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285OO	2016 Fall	Eating Disorders: Special Considerations and Populations Seminar		A review of issues associated with eating disorders within diverse populations. Emphasis on multicultural populations, current research, intervention, prevention,	Prerequisites: None.	ASD285O O may be repeated for a total of four (4)	Occ	LEC 1.0 1.0 1.0	S

				and treatments in the field. Also includes community resources information.		credit hours.			
ASD285PP	2016 Fall	Eating Disorders: Conceptualization and Treatment Seminar		A review of issues associated with eating disorders. Emphasis on current research, intervention, prevention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	ASD285P P may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285QQ	2016 Fall	Behavioral Addictions Seminar		A review of issues associated with behavioral addictions. Emphasis on current research, intervention, prevention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	ASD285Q Q may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285RR	2016 Fall	Behavioral Addictions Seminar: Internet-Related Addictions		A review of issues associated with internet-based behavioral addictions. Emphasis on diagnostic descriptions and considerations for internet-based addictions including current research, intervention, prevention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	ASD285R R may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285SS	2017 Spring	Marijuana Addiction Seminar		An overview of issues associated with marijuana addiction. Emphasis on current research, intervention, prevention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	ASD285S S may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD285TT	2017 Spring	Opioid Addiction Seminar		An overview of issues associated with opioid addiction. Emphasis on current research, intervention, prevention, and treatments in the field. Also includes community resources information.	Prerequisites: None.	ASD285T T may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASD295	2016 Summer	Advanced Foundations: Addictions and Substance Use Disorders Counselor		Review for individuals preparing for addictions and substance use disorders counselor licensing and/or certification exams. Emphasis on ethics, treatment, pharmacology, family issues, and self-help groups.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

		Licensing/Certification Exams							
ASD296WA	2012 Spring	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the instructor.		Occ	LAB 1.0 5.0 0.0	Z
ASD296WB	2012 Spring	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the instructor.		Occ	LAB 2.0 10.0 0.0	Z
ASD296WC	2012 Spring	Cooperative Education		Work-college experiences that involve the combined efforts of educators and	Prerequisites: Completion of at least		Occ	LAB 3.0	Z

				employers to accomplish an outcome related to the career objectives of the students.	twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the instructor.			15.0 0.0	
ASD296WD	2012 Spring	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the instructor.		Occ	LAB 4.0 20.0 0.0	Z
ASD298AA	2012 Spring	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
ASD298AB	2012 Spring	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
ASD298AC	2012 Spring	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
ASE100	2023 Fall	Introduction to Automotive Service		Introduction to the standards of the automotive industry. Includes an overview of the major automotive systems, safety practices, workplace habits, tools, and equipment.	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
ASE102	2019 Fall	Automotive Express Service		Use of standard service publications; performance of commonly used service operations following published service procedures; emphasis on good attitude development and safety habits about automotive service.	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
ASE102AU	2019 Fall	Automotive Express Service		Use of standard service publications; performance of commonly used service operations following published service procedures; emphasis on	Prerequisites: None.		Occ	LEC 2.0 1.0 1.0 LAB	T

				good attitude development and safety habits about automotive service.				0.0 3.0 3.0	
ASE110	2023 Fall	Engine Fundamentals		Diagnosis, disassembly, repair and reassembly of automotive internal combustion engines.	Prerequisites: None.		Occ	L+L 4.0 7.5 7.5	T
ASE110AU	2023 Fall	Engine Fundamentals		Diagnosis, disassembly, repair and reassembly of automotive internal combustion engines.	Prerequisites: None.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5	T
ASE111	2019 Fall	Engine Diagnosis and Inspection		Diagnosis and inspection of automotive internal combustion engines.	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
ASE111AU	2019 Fall	Engine Diagnosis and Inspection		Diagnosis and inspection of automotive internal combustion engines.	Prerequisites: None.		Occ	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T
ASE120	2023 Fall	Automatic Transmission and Transaxle		Principles of automotive operation, servicing and repair procedures for automatic transmissions/transaxles; includes diagnostics and testing of mechanical, electrical, and hydraulic components.	Prerequisites: None.		Occ	L+L 4.0 7.5 7.5	T
ASE120AU	2023 Fall	Automatic Transmission and Transaxle		Principles of automotive operation, servicing and repair procedures for automatic transmissions/transaxles; includes diagnostics and testing of mechanical, electrical, and hydraulic components.	Prerequisites: None.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5	T
ASE130	2023 Fall	Manual Drive Trains and Axles		Operation, diagnosis, service, and repair of the automotive powertrain. Includes manual transmissions/transaxles, clutches,	Prerequisites: None.		Occ	L+L 4.0 7.5 7.5	T

				drive axles, driveshafts, differentials, four-wheel drive, and all-wheel drive.					
ASE130AU	2023 Fall	Manual Drive Trains and Axles		Operation, diagnosis, service, and repair of the automotive powertrain. Includes manual transmissions/transaxles, clutches, drive axles, driveshafts, differentials, four-wheel drive, and all-wheel drive.	Prerequisites: None.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5	T
ASE140	2023 Fall	Automotive Steering, Suspension and Alignment		Principles of automotive suspension and steering systems. Diagnosis, service, and repair procedures emphasis on four-wheel alignment.	Prerequisites: None.		Occ	L+L 4.0 7.5 7.5	T
ASE140AU	2023 Fall	Automotive Steering, Suspension and Alignment		Principles of automotive suspension and steering systems. Diagnosis, service, and repair procedures emphasis on four-wheel alignment.	Prerequisites: None.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5	T
ASE141	2019 Fall	Steering, Suspension and Pre-Alignment		Principles and operation of automotive suspension and steering systems.	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
ASE141AU	2019 Fall	Steering, Suspension and Pre-Alignment		Principles and operation of automotive suspension and steering systems.	Prerequisites: None.		Occ	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T
ASE150	2023 Fall	Automotive Brake Systems		Operation, diagnosis, service, and repair of automotive brake systems.	Prerequisites: None.		Occ	L+L 4.0 7.5 7.5	T
ASE150AU	2023 Fall	Automotive Brake Systems		Operation, diagnosis, service, and repair of automotive brake systems.	Prerequisites: None.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5	T

ASE151	2019 Fall	Introduction to Brake Systems		Fundamentals and operation of automotive braking systems. Includes training in service, testing, and repair of basic brake and brake-related components.	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
ASE151AU	2019 Fall	Introduction to Brake Systems		Fundamentals and operation of automotive braking systems. Includes training in service, testing, and repair of basic brake and brake-related components.	Prerequisites: None.		Occ	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T
ASE160	2023 Fall	Introduction to Automotive Electrical		Automotive electrical systems foundations. Emphasis on testing and diagnosis of automotive battery, starting, and charging systems.	Prerequisites: None.		Occ	L+L 4.0 7.5 7.5	T
ASE160AU	2023 Fall	Introduction to Automotive Electrical		Automotive electrical systems foundations. Emphasis on testing and diagnosis of automotive battery, starting, and charging systems.	Prerequisites: None.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5	T
ASE161	2019 Fall	Basic Automotive Electrical/Electronics		The basic principles of automotive electricity and electrical systems.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
ASE161AU	2019 Fall	Basic Automotive Electrical/Electronics		The basic principles of automotive electricity and electrical systems.	Prerequisites: None.		Occ	LEC 2.0 1.0 1.0 LAB 0.0 2.0 2.0	T
ASE162	2019 Fall	Automotive Battery, Starting and Charging Systems		The principles of operation, testing and diagnosis of automotive battery, starting and charging systems.	Prerequisites: A grade of C or better in ASE161, or permission of Instructor.		Occ	L+L 2.0 3.0 3.0	T
ASE162AU	2019 Fall	Automotive Battery, Starting and Charging Systems		The principles of operation, testing and diagnosis of automotive battery, starting and charging systems.	Prerequisites: A grade of C or better in ASE161, or		Occ	LEC 2.0 1.0 1.0	T

					permission of Instructor.			LAB 0.0 2.0 2.0	
ASE170	2023 Fall	Automotive Heating, Ventilation and Air Conditioning Systems		Theory and operation of automotive heating, ventilation and air conditioning systems. Includes diagnosis, service and repair of these systems.	Prerequisites: None.		Occ	L+L 4.0 7.5 7.5	T
ASE170AU	2023 Fall	Automotive Heating, Ventilation and Air Conditioning Systems		Theory and operation of automotive heating, ventilation and air conditioning systems. Diagnosis, service and repair of these systems.	Prerequisites: None.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5	T
ASE180	2023 Fall	Introduction to Engine Management		Introduction to automotive engine management. Includes the construction and operating principles of automotive internal combustion engines. Focus on operation and diagnosis of fuel systems, ignition systems, lubrication, and cooling systems.	Prerequisites: None.		Occ	L+L 4.0 7.5 7.5	T
ASE180AU	2023 Fall	Introduction to Engine Management		Introduction to automotive engine management. Includes the construction and operating principles of automotive internal combustion engines. Focus on operation and diagnosis of fuel systems, ignition systems, lubrication, and cooling systems.	Prerequisites: None.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5	T
ASE181	2019 Fall	Introduction to Engine Performance		An introductory course in automotive engine performance as it relates to the construction and operating principles of automotive internal combustion engines, fuel systems, ignition systems, and the related lubrication and cooling systems.	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
ASE181AU	2019 Fall	Introduction to Engine Performance		An introductory course in automotive engine performance as it relates to the construction and operating principles of automotive internal combustion engines, fuel systems,	Prerequisites: None.		Occ	LEC 2.0 1.0 1.0 LAB 0.0	T

				ignition systems, and the related lubrication and cooling systems.				3.0 3.0	
ASE182	2019 Fall	Fundamentals of Automotive Fuel/Air and Ignition Systems		The theory and fundamentals of automotive fuel/air delivery and ignition systems. The proper diagnosis and repair of the fuel/air delivery and ignition systems.	Prerequisites: A grade of C or better in ASE181, or permission of Instructor.		Occ	L+L 2.0 4.0 4.0	T
ASE182AU	2019 Fall	Fundamentals of Automotive Fuel/Air and Ignition Systems		The theory and fundamentals of automotive fuel/air delivery and ignition systems. The proper diagnosis and repair of the fuel/air delivery and ignition systems.	Prerequisites: A grade of C or better in ASE181, or permission of Instructor.		Occ	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T
ASE240	2023 Fall	Advanced Driver Assistance Systems		Principles of Advanced Driver Assistance Systems (ADAS). Diagnosis, service, and repair procedures.	Prerequisites: A grade of C or better in ASE140, or ASE140AU, or permission of Instructor.		Occ	L+L 2.0 4.0 4.0	T
ASE241	2019 Fall	Advanced Steering, Suspension and Alignment		Advanced automotive principles of suspension and steering systems. Diagnosis, service and repair procedures, with emphasis on four-wheel alignment.	Prerequisites: A grade of C or better in ASE141, or permission of Instructor.		Occ	L+L 2.0 4.0 4.0	T
ASE241AU	2019 Fall	Advanced Steering, Suspension and Alignment		Advanced automotive principles of suspension and steering systems. Diagnosis, service and repair procedures, with emphasis on four-wheel alignment.	Prerequisites: A grade of C or better in ASE141, or permission of Instructor.		Occ	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T
ASE251	2019 Fall	Advanced Brake Systems		The operation, diagnosis, service and repair of advanced automotive brake systems.	Prerequisites: A grade of C or better in ASE151, or permission of Instructor.		Occ	L+L 2.0 4.0 4.0	T
ASE251AU	2019 Fall	Advanced Brake Systems		The operation, diagnosis, service and repair of advanced automotive brake systems.	Prerequisites: A grade of C or better in ASE151, or permission of Instructor.		Occ	LEC 2.0 1.0 1.0 LAB 0.0	T

								3.0 3.0	
ASE260	2023 Fall	Advanced Automotive Electrical		Advanced principles of automotive electronics.	Prerequisites: A grade of C or better in ASE160, or ASE160AU, or permission of Instructor.		Occ	L+L 4.0 7.5 7.5	T
ASE260AU	2023 Fall	Advanced Automotive Electrical		Advanced principles of automotive electronics.	Prerequisites: A grade of C or better in ASE160, or ASE160AU, or permission of Instructor.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5	T
ASE261	2019 Fall	Automotive Electrical Diagnostics and Repair		Principles of automotive electrical diagnostics and repair.	Prerequisites: A grade of C or better in ASE162, or permission of Instructor.		Occ	L+L 2.0 4.0 4.0	T
ASE261AU	2019 Fall	Automotive Electrical Diagnostics and Repair		Principles of automotive electrical diagnostics and repair.	Prerequisites: A grade of C or better in ASE162, or permission of Instructor.		Occ	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T
ASE262	2019 Fall	Automotive Electronic Control Systems		Principles and operation of automotive electronics and electronic control systems.	Prerequisites: A grade of C or better in ASE261, or permission of Instructor.		Occ	L+L 2.0 4.0 4.0	T
ASE262AU	2019 Fall	Automotive Electronic Control Systems		Principles and operation of automotive electronics and electronic control systems.	Prerequisites: A grade of C or better in ASE261, or permission of Instructor.		Occ	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T
ASE263	2023 Fall	Hybrid Vehicle Overview		Automotive hybrid vehicle design and operation. Safety practices as suggested by manufacturers for servicing hybrid vehicle.	Prerequisites: A grade of C or better in ASE100.		Occ	L+L 2.0 4.0 4.0	T

ASE264	2019 Fall	Automotive Electrical/Electronic Systems III		Designed for the advanced automotive student, this course covers the automotive computer, multiple computer systems, and automotive computer networks.	Prerequisites: A grade of C or better in ASE161 and ASE162, or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
ASE265	2023 Fall	Introduction to Electric and Hybrid Vehicles		Principles of electric drive vehicles, including electric drive, hybrid, and fuel cell electric vehicles.	Prerequisites: A grade of C or better in ASE260, or permission of Instructor.		Occ	L+L 2.0 4.0 4.0	T
ASE266	2019 Fall	Electric/Hybrid Vehicle High Voltage Batteries		This course covers the safety, operation, testing, diagnosis, and repair of electrical and hybrid high voltage batteries.	Prerequisites: A grade of C or better in ASE161 and ASE162, or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
ASE267	2019 Fall	Electric Vehicle Operation and Diagnosis		Covers the operation and diagnosis of electric/hybrid vehicles.	Prerequisites: A grade of C or better in ASE161 and ASE162, or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
ASE280	2024 Spring	Engine Management		Diagnostic concepts of advanced engine management. Operation and diagnosis of engine management control systems, communication networks, and vehicle emissions.	Prerequisites: A grade of C or better in ASE180, or ASE180AU, or permission of Instructor.		Occ	L+L 4.0 7.5 7.5	T
ASE280AU	2024 Spring	Engine Management		Diagnostic concepts of advanced engine management. Operation and diagnosis of engine management control systems, communication networks, and vehicle emissions.	Prerequisites: A grade of C or better in ASE180, or ASE180AU, or permission of Instructor.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 5.5 5.5	T
ASE281	2019 Fall	Computerized Automotive Engine Control Systems		The theory of computerized engine control systems as they relate to engine performance and emissions control.	Prerequisites: A grade of C or better in ASE261 and ASE182, or permission of Instructor.		Occ	L+L 2.0 4.0 4.0	T
ASE281AU	2019 Fall	Computerized Automotive		The theory of computerized engine control systems as they relate to	Prerequisites: A grade of C or better in ASE182, or		Occ	LEC 2.0 1.0	T

		Engine Control Systems		engine performance and emissions control.	permission of Instructor.			1.0 LAB 0.0 3.0 3.0	
ASE282	2019 Fall	Advanced Engine Performance Diagnosis		Diagnosis and repair of emission and engine control systems. Emphasizes the proper diagnosis, documentation, and repair of systems faults.	Prerequisites: A grade of C or better in ASE261 and ASE281, or permission of Instructor.		Occ	L+L 2.0 4.0 4.0	T
ASE282AU	2019 Fall	Advanced Engine Performance Diagnosis		Diagnosis and repair of emission and engine control systems. Emphasizes the proper diagnosis, documentation, and repair of systems faults.	Prerequisites: A grade of C or better in ASE261 and ASE281, or permission of Instructor.		Occ	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T
ASE290AA	2020 Fall	Automotive Service Internship		Automotive work experience in the automotive service industry.	Prerequisites: Permission of Department or Division.	80 hours of designated work per credit. Maximum of four (4) credits can be earned by taking any combination of ASE290A A, and/or ASE290A B, and/or ASE290A C; this combination may include repeats of the same suffixed course(s).	Occ	L+L 1.0 1.0 0.0	C

ASE290AB	2020 Fall	Automotive Service Internship		Automotive work experience in the automotive service industry.	Prerequisites: Permission of Department or Division.	80 hours of designated work per credit. Maximum of four (4) credits can be earned by taking any combination of ASE290A, and/or ASE290B, and/or ASE290C; this combination may include repeats of the same suffixed course(s).	Occ	L+L 2.0 2.0 0.0	C
ASE290AC	2020 Fall	Automotive Service Internship		Automotive work experience in the automotive service industry.	Prerequisites: Permission of Department or Division.	80 hours of designated work per credit.	Occ	L+L 3.0 3.0 0.0	C
ASE296WA	2019 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least		Occ	LAB 1.0 5.0 0.0	Z

					one class which is related to student's major or career interest or with permission of the Instructor.				
ASE296WB	2019 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Occ	LAB 2.0 10.0 0.0	Z
ASE296WC	2019 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with		Occ	LAB 3.0 15.0 0.0	Z

					permission of the Instructor.				
ASE296WD	2019 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Occ	LAB 4.0 20.0 0.0	Z
ASE298AA	2019 Fall	Special Projects		An organized and tailored activity around the interests and needs of the individual student. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
ASE298AB	2019 Fall	Special Projects		An organized and tailored activity around the interests and needs of the individual student. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
ASE298AC	2019 Fall	Special Projects		An organized and tailored activity around the interests and needs of the individual student. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z

ASL090AA	2020 Fall	Speedy American Sign Language I		Introduction of techniques for communicating with deaf people using American Sign Language (A.S.L.). Expressive and receptive sign skills, manual alphabet, numbers, and basic sign vocabulary.	Prerequisites: None. ASL103 suggested but not required.	ASL090A A may be repeated for a total of five (5) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASL090AB	2020 Fall	Speedy American Sign Language II		Use American Sign Language (ASL) to converse about feelings, family members, other people, clothing, events according to proper tense, and to count to one hundred.	Prerequisites: A grade of C or better in ASL090AA. Completion of prerequisites within the last three years is required.	ASL090A B may be repeated for a total of five (5) credit hours.	Occ	LEC 1.0 1.0 1.0	S
ASL101	2020 Fall	American Sign Language I		Introduction of principles, methods, and techniques for communicating with deaf people who sign. Development of expressive and receptive sign skills, manual alphabet, numbers, and sign vocabulary. Overview of syntax, grammar, and culture related to American Sign Language (A.S.L.).	Prerequisites: None. ASL103 suggested as a corequisite but not required.		Occ	LEC 4.0 4.0 4.0	S
ASL102	2020 Fall	American Sign Language II		Continued development of knowledge and language skills for communicating with deaf people who sign. Includes numbers, fingerspelling, and culture. Emphasis on enhancement of receptive sign skills and continued development of expressive sign skills. Application of rudimentary, syntactical, and grammatical structure stressed with continued development of sign vocabulary.	Prerequisites: A grade of C or better in ASL101 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Occ	LEC 4.0 4.0 4.0	S
ASL103	2020 Fall	Introduction to the Deaf Community		History and development of American Sign Language (ASL) and English codes. Overview of education for Deaf and Hard of Hearing children. Legal rights and common adaptive devices used by Deaf and Hard of Hearing individuals.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
ASL105	2020 Fall	Survey of the Interpreting Profession		Survey of the field of sign language interpreting. Overview of cultural, historical and sociological framework for the principles, ethics, roles,	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				responsibilities, and standard practices of the interpreting profession.					
ASL110	2020 Fall	Fingerspelling		Introduction to fingerspelling techniques. Focus on methods, theory, and applications on receptive and expressive skills including manual alphabet production and numbers. In addition, skill development in speed, dexterity, clarity, and lexicalized fingerspelling, numeric incorporation, prefixes, suffixes, and polysyllabic words.	Prerequisites: A grade of C or better in ASL101 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Occ	LEC 3.0 3.0 3.0	S
ASL200	2020 Fall	Issues and Resources		Implications of laws pertaining to educational choices and rights of deaf, deaf-blind, and hard of hearing individuals. Local, state, and national organizations, activities, and agencies affecting the deaf community.	Prerequisites: A grade of C or better in ASL102 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Occ	LEC 3.0 3.0 3.0	S
ASL201	2020 Fall	American Sign Language III		Linguistics of American Sign Language (A.S.L.) including non-manual behaviors and signing English idioms with conceptual accuracy. Emphasis on practical application of A.S.L. skills, expanded vocabulary, and cross-cultural communication.	Prerequisites: A grade of C or better in ASL102 or permission of Department or Division. (ENG101 or ENG107) and (CRE101 or equivalent as indicated by assessment) suggested but not required. Completion of prerequisites within the last three years is required.		Occ	LEC 4.0 4.0 4.0	S
ASL202	2020 Fall	American Sign Language IV		Advanced American Sign Language skills including continued vocabulary. Emphasis on conversational techniques in a cross-cultural framework. Continued work on conceptual accurate signing of English idioms and words with multiple meanings.	Prerequisites: A grade of C or better in ASL201 or permission of Department or Division. (ENG101 or ENG107), ASL200, and (CRE101 or		Occ	LEC 4.0 4.0 4.0	S

					equivalent as indicated by assessment) suggested but not required. Completion of prerequisites within the last three years is required.				
ASL203	2020 Fall	American Sign Language V		Advanced study of vocabulary, classifiers, use of space, and grammatical features of American Sign Language (ASL). Includes evaluation of changes that occur in ASL as a living language. Advanced use of ASL in demonstrations, reports, and presentations	Prerequisites: A grade of C or better in ASL202. Completion of prerequisites within the last three years is required.		Occ	LEC 4.0 4.0 4.0	S
ASL204	2020 Fall	Comparative Linguistics: ASL/English		A variety of topics about linguistics of American Sign Language (ASL) and English including phonology, morphology, lexicon, syntax, discourse, and language acquisition. Aspects of using sign language and how visual languages differ and are similar to spoken language.	Prerequisites: A grade of C or better in ASL202. Corequisites: ASL203. Completion of prerequisites within the last three years is required.		Occ	LEC 3.0 3.0 3.0	S
ASL212	2020 Fall	Deaf Culture		Linguistic, social, educational, and political issues in deaf culture. Values and group identity issues as related to heritage and literature. Special emphasis on the cultural and philosophical attitudes shared with other minority groups.	Prerequisites: A grade of C or better in ASL202 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Occ	LEC 3.0 3.0 3.0	S
ASL296WA	2020 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify), or permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z

					Corequisites: Concurrent in at least one class related to student's major or career interest, or permission of Instructor.				
ASL296WB	2020 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify), or permission of Instructor. Corequisites: Concurrent in at least one class related to student's major or career interest, or permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
ASL296WC	2020 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify), or permission of Instructor. Corequisites: Concurrent in at least one class related to student's major or career interest, or		Occ	LAB 3.0 15.0 0.0	Z

					permission of Instructor.				
ASL296WD	2020 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify), or permission of Instructor. Corequisites: Concurrent in at least one class related to student's major or career interest, or permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
ASL298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
ASL298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

ASL298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
ASM104	2018 Fall	Bones, Stones, and Human Evolution		Study of human evolution and variation; including fossil hominids and their tools, primate anatomy and behavior, human genetics, and the environment and human biology.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB] General Education Designation: Natural Sciences (General) - [SG]	Acad	L+L 4.0 5.0 5.0	T
ASM265	2018 Fall	Laboratory Methods in Archaeology		Techniques of artifact. Basic archaeological research techniques; methods of report writing.	Prerequisites: None.	ASM265 may be repeated for a total of eight (8) credits hours Course Attribute(s): General Education Designation: Natural Sciences (General) - [SG]	Acad	L+L 4.0 4.0 4.0	T

ASM275	2024 Fall	Forensic Anthropology		Survey of the role of forensic anthropologists, from the crime scene to the courtroom. Course focuses on how skeletal analysis can aid in medicolegal investigations, especially by identifying aspects of the life history of unknown individuals and by reconstructing events that took place at crime scenes. Covers both the legal aspects of forensic practice and the underlying biological basis for evidence obtained from skeletal remains. Examines applications of forensic anthropology in mass disasters, human rights investigations, and the deciphering of historic cases. Lab activities designed to illustrate techniques and principles central to the discipline.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB] General Education Designation: Natural Sciences (General) - [SG]	Acad	L+L 4.0 5.0 5.0	T
ASM282AA	2013 Summer I	Service-Learning Experience in Anthropology		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	ASM282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
ASM282AB	2013 Summer I	Service-Learning Experience in Anthropology		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	ASM282A B may be repeated for a total of six (6) credit hours. Standard grading available according to	Acad	LAB 2.0 2.0 0.0	L

						procedures outlined in catalog.			
ASM282AC	2013 Summer I	Service-Learning Experience in Anthropology		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	ASM282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
ASM298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
ASM298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
ASM298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

				and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
AST101	2024 Fall	Survey of Astronomy		Survey of astronomy for the nontechnical student. The history, content, and evolution of the solar system and the universe in general. Astronomical principles and instrumentation. The planets, moons, sun, comets, stars and star formation, galaxies, and cosmology.	Prerequisites: None.	Course Attribute(s): General Education Designation: Natural Sciences (General) - [SG]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
AST106	2019 Spring	Life in the Universe	GLG106	Introduction to the search for life in the universe for the non-science major. Earth's location in space and time, nature of life, light and the spectrum, origin and history of the universe, origin of life on Earth and the possibility of life on other planets.	Prerequisites: A grade of C or better in MAT090 or MAT091 or MAT092 or completion of higher level mathematics course, or satisfactory score on placement exam.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
AST111	2019 Spring	Introduction to Solar System Astronomy		Introduction to astronomy for the non-science major. The scientific method, properties of light, astronomical instruments, our Solar System and solar systems around other stars. Includes hands-on astronomical observations and laboratory exercises.	Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory score on district placement exam.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
AST112	2019 Spring	Introduction to Stars, Galaxies, and Cosmology		Introduction to astronomy for the non-science major. Structure and evolution of stars; supernovae, black holes, and quasars; nebulae; star clusters; galaxies; cosmology, including the birth and death of the universe.	Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory score on district placement exam.	AST111 is not a prerequisite for AST112. Course Attribute(s): General Education Designation: Natural	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T

						Sciences (Quantitative) - [SQ]			
AST282AA	2023 Fall	Service-Learning Experience in Astronomy		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	AST282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
AST282AB	2023 Fall	Service-Learning Experience in Astronomy		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	AST282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L
AST282AC	2023 Fall	Service-Learning Experience in Astronomy		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	AST282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedure	Acad	LAB 3.0 3.0 0.0	L

						s outlined in catalog.			
AST285	2018 Fall	Introduction to Astrodynamics	ECE285 PHY285	Introduction to celestial mechanics and the dynamics of spacecraft navigation. Introduction to rocket propulsion and spacecraft design. Orbital and interplanetary celestial mechanics and maneuvers. Astrophysics and characteristics of the space environment. Lab is project-based, utilizing a real-time spacecraft simulation environment.	Prerequisites: A grade of C or better in ENG101 and (PHY115 or PHY121).		Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
AST294	2010 Fall	Special Topics in Astronomy		Conceptual, experimental, and computational aspects of a special topic in astronomy.	Prerequisites: Permission of Department or Division.	AST294 may be repeated for credit.	Acad	LEC 3.0 3.0 3.0	S
AST294AA	2010 Fall	Special Topics in Astronomy		Conceptual, experimental, and computational aspects of a special topic in astronomy.	Prerequisites: Permission of Department or Division.	AST294A A may be repeated for credit.	Acad	LEC 2.0 2.0 2.0	S
AST294AB	2010 Fall	Special Topics in Astronomy		Conceptual, experimental, and computational aspects of a special topic in astronomy.	Prerequisites: Permission of Department or Division.	AST294A B may be repeated for credit.	Acad	LEC 1.0 1.0 1.0	S
AST294AC	2010 Fall	Special Topics in Astronomy		Conceptual, experimental, and computational aspects of a special topic in astronomy.	Prerequisites: Permission of Department or Division.	AST294A C may be repeated for credit.	Acad	LEC 0.5 0.5 0.5	S
AST298AA	1996 Spring	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
AST298AB	1996 Spring	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z

				type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
AST298AC	1996 Spring	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
ATC298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
ATC298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
ATC298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z

				and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
ATP100	2018 Fall	Introduction to Manufacturing and Programmable Logic Controllers		Explores the origin and basic operation of programmable logic controllers (PLC) in manufacturing processes. Laboratory exercises include ladder logic programming, installation, adjustment, and testing of digital and analog sensors, signal conditioners, and basic troubleshooting concepts.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
ATP101	2016 Fall	Introduction to Automated Systems and Robotics		An introduction to automation, distribution systems, Automated Storage and Retrieval Systems (ASRS), and the role of the manufacturing technician. Includes general manufacturing techniques, industry standards, and statistical process control.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
ATP105	2010 Spring	Engineering Documentation		Analysis and interpretation of engineering documentation, common to manufacturing processes.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
ATP106	2018 Fall	Industrial Electrical Systems		Safety for electrical power and control systems, DC & AC circuit analysis, DC power supplies, switches and proximity sensors, inductors and capacitors, electrical and engineering documentation & schematics, digital multimeter & oscilloscope operation, solid state relays, and industrial control transformers.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
ATP111	2018 Fall	Mechanical Systems and Maintenance		Examination of mechanical drive systems. Includes fundamentals of direct drives, belt and pulley drives, chain drives and gear drives. Explores calculating and measuring quantities such as power, speed, torque, speed and torque reduction/amplification, and backlash.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T

				Also includes hands-on experience assembling and aligning components, testing and troubleshooting systems.					
ATP115	2018 Fall	Fluid Power		Fundamental industrial fluid power concepts including hydraulic and pneumatic installation, maintenance, and adjustments for the control of automated manufacturing systems.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
ATP130	2018 Fall	DC Circuit Analysis		Direct current (DC) electric circuits. Ohm's law, Kirchoff's laws, series, parallel and series-parallel circuits, network theorems, fundamentals of magnetism in electric circuits.	Prerequisites: None.		Occ	L+L 2.0 2.0 2.0	T
ATP135	2018 Fall	AC Circuit Analysis		Alternating Current (AC) circuits containing resistance and reactance. Detailed coverage of AC circuit parameters, including theorems, impedance matching, and resonance.	Prerequisites: A grade of C or better in ATP130 or ELE100 or approval of Instructor.		Occ	L+L 2.0 3.0 3.0	T
ATP150	2018 Fall	Fluid Power 1 - Hydraulics, Pneumatics, and Vacuum Concepts		Fundamental fluid power and vacuum for industry. Pneumatic, hydraulic, and vacuum system technologies with emphasis on assembly, integration, and measurement.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
ATP160	2018 Fall	Programmable Logic Controllers 1 - Introduction to Ladder Logic		Introductory lecture and laboratory course explores the origin and basic operation of Programmable Logic Controllers (PLC) with laboratory exercises including wiring of hardware, ladder logic programming and basic troubleshooting concepts.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ATP135 or ELC119 or permission of Program Director.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 4.0 4.0	T
ATP175	2018 Fall	Introduction to Motors and Motor Controls		Introduction to direct current and alternating current (AC) motors, types of direct current (DC) and alternation motors.	Prerequisites: A grade of C or better in (ATP130 and ATP135) or ELE111.		Occ	L+L 2.0 3.0 3.0	T
ATP180	2018 Fall	Programmable Logic Controllers 2 - Human-Machine Interfaces and Function Block Programming		Advanced lecture and laboratory course builds upon the foundations covered in introductory course, covering development and documentation of advanced ladder logic and function block programming, Programmable Logic Controller (PLC) control of variable frequency devices, and the installation and programming of Human Machine Interfaces (HMI).	Prerequisites: A grade of C or better in ATP160 or permission of Program Director.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 5.0 5.0	T

ATP190	2019 Spring	Industrial Robotics		Introduction to industrial robotics covering topics such as safety, operation, control technology, and programming.	Prerequisites: A grade of C or better in GTC108 or higher level math course.		Occ	LEC 3.0 4.0 3.7	S
ATP201	2018 Fall	Programmable Logic Controller (PLC) Systems		Advanced lecture and laboratory course builds upon the foundations covered in introductory course, including development and documentation of advanced ladder logic and function block programming, Programmable Logic Controller (PLC) control of variable frequency devices, PLC Networks and the installation and programming of Human Machine Interfaces (HMI).	Prerequisites: A grade of C or better in (ATP100 and ATP106) or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
ATP205	2018 Fall	Electric Motors and Controls		Examination of electrical motor control, power, and protection systems. Includes fundamentals of single and three-phase power, power, control and protection circuits. Also includes variable frequency drive (VFD), silicon controlled rectifier (SCR) control, and programmable logic controller (PLC).	Prerequisites: A grade of C or better in (ATP100 and ATP106) or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
ATP210	2018 Fall	Process Control		Introduction to instrumentation and control systems for wet type (continuous product) and dry type (discrete product) production systems. Includes process control concepts, instrumentation tag information, piping and instrumentation diagrams, level and flow sensing devices, Proportional-Integral-Derivative (PID) controllers, Programmable Logic Controllers (PLC), and final control elements.	Prerequisites: A grade of C or better in (ATP100 and ATP106) or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
ATP215	2018 Fall	Automation System Integration		Capstone course regarding the implementation of the planning, construction, adjustment, and testing of an industrial control system needed for the development of a functional automated system.	Prerequisites: A grade of C or better in (ATP201 and ATP205 and ATP210) or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
ATP296WA	2017 Spring	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome	Prerequisites: Completion of at least twelve (12) college		Occ	LAB 1.0	C

				related to the career objectives of the students.	credits minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.			5.0 0.0	
ATP296WB	2017 Spring	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Occ	LAB 2.0 10.0 0.0	C
ATP296WC	2017 Spring	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to		Occ	LAB 3.0 15.0 0.0	C

					student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
ATP296WD	2017 Spring	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Occ	LAB 4.0 20.0 0.0	C
AUT097	1995 Fall	General Automotive Maintenance		A study of automotive systems operation and maintenance for the consumer. Purchasing service for cars and performing minor maintenance	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AUT101	1994 Fall	Internal Combustion Engines Theory		Study of construction and operating principles of internal combustion engines and related lubrication, cooling, fuel, and electrical systems	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

AUT101AA	2018 Fall	Internal Combustion Engines Theory		Study of construction and operating principles of internal combustion engines and related lubrication, cooling, fuel, and electrical systems	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
AUT103AA	2018 Fall	Automotive Electrical Systems		Basic principles and fundamentals of automotive electricity and electrical systems. Training in diagnosis, service and reconditioning procedures of automotive starting, charging, ignition, and electrical circuits and components	Prerequisites: None.		Occ	L+L 6.0 10.0 10.0	T
AUT103AB	2018 Fall	Automotive and Electrical/Electronic Systems I		Designed for beginning automotive students. The principle of electricity; the mathematical computations involved with Ohm's Law; the use of meters; electrical schematics; the theory of electrical components as they relate to automobiles; the diagnosis, testing, service and repair of batteries, starting systems and charging systems, lighting systems and instrumentation	Prerequisites: None.		Occ	L+L 4.0 7.0 7.0	T
AUT103BD	2009 Spring	Ignition Systems		Diagnosis, service, and reconditioning procedures for automotive ignition systems	Prerequisites: Permission of Instructor.		Occ	LEC 1.0 1.0 1.0	S
AUT103DA	2018 Fall	Basic Automotive Electrical Theory		Covers introductory level automotive electrical theory. This includes shop safety and procedures, Circuits, Ohm's Law, use of meters, oscilloscopes, and other basic test equipment, as well as diagnosis of problems in and caused by electrical circuits. Repair of these problems also covered	Prerequisites: None.		Occ	L+L 1.1 2.0 2.0	T
AUT103DB	2018 Fall	Automotive Batteries		Study of automotive batteries. Diagnosis, testing, service, and repair of batteries and related circuits covered	Prerequisites: A grade of C or better in AUT103DA or permission of Instructor.		Occ	L+L 0.6 1.0 1.0	T
AUT103DC	2018 Fall	Automotive Charging Systems		The diagnosis, testing, service, and repair of charging systems and related components	Prerequisites: A grade of C or better in AUT103DA or permission of Instructor.		Occ	L+L 0.9 1.5 1.5	T

AUT103DD	2018 Fall	Automotive Starting Systems		Covers the starting motor systems used on modern automotive vehicles including light duty trucks. Diagnosis, testing, service, and repair of starting systems and related components covered.	Prerequisites: A grade of C or better in AUT103DA or permission of Instructor.		Occ	L+L 0.6 1.12 1.12	T
AUT103DE	2018 Fall	Automotive Lighting, Indicator, and Warning Circuits		Covers the operation of, diagnosis and repair of common automotive lighting, instrumentation, and warning device circuits used on the automobile.	Prerequisites: A grade of C or better in AUT103DA or permission of Instructor.		Occ	L+L 0.8 1.37 1.37	T
AUT104AA	2018 Fall	Automotive Fuel Systems		Theory and operation of fuel injection, engine control management, turbo charging and fuel systems, training in diagnosis, service and reconditioning procedures	Prerequisites: A grade of C or better in AUT103AA or AUT103AB or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
AUT105AA	2018 Fall	Engine Performance and Diagnosis		The theory and fundamentals of automotive engine management troubleshooting and oscilloscope testing as it pertains to diagnosis and tune-up of the modern day automobile. Emphasis on interpretation of oscilloscope patterns and Scantool Data as they relate to engine performance.	Prerequisites: A grade of C or better in (AUT103AA and AUT104AA) or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
AUT106AA	2018 Fall	Engine Overhaul and Reconditioning		Diagnostic and service skills essential to service and repair automotive internal combustion engines. Includes valve guide, seat reconditioning, cylinder block, piston, rod and crankshaft service	Prerequisites: None.		Occ	L+L 4.0 8.0 8.0	T
AUT106AC	2018 Fall	Engine Overhaul and Reconditioning: Heads and Valves		Diagnostic and service skills essential to service and repair of the cylinder head and valve train of contemporary automotive engines. Includes valve, guide, and seat reconditioning and service. Does not include block and crankshaft service	Prerequisites: A grade of C or better in AUT103AA or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
AUT106AD	2018 Fall	Engine Overhaul and Reconditioning Block and Crankshaft		Diagnostic and service skills related to cylinder block, piston, rod and crankshaft service. Includes honing, boring and crankshaft reconditioning as well as piston and ring service. Does not include cylinder head and valve work.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T

AUT107AA	2018 Fall	Automotive Air Conditioning		The theory and principles of refrigeration and air conditioning. Training in diagnosis, servicing, and reconditioning procedures of automotive air conditioning systems	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
AUT107AC	2018 Fall	Automotive Air Conditioning		The theory and principles of refrigeration and air conditioning. Training in diagnosis, servicing, and reconditioning procedures of automotive air conditioning systems	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
AUT107AD	2018 Fall	Automotive Air Conditioning		The theory and principles of refrigeration and air conditioning. Training in diagnosis, servicing, and reconditioning procedures of automotive air conditioning systems including electronic system controls.	Prerequisites: A grade of C or better in AUT103AA.		Occ	L+L 4.0 7.0 7.0	T
AUT108AB	2018 Fall	Front-End Suspension, Steering, and Alignment		The fundamentals and principles of suspension and steering systems. Diagnosis, service, and reconditioning procedures. Laboratory emphasis on front-end service and alignment	Prerequisites: None.		Occ	L+L 4.0 7.0 7.0	T
AUT109AA	2018 Fall	Automotive Brake Systems		The fundamentals and principles of hydraulics and automotive braking systems. Diagnosis, service, and reconditioning procedures of automotive braking systems	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
AUT109AC	2018 Fall	Automotive Brake Systems		Designed for beginning automotive students. Fundamentals of drum, disc, and ABS brakes. Includes training in diagnosis, testing, service, and repair	Prerequisites: None.		Occ	L+L 4.0 7.0 7.0	T
AUT110AC	2018 Fall	Automotive Power Trains		Designed for beginning automotive students. Operation, diagnosis, service, and repair of the automotive power train. Includes clutches, torque converters, standard and automatic transmissions and transaxles, front and rear drive axles, drive shafts, differentials and transfer case	Prerequisites: None.		Occ	L+L 4.0 7.0 7.0	T
AUT123	2018 Fall	Automatic Transmissions		Theory of operation and servicing procedures for current automatic transmissions.	Prerequisites: A grade of C or better in (AUT103AA and AUT104AA) or permission of Instructor.		Occ	LEC 6.0 4.0 4.0 LAB 0.0	T

								6.0 6.0	
AUT123AA	2018 Fall	Automatic Transmissions		Theory of operation and servicing procedures for current domestic automatic transmissions; includes diagnostics and testing of mechanical, electrical, and hydraulic components	Prerequisites: None.		Occ	L+L 4.0 8.0 8.0	T
AUT130	2018 Fall	Automotive Quick Service		Use of standard service publications; performance of commonly used service operations following published service procedures; emphasis on good attitude development and safety habits about automotive service.	Prerequisites: None.		Occ	L+L 4.0 7.0 7.0	T
AUT203	2018 Fall	Electrical Accessories		Theory and principles of wiring diagrams, accessories circuits, turn signals, and warning systems. Circuit trouble-shooting and service of gauges, indicators, power windows and seats, deck latches, and windshield wipers. Computerized electronic devices.	Prerequisites: A grade of C or better in AUT103AA or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
AUT210	1996 Spring	Automotive Emission Systems		Automotive emissions control systems and methods of emissions measurement. Diagnostic practices as suggested by the manufacturers and the related service of emissions control devices	Prerequisites: A grade of C or better in (AUT103AA and AUT104AA) or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
AUT210AA	2018 Fall	Automotive Emission Systems		Automotive emissions control systems and methods of emissions measurement. Diagnostic practices as suggested by the manufacturers and the related service of emissions control devices	Prerequisites: A grade of C or better in (AUT103AA and AUT104AA) or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
AUT215AA	2018 Fall	Automotive and Electrical/Electronic Systems II		Electrical accessory circuits including horns, wipers, defoggers, automatic door locks, power mirrors, power windows and power seats. Focuses on introduction to body computers, advanced lighting circuits and instrumentation, and chassis electronic control systems. Includes training in diagnosis, testing, service, and repair.	Prerequisites: A grade of C or better in AUT103AA or AUT103AB or permission of Instructor.		Occ	L+L 4.0 7.0 7.0	T
AUT233	2018 Fall	Computerized Engine Control Systems		Presents the reasons for developing and using computerized engine control systems. Explores system	Prerequisites: A grade of C or better in AUT103AB and		Occ	L+L 3.0	T

				operation, examining each component. Emphasizes diagnosis and repair of system faults	AUT104AA or permission of Instructor.			5.0 5.0	
AUT240	2018 Fall	Hybrid Vehicle Overview		Automotive hybrid vehicle design and operation. Safety practices as suggested by manufacturers for servicing hybrid vehicles.	Prerequisites: A grade of C or better in AUT130.		Occ	L+L 2.0 3.0 3.0	T
AUT282AA	2014 Summer	Service-Learning Experience in Automotive		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	AUT282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 1.0 1.0 0.0	L
AUT282AB	2014 Summer	Service-Learning Experience in Automotive		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	AUT282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 2.0 2.0 0.0	L
AUT282AC	2014 Summer	Service-Learning Experience in Automotive		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	AUT282A C may be repeated for a total of six (6) credit hours. Standard grading	Occ	LAB 3.0 3.0 0.0	L

						available according to procedures outlined in catalog.			
AVC100	2023 Fall	Introduction to Digital Arts		Foundation course in digital arts and design, with emphasis in the production of art using the computer.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
AVC103	2023 Fall	Typography in the Digital Age		Survey of the history of typography and individual designers. Emphasis on the function of typography as an integral part of effective visual communication. Study of type anatomy, mechanics, characteristics, structure, and the principles of effective selection and the relation of copy and image in graphic design. Evaluate fonts both visually and technically and learn how to manage them.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC104	2023 Fall	Cross-Media Marketing for Designers		Role of graphic designer in business with an emphasis on using graphic design to achieve marketing and sales objectives. Variety of communication channels explored, such as print and digital and including social media, web, and mobile media.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
AVC110	2023 Fall	Survey of Graphic Design and Visual Communication		A survey of graphic design and visual communication with an emphasis on application, history, and design processes. Tracing connections between contemporary and historical design. Apply knowledge to assemble and produce projects.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
AVC114	2023 Fall	Digital Color		Overview of how color is perceived and utilized in a digital environment and how to ensure consistent color from capture to final output in print or online. Investigate visual solutions utilizing electronic devices for color correction, manipulation and integrity.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
AVC119	2023 Fall	Penciling for Sequential Art		Development of observational skills as they apply to sequential art. Emphasis on techniques that	Prerequisites: None. ART111, or ART116, or previous drawing		Occ	L+L 3.0	T

				showcase how characters interact with their environment and manipulate props and cartooning anatomy. Includes techniques on composing page layouts, adapting scripts and reference gathering.	experience strongly recommended.			6.0 6.0	
AVC120	2023 Fall	Inking for Sequential Art		Development of inking materials and techniques used in sequential art. Emphasis on the types of tools used in the industry and the various means of employing them. Understanding the duties of the inker and the process of computer finishing.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
AVC135	2023 Fall	Foundations of Photojournalism		Basic technical knowledge of photographic process as applied by mass media.	Prerequisites: A grade of C or better in ART131 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC138	2023 Fall	Commercial Photography I		Basic techniques of lighting, camera work, and reproduction of commercial photography. Cooperation with commercial art community.	Prerequisites: A grade of C or better in (ART131 or AVC142) or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC139	2023 Fall	Commercial Photography II		Advanced techniques with portfolio organization and presentation.	Prerequisites: A grade of C or better in AVC138.		Occ	L+L 3.0 6.0 6.0	T
AVC140	2023 Fall	Portrait Photography		Fundamentals of portrait photography. Basic techniques of lighting, posing, design, and digital workflows applicable to the industry. Theory and practices of a portrait photography business.	Prerequisites: A grade of C or better in ART131, or AVC142, or permission of Instructor.	Digital camera with manual settings required.	Occ	L+L 3.0 6.0 6.0	T
AVC142	2023 Fall	Introduction to Digital Photography		Fundamentals of digital photography. Includes camera operations, exposure techniques, introduction to digital output, and theory of digital photography.	Prerequisites: None.	Digital camera required.	Occ	L+L 3.0 6.0 6.0	T
AVC143	2023 Fall	Intermediate Digital Photography		Intermediate theory and techniques of digital photography. Aesthetic awareness and personal expression from image capture through intermediate techniques in the digital darkroom. Introduction to high-resolution digital output.	Prerequisites: A grade of C or better in AVC142 or permission of Instructor.	Semi-adjustable , high-resolution digital camera is required.	Occ	L+L 3.0 6.0 6.0	T

AVC150	2024 Fall	Multimedia Storytelling		Enables students to find and develop their personal stories. Emphasis on the use of digital technology to create, edit, produce and archive a multimedia story.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
AVC164	2023 Fall	Introduction to Drawing and Digital Paint		Essential skills, concepts and use of digital media for drawing and painting. From concept to line-drawing; use of value, texture, color, lighting, space and scale elements to execute a finished rendering.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC164AC	2023 Fall	Introduction to Drawing and Digital Paint III		Essential skills, concepts and use of digital media for drawing and painting to execute a finished rendering and output formats.	Prerequisites: Permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
AVC169	2023 Fall	2D Media Design		Generation of two-dimensional (2D) images, designs, and media using digital and traditional methods of visual problem solving. Understanding digital and design-based techniques and workflows.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC170	2023 Fall	3D Computer Design		Artistic manipulation of computer images. Emphasis on color and three-dimensional (3D) design in production of these images. Existing software used to generate three-dimensional art.	Prerequisites: A grade of C or better in AVC100 or AVC169 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC173	2023 Fall	Computer Art		Introduction to the multiple elements of paint software programs using the microcomputer. Basic foundation in the use of computer techniques including color paint programs for the production of computer images. Use of electronic input and output devices.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	Prerequisites: A grade of C or better in ART100 or permission of Instructor.	Occ	L+L 3.0 6.0 6.0	T
AVC174	2023 Fall	Electronic Color Principles		Interactive use of color for graphic communication. Color theory, color relationships and electronic color manipulation for computer graphic art, animation and multimedia.	A grade of C or better required in all prerequisites. Prerequisites or Corequisites: AVC100.		Occ	L+L 1.0 2.0 2.0	T

AVC175	2023 Fall	Electronic Publishing Design I		Introduction to the multiple elements of commercial publishing using the microcomputer. Basic foundation in the use of electronic page layout techniques. Emphasis on publication design layout and concepts.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC177	2023 Fall	Digital Photographic Imaging I		Introduction to multiple elements of digital imaging. Basic foundation in photographic manipulation of images, with special attention to aesthetic foundations underlying photographic composition.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC178	2023 Fall	Digital Arts Studies		Designed for broad overview of the digital arts. Experience in digital based media, creative problem solving, design and aesthetics.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC179	2023 Fall	Electronic Presentation Design		Introduction to the multiple elements of commercial-graphic presentation materials using the microcomputer and other advanced technologies. Basic foundation in the use of computer presentation software programs using presentation techniques. Special attention to aesthetic foundations underlying all presentation materials.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC180AC	2023 Fall	Designer's Tools: Quark Express		Introduction to the multiple elements of Quark Express, a visual art adaptation software package using the Macintosh microcomputer. Basic foundation course in the use of electronic techniques, including appropriate input and output production devices.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
AVC180AD	2023 Fall	Designer's Tools: Adobe Illustrator		Introduction to the multiple elements of Adobe Illustrator, a visual art adaptation software package using the Macintosh microcomputer. Basic foundation course in the use of electronic techniques, including	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T

				appropriate input and output production devices.					
AVC180AE	2023 Fall	Designer's Tools: Adobe Photoshop		Introduction to the multiple elements of Photoshop software package using the microcomputer. Basic foundation in the use of electronic techniques including appropriate input and output production devices.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
AVC180AI	2023 Fall	Designer's Tools:3-D Studio Textures		Introduction to multiple elements of 3-D studio material using DOS microcomputers. Basic foundation in the use of electronic input and output production devices.	Prerequisites: A grade of C or better in AVC/MMT184 or AVC284 or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
AVC180AJ	2023 Fall	Designer's Tools:3-D Special Effects		Introduction to multiple elements of 3-D studio special effects software using DOS microcomputer. Basic foundation in the use of electronic input and output production devices.	Prerequisites: A grade of C or better in AVC/MMT184 or AVC284 or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
AVC180AK	2023 Fall	Designer's Tools: Adobe Premiere		Basic functions and use of Adobe Premiere video editing software. Applications for computer animation, multimedia, and digital video production.	Prerequisites: A grade of C or better in AVC100. AVC/MMT184 is strongly recommended but not required.		Occ	L+L 1.0 2.0 2.0	T
AVC180AL	2023 Fall	Designer Tools: Character Studio		Character Studio 3D-Character Animation software. Character motion, editing and blending electronic with traditional techniques.	Prerequisites: A grade of C or better in AVC100 and AVC/MMT184. ART116 is recommended but not required.		Occ	L+L 2.0 5.0 5.0	T
AVC180AM	2023 Fall	Designer's Tools: Dreamweaver		Introduction to Dreamweaver software and Web editing process. Developing sites, automating production, Web design integration using graphics, and graphics output. Learn powerful Web editing methods.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
AVC180AN	2023 Fall	Designer's Tools: Flash		Introduction to Flash software. Basic foundation in Flash vector graphics, 2D and 3D animation and creation of full motion video with sound.	Prerequisites: A grade of C or better in (AVC180AD and AVC180AE) or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T

AVC180AP	2023 Fall	Designer's Tools: Photoshop for Multimedia		Advanced Adobe Photoshop techniques for multimedia. Foundations in imaging for animation, Web, graphics, digital video and offset graphics.	Prerequisites: A grade of C or better in AVC180AE or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
AVC180AR	2023 Fall	Designer's Tools: Final Cut Pro		Introduction to non-linear editing using Final Cut Pro software for graphics, animation and the Web applications.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
AVC180AS	2023 Fall	Designer's Tools: Adobe InDesign		Basic functions and operations of Adobe InDesign software. Application for graphic design, publishing, digital pre- press production and web layout.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
AVC180AT	2023 Fall	Designer's Tools: Adobe After Effects		Introduction to Adobe After Effects software. Digital effects and motion graphics for the WEB, CD-ROM, DVD, video, film and animation.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
AVC181	2023 Fall	Graphic Design I		Basic understanding of design principles and the stages of graphic design, with an emphasis on final product and presentation.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC182	2023 Fall	Graphic Design II		Utilizing graphic design essentials of typography, contrast and layout to develop design solutions to problems in consumer advertising, typography and structure.	Prerequisites: A grade of C or better in AVC181 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC183	2023 Fall	Digital Graphic Arts I		Graphic design use in microcomputer; black and white graphics, standard and color brushes, lines, shapes, area fills and fonts. Application to illustration, advertising graphics, typography, and video interaction.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC184	2023 Fall	Digital Animation I	MMT184	The art of animation (animated sequences, special effects, titles, etc.) using the computer. Construction characters, background graphics, color, scaling, storyboard, cells, timing, editing, and surface rendering. Screening and discussion of selected animated short films and videos.	Prerequisites: A grade of C or better in (ART111 or ART116) or permission of Instructor. Corequisites: AVC100 or		Occ	L+L 3.0 6.0 6.0	T

					permission of Instructor.				
AVC185	2023 Fall	3D Modeling and Animation I	MMT185	Basic concepts of 3D modeling. Anatomy of computer geometry; basic elements that make computer models-curves, surfaces, non-uniform rational basis spline (NURBS), and polygons. 3D translation, shading, materials, and rendering.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC187	2023 Fall	Perspective Drawing for Animation		Perspective techniques for creating depth illusion as applied to principles of 3D modeling and animation. Study of size relationships, size and space variation, converging lines, vanishing points, overlapping planes. 3D lighting systems and light changes over distance.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
AVC190	2024 Fall	Art of Web Site Design	MMT190	Introduction to design production for websites. Layout, typography and presentation style for HTML (Hyper Text Markup Language). Design of mock-ups using digital design software to produce artistic form and content for the Web using Hyper Text Markup Language (HTML), digital text, and graphics. Discussion of color, proportion, typography and Web-specific design principles. Emphasizes design of cross-browser compatible interfaces that optimize usability, accessibility and browser interoperability.	Prerequisites: A grade of C or better in AVC100, or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC190AA	2024 Fall	Art of Website Design I		Introduction to design production for websites. Layout, typography and presentation style for HTML (Hyper Text Markup Language). Design of mock-ups using digital design software to produce artistic form and content for the Web using Hyper Text Markup Language, digital text, and graphics.	Prerequisites: A grade of C or better in AVC100, or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
AVC190AB	2024 Fall	Art of Website Design II		Producing Web site pages, using design and Hyper Text digital text and graphics. Discussion of color,	Prerequisites: A grade of C or better in AVC100 and AVC190AA, or		Occ	L+L 1.0 2.0 2.0	T

				proportion, typography and Web-specific design principles.	permission of Instructor.				
AVC190AC	2024 Fall	Art of Website Design III		Producing Web sites using artistic form and content. Emphasizes design of cross-browser compatible interfaces that optimize usability, accessibility and browser interoperability.	Prerequisites: A grade of C or better in AVC100 and AVC190AB, or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
AVC191	2025 Fall	Storyboarding and Layout		Introduction to storyboarding, including film storytelling and scene presentation.	Prerequisites: A grade of C or better in ART111 or AVC187.		Acad	L+L 3.0 3.0 3.0	T
AVC192	2023 Fall	Advanced Web Presentation Design		Advanced interactive application and training for Web designers and graphic artists using Quark, Illustrator, Photoshop, HTML Flash, Dreamweaver and Digital Video site optimization techniques. Development of design concepts for web pages that communicate and deliver Web content creatively	Prerequisites: A grade of C or better in AVC/MMT190 or permission of instructor. AVC180AM and AVC180AN suggested but not required.		Occ	L+L 3.0 6.0 6.0	T
AVC200	2023 Fall	Animation and Interactivity		Animation and object-oriented programming concepts and techniques using industry standard authoring tools applied by the creative industry to animation productions, and interactive media. Introduction to animation and object-oriented programming concepts and techniques using industry standard authoring tools. Includes tools used by the creative industry for animation productions and interactive media	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC201	2023 Fall	Variable Data Printing		Understanding variable data and all areas including: design, utilizing data, cleaning and creating a database, file setup, prepress and press setup. Software used: Excel, Adobe InDesign, Acrobat.	Prerequisites: A grade of C or better in AVC175, or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC202	2023 Fall	Media Productions I		Introduction to digital media production tools, equipment, and broadcast applications. Pre-production including script writing, storyboards, budgeting and copyright; studio and mobile production including the use of cameras, lighting,	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	Prerequisites: A grade of C or better in ART100 or permissio	Occ	L+L 3.0 6.0 6.0	T

				audio recording, and new media tools; post-production including media editing, transitions, titles, overlays and basic motion graphics.		n of Instructor.			
AVC203	2023 Fall	Aesthetics of Web Design		Develop portfolio-level web design projects. Emphasis on advanced elements and principles of design. Continued development of aesthetic awareness and personal expression. Evaluation of aesthetic principles throughout semester.	Prerequisites: A grade of C or better in AVC/MMT190 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC204	2023 Fall	Creative Design for Advertising		Focuses on the design and production of advertisement layouts and visual marketing campaigns for digital, mobile, and social channels which drive business objectives. Emphasis on terminology, analysis, and critique of advertising design, campaign methods, techniques, and the use of video across digital, mobile, and social channels.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
AVC210	2023 Fall	Design Tools for Imagery, Production, and Publishing		Industry standard development of image manipulation, digital production, digital negatives, typography, and desktop publishing. New techniques using integrated software with multiple platform applications. Emphasis on alternative processes including: technique, aesthetics and creative imagery.	Prerequisites: A grade of C or better in AVC100 and [AVC169 or (AVC180AD, AVC180AE, and ART180AS)] and AVC181, or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC215	2023 Fall	Advanced Electronic Publishing		Advanced use of electronic page layout techniques including in-depth styles; typography; technical documents and digital publishing interactivity.	Prerequisites: A grade of C or better in AVC175.		Occ	L+L 3.0 6.0 6.0	T
AVC219	2023 Fall	Coloring, Toning and Lettering for Sequential Art		Understanding of the digital rules and programs used in coloring, toning and lettering comics, and the problems presented therein within the sequential narrative. Emphasis on rules and guidelines within the industry, and digital coloring and lettering.	Prerequisites: A grade of C or better in (AVC100 and AVC119) or permission of Instructor. AVC120 recommended.		Occ	L+L 3.0 6.0 6.0	T
AVC220	2023 Fall	Publishing for the Comic Industry		Understanding of the comics industry. Includes researching, marketing,	Prerequisites: A grade of C or better		Occ	L+L 3.0	T

				packaging, and distributing comics. Emphasis on selling and submitting to comic publishers, how to develop comics for self-publishing, promotional materials, and understanding contracts and copyrights involved in the process of publishing comics.	in AVC100 or permission of Instructor.			6.0 6.0	
AVC221	2023 Fall	Comics Creation		Development of a complete sequential comic, using all comics skills from beginning to end. Process includes scripting, penciling, inking, coloring or toning, lettering, and printing for publication.	Prerequisites: A grade of C or better in (AVC100 and AVC219) or permission of Instructor.		Occ	L+L 3.0 3.0 3.0	T
AVC227	2023 Fall	Estimating for Digital Output		Introduction to estimating for digital output including job costing, labor/time, material and equipment costs. Focus on layout and imposition for press. Learn outside purchasing and vendor relationship management.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
AVC230	2023 Fall	Visual Brand Design		Simulates an actual working environment which exposes students to the challenges and advantages of working in cross-functional teams. Topics include preparation for collaborative work environments, critical thinking and communication, messaging, and effectively employing marketing and design principles. Reviews logo creation and implementation, preparing online and offline collateral, creating marketing messaging and campaigns, written and oral communication, and personal presentation skills.	Prerequisites: A grade of C or better in (AVC100 and MKT110) or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC232	2023 Fall	Studio Lighting		This course covers the fundamentals of lighting techniques with studio strobes, speed lights, and continuous lighting systems. Teaches students to use different light modifiers according to situation, subject and personal vision.	Prerequisites: A grade of C or better in ART131, or AVC142, or permission of Instructor.	Camera with manual settings required of this course. AVC232 may be repeated for a total	Occ	L+L 3.0 6.0 6.0	T

						of six (6) credit hours.			
AVC236	2023 Fall	Photography Location Shooting		Practical application of camera techniques, use of lighting, and on-location shooting for post-production printing.	Prerequisites: A grade of C or better in (ART131 or AVC142) or permission of Instructor.	Film and/or Digital Single Lens Reflex (DSLR) camera is required. AVC236 may be repeated for credit.	Occ	L+L 3.0 6.0 6.0	T
AVC237	2023 Fall	Fashion Photography		Practical application of photographic techniques within the fashion industry. Includes the photographing of models, garments, and accessories.	Prerequisites: A grade of C or better in (ART131 or AVC142) or permission of instructor.	Digital Single Lens Reflex (DSLR) camera is required. AVC237 may be repeated for credit.	Occ	L+L 3.0 6.0 6.0	T
AVC240	2023 Fall	Cinematography and Directing for 2D/3D Animation		Essential skills, concepts and the use of virtual cameras in 2D and 3D animation environments: planning, pre-production, storyboards and pre-visualization using real-world camera principles is combined with rendering, sound and post-production in a nonlinear environment.	Prerequisites: A grade of C or better in (AVC/MMT184, or AVC/MMT185, or FMP108) or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC246	2023 Fall	Digital Fabrication	THO246	Introduction to concepts and application of computer visualization, modeling, and rapid prototyping for interdisciplinary arts. Students will design sculptures applying 3D computer modeling techniques, rapid prototyping, and other available digital output devices to produce solid models.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
AVC247	2024 Fall	High Resolution Digital Model		This course introduces students to the cutting-edge world of 3D laser	Prerequisites: None.	AVC247 may be	Occ	L+L 3.0	T

		Making through 3D Laser Scanning and Photogrammetry		scanning and photogrammetry, focusing on creating high-resolution digital models of various objects.		repeated for credit.		6.0 6.0	
AVC248	2023 Fall	Design Self Promotion		Defining career goals, and developing a self-promotional marketing plan to enter the workplace, including a resume, business card, leave behind, social media presence, interactive portfolio and printed portfolio. Understand business ethics and etiquette, artist's rights, copyright laws and contractual agreements, and develop networking, interview and communication skills.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
AVC249	2023 Fall	Visual Communication Project Management and Workflow		Communication and coordination of digital projects from inception through completion. Emphasis on job workflow including professional communication, time management, detailed follow through and conflict resolution with stakeholders.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.	Working with Printing Industries of America and their iLearning Center, students will have the opportunity to become industry certified for the Customer Service Professional (CSP) Certification for a minimal additional cost.	Occ	L+L 3.0 6.0 6.0	T
AVC269AC	2023 Fall	Digital Studio		Continued development of digital studio media with emphasis on advanced use of media techniques within a digital environment.	Prerequisites: A grade of C or better in (AVC169 or AVC170 or AVC173	AVC269A C students must have	Occ	L+L 3.0 6.0 6.0	T

					or AVC179 or AVC192 or AVC274 or AVC284 or AVC289 or AVC291) or permission of Instructor.	completed advanced courses in the subject field.			
AVC270	2023 Fall	Digital Photographic Imaging II		Intermediate digital photographic imaging techniques. Refinement of aesthetic awareness and personal expression.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC177.		Occ	L+L 3.0 6.0 6.0	T
AVC273AC	2023 Fall	Special Topics: Multimedia Arts		Multimedia art studio course examining new and/or current topics in media and/or multimedia arts.	Prerequisites: Permission of Instructor.	AVC273A C is designed to offer special topics and/or specialized training for students in multimedia arts. Activities may also be appropriate for portfolio enhancement.	Occ	L+L 3.0 6.0 6.0	T
AVC274	2023 Fall	Digital Photographic Imaging III		Advanced digital photographic imaging techniques. Advanced manipulation techniques of photographic images and time-based media. Continued development of aesthetic awareness and personal expression.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC270.		Occ	L+L 3.0 6.0 6.0	T
AVC279	2023 Fall	Media Productions II		Intermediate digital media production techniques. Continued pre-production, production, and post-production skills. Exploration of types of productions including interviews,	Prerequisites: A grade of C or better in AVC202 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T

				informational/how-to, marketing/product, and documentary/artistic media productions. Refinement of aesthetic awareness and personal expression.					
AVC280AA	2023 Fall	Digital Media Arts and Design Capstone		Focus on design, art, and development skills for a problem taken from business or industry. Includes practice-based capstone project focusing on a specific issue or need in digital media arts and design.	Prerequisites: Permission of Program Director or Instructor.	AVC280A A requires 80 clock hours of designated work per credit hour.	Occ	L+L 1.0 2.0 2.0	T
AVC280AB	2023 Fall	Digital Media Arts and Design Capstone		Focus on design, art, and development skills for a problem taken from business or industry. Includes practice-based capstone project focusing on a specific issue or need in digital media arts and design.	Prerequisites: Permission of Program Director or Instructor.	AVC280A B requires 80 clock hours of designated work per credit hour.	Occ	L+L 2.0 4.0 4.0	T
AVC280AC	2023 Fall	Digital Media Arts and Design Capstone		Focus on design, art, and development skills for a problem taken from business or industry. Includes practice-based capstone project focusing on a specific issue or need in digital media arts and design.	Prerequisites: Permission of Program Director or Instructor.	AVC280A C requires 80 clock hours of designated work per credit hour.	Occ	L+L 3.0 6.0 6.0	T
AVC281	2023 Fall	Graphic Design III		Advanced course in the process of graphic design and problem solving to meet customer specifications. Emphasis on steps needed to create and promote complex graphic design projects.	Prerequisites: A grade of C or better in AVC182 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC283	2023 Fall	Digital Graphic Arts II		Advanced skill development of graphic design through use of microcomputer. Emphasis on computer design and techniques for producing all types of camera-ready advertising art for printed matter and package design. Includes illustration, typography, photo imaging, and color separation.	Prerequisites: A grade of C or better in AVC183 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T

AVC284	2023 Fall	Digital Animation II		Elements of electronic animation with interactive text graphics, photography, sound, film, and video construction.	Prerequisites: A grade of C or better in AVC/MMT184 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC285	2023 Fall	3D Modeling and Animation II	MMT285	Advanced techniques for 3D modeling and computer animation. Creating and applying 2D background and 3D model textures, creating and applying special effects to models and animation, designing, modeling, and animating a digital 3D character from a character study.	Prerequisites: A grade of C or better in AVC/MMT185.		Occ	L+L 3.0 6.0 6.0	T
AVC286	2023 Fall	Graphic Design IV		Continuing advanced course in the process of graphic design and problem solving to meet customer specifications. Emphasis on creating complex graphic design projects.	Prerequisites: A grade of C or better in AVC281 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC287	2023 Fall	3D Character Animation		3D-Character modeling and animation for multimedia, film, broadcast, video games and interactive entertainment. Character motion, editing, and blending electronic with traditional techniques.	Prerequisites: A grade of C or better in AVC/MMT184 or AVC180AC. Corequisites: ART116 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC288	2023 Fall	PDF Portable Document Format		Focuses on complexity, versatility and creation of a PDF file. Emphasis on the importance of the settings regarding color management, compression, and output. Includes fillable forms and interactive files with audio and video capabilities, editing functions, preflight abilities and security.	Prerequisites: A grade of C or better in AVC175 or permission of Instructor.	Emphasis will be on understanding how and why PDF is the most common workflow for printers.	Occ	L+L 3.0 6.0 6.0	T
AVC289	2023 Fall	Computer Illustration		Introduction to the multiple elements of commercial illustration using the microcomputer. Basic foundation in the use of computer techniques including color paint and draw programs for the production of commercial illustrations for publications and printed matter. Use of and output devices.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T

AVC290AN	2024 Fall	Art Studio: Animation		Practical course that draws on previous knowledge of Animation.	Prerequisites: A grade of C or better in AVC284, or AVC/MMT285, or permission of Instructor.	AVC290AN may be repeated for credit.	Occ	L+L 3.0 6.0 6.0	T
AVC290DP	2024 Fall	Art Studio: Digital Photography		Practical course that draws on previous knowledge of Digital Photography.	Prerequisites: A grade of C or better in AVC274 or permission of Instructor.	AVC290DP may be repeated for credit.	Occ	L+L 3.0 6.0 6.0	T
AVC290GD	2024 Fall	Art Studio: Graphic Design		Practical course that draws on previous knowledge of Graphic Design.	Prerequisites: A grade of C or better in AVC280AC, or AVC283, or permission of Instructor.	AVC290GD may be repeated for credit.	Occ	L+L 3.0 6.0 6.0	T
AVC290IL	2024 Fall	Art Studio: Illustration		Practical course that draws on previous knowledge of Illustration.	Prerequisites: A grade of C or better in AVC280AC, or AVC289, or permission of Instructor.	AVC290IL may be repeated for credit.	Occ	L+L 3.0 6.0 6.0	T
AVC291	2023 Fall	Digital Prepress		Introduction to fundamental concepts of digital prepress necessary for the designer to create digital documents for accurate output and reproduction.	Prerequisites: A grade of C or better in AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC292	2023 Fall	Digital Output Prepress		Introduction to prepress for digital output. Foundation of job costing and the functions of a job ticket for proper file preparation including trapping, color management, file transfers, workflow, RIPping, imposition and file proofing.	Prerequisites: A grade of C or better in AVC291 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC293	2023 Fall	Digital Output		Emphasis on setup, operation, and maintenance of a digital press. Introduction to specialty and common substrates and inks. Instruction on quality control, troubleshooting techniques, and proper safety precautions for press, equipment, and consumables.	Prerequisites: Permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
AVC295KA	2023 Fall	Art Workshop/Seminar:		Advanced level workshop/seminar in art disciplines.	Prerequisites: Minimum of three (3) credits introductory		Occ	L+L 1.0	T

		Graphics/Animation			and three (3) credits intermediate level courses in specific field or permission of Department or Division Chair.			2.0 2.0	
AVC295XA	2023 Fall	Art Workshop/Seminar: Digital Photography		Advanced level workshop seminar in digital photography disciplines.	Prerequisites: A grade of C or better in AVC143 or permission of Instructor.	AVC295X A may be repeated for a total of four (4) credits.	Occ	L+L 1.0 2.0 2.0	T
AVC295XB	2023 Fall	Art Workshop/Seminar: Digital Photography		Advanced level workshop seminar in digital photography disciplines.	Prerequisites: A grade of C or better in AVC143 or permission of Instructor.	AVC295X B may be repeated for a total of eight (8) credits.	Occ	L+L 2.0 4.0 4.0	T
AVC295XC	2023 Fall	Art Workshop/Seminar: Digital Photography		Advanced level workshop seminar in digital photography disciplines.	Prerequisites: A grade of C or better in AVC143 or permission of Instructor.	AVC295X C may be repeated for a total of twelve (12) credits.	Occ	L+L 3.0 6.0 6.0	T
AVC296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the instructor.		Occ	LAB 1.0 5.0 0.0	Z

AVC296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the instructor.		Occ	LAB 2.0 10.0 0.0	Z
AVC296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the instructor.		Occ	LAB 3.0 15.0 0.0	Z
AVC296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6		Occ	LAB 4.0 20.0 0.0	Z

				related to the career objectives of the students.	grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to student's major or career interest or with permission of the instructor.				
AVC297AA	2023 Fall	Commercial Art Internship		Digital design, development, and photographic imaging work experience in a business or industry. 80 hours of designated work.	Prerequisites: Permission of Department or Division.	AVC297A A may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 1.0 0.0	C
AVC297AB	2023 Fall	Commercial Art Internship		Digital design, development, and photographic imaging work experience in a business or industry. 160 hours of designated work.	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 2.0 0.0	C
AVC297AC	2023 Fall	Commercial Art Internship		Digital design, development, and photographic imaging work experience in a business or industry. 240 hours of designated work.	Prerequisites: Permission of Department or Division.		Occ	L+L 3.0 3.0 0.0	C
AVC298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
AVC298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual	Prerequisites: Permission of		Occ	LAB 2.0	Z

				student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			2.0 0.0	
AVC298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
AVT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
AVT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

AVT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
BAM305	2025 Fall	Mathematics for Machine Learning	MAT305	Advanced mathematical concepts essential for understanding and applying techniques in machine learning using Python programming language. Focus on vector-based calculus, probability distributions, continuous optimization, and information theory.	Prerequisites: A grade of C or better in (AIM250 and MAT227) or permission of Program Director.		Acad	L+L 3.0 4.0 4.0	T
BAM310	2025 Fall	Machine Learning II: Deep Learning		Examination of deep learning algorithms and Python applications. Emphasis on data input, algorithm selection, hyperparameter tuning, and deep learning model evaluation and selection.	Prerequisites: A grade of C or better in AIM250 or permission of Program Director.		Acad	L+L 3.0 4.0 4.0	T
BAM320	2025 Fall	Computer Vision		Examination of vision with computers utilizing Python tools and libraries. Emphasis on image processing and feature detection as it applies to various computer vision tasks, utilizing visualizations for transparency. Includes statistical and deep computer vision techniques.	Prerequisites: A grade of C or better in (BAM310 and BAM/MAT305) or permission of Program Director.		Acad	L+L 3.0 4.0 4.0	T
BAM330	2025 Fall	Natural Language Processing for Machine Learning		Examination of natural language processing utilizing Python tools and libraries. Emphasis on computer linguistic understanding as it applies to various natural language tasks. Statistical and deep natural language techniques will be covered including large language models.	Prerequisites: A grade of C or better in (BAM310 and BAM/MAT305) or permission of Program Director.		Acad	L+L 3.0 4.0 4.0	T
BAM440	2025 Fall	Hardware Optimization for Machine Learning		Explores advanced techniques in parallel computing for optimizing performance in machine learning applications. Focus on design,	Prerequisites: A grade of C or better in CSC/EEE230, CSC240++,		Acad	L+L 3.0 4.0 4.0	T

				implementation, and evaluation of parallel algorithms across various hardware architectures, including CPUs, GPUs, and custom artificial intelligence accelerators. Includes hands-on projects and real-world case studies to develop the skills necessary to leverage parallel computing effectively to accelerate machine learning tasks.	BAM/MAT305, and BAM310.				
BAM450	2025 Fall	Planning and Optimization for Automation		Explores optimization path for automation. Covers a diverse array of techniques including evolutionary algorithms, reinforcement learning, and swarm intelligence to navigate complex environments. Emphasis on hands-on projects and theoretical exploration, including design and implementation of optimized paths.	Prerequisites: A grade of C or better in CSC310, BAM/MAT305, and BAM310.		Acad	L+L 3.0 4.0 4.0	T
BAM490	2025 Fall	Artificial Intelligence Capstone I		Capstone project with opportunities for research and application of artificial intelligence and machine learning knowledge and skills obtained throughout the student's program of study. Focus on project research, selection, design, and implementation with emphasis on communication, critical thinking, and technical skills.	Prerequisites: A grade of C or better in BAM320, BAM330, and CSC310.		Acad	L+L 3.0 4.0 4.0	T
BAM499	2025 Fall	Artificial Intelligence Capstone II		Completion of capstone project using research and application of artificial intelligence and machine learning knowledge and skills obtained throughout the student's program of study. Focus on project testing, enhancement, and evaluation. Emphasis on self-assessment, development of a written report, project defense, and career development.	Prerequisites: A grade of C or better in BAM490.		Acad	L+L 3.0 4.0 4.0	T
BAW100	2023 Fall	Nail Technology I		Introduction to basic nail services, general sciences, safety, and infection control practices in the nail care industry.	Prerequisites: None.		Occ	L+L 4.0 8.0 8.0	T
BAW102	2024 Fall	Aesthetics Essentials		Effective client communication, interpersonal skills, and how to deliver	Prerequisites: None.		Occ	L+L 4.0	T

				an effective skin care facial treatment and client pre and post consultations. Topics also include sanitation, Arizona laws, client care, and facial care.				8.0 8.0	
BAW104	2024 Fall	Hair Essentials I		Introduction to the basic theory and procedures in cosmetology hair essentials.	Prerequisites: None.		Occ	L+L 4.0 8.0 8.0	T
BAW105	2023 Fall	Nail Technology II		Apply advanced techniques and continue to build on previous concepts learned in nail services, general sciences, safety, and infection control in the nail industry.	Prerequisites: A grade of C or better in BAW100 or permission of Program Director.		Occ	L+L 4.0 8.0 8.0	T
BAW106	2024 Fall	Hair Essentials II		Hair-shaping techniques and chemical application procedures in cosmetology hair essentials.	Prerequisites: A grade of C or better in BAW104.		Occ	L+L 4.0 8.0 8.0	T
BAW110	2024 Fall	Advanced Aesthetics		Theory and application of advanced skin care modalities, resurfacing, and cosmetic chemistry. Hair removal techniques, makeup application, and an introduction to body treatments are also included. Application of theory and skills through treatment services provided to the public. Focus on communication and documentation to create customized treatment plans and product recommendations for clients that follow all safety and infection control procedures in compliance with the Arizona Barbering and Cosmetology Board (BCB).	Prerequisites: A grade of C or better in BAW102.		Occ	L+L 4.0 8.0 8.0	T
BAW111	2023 Fall	Nail Technology III		Preparation for the written and practical examinations for Arizona Barbering and Cosmetology Board licensure. Includes concepts related to nail services, general sciences, and business skills in the nail care industry.	Prerequisites: A grade of C or better in BAW105 or permission of Program Director.		Occ	L+L 4.0 8.0 8.0	T
BAW112	2023 Fall	Hair Essentials		Focus on the competencies of the Cosmetologist and the Hair Stylist certificate programs and the Arizona Barbering & Cosmetology Board as an introduction to the basic theory	Prerequisites: None.		Occ	L+L 7.0 17.0 17.0	T

				and procedures in cosmetology hair essentials.					
BAW114	2024 Fall	Student Salon I		Continuation of cosmetology theory and practical concepts at an intermediate level. Theory will be focusing on professional development, salon ecology, anatomy and hair decisions. Practical skills will be demonstrated daily on clients and manikins. Rubrics on procedures are done monthly. One day a month on Arizona Barbering and Cosmetology Board (BCB) state licensure focus.	Prerequisites: A grade of C or better in BAW106.		Occ	L+L 4.0 8.0 8.0	T
BAW115	2024 Fall	Aesthetics Mastery		Focus on theories and performance of comprehensive professional aesthetics treatments for the public including communication and documentation to create customized treatment plans and product recommendations for clients that follow all safety and infection control procedures in compliance with the Arizona Barbering and Cosmetology Board (BCB). Overview of business planning and employment in the field including marketing, job search strategies, professional development, and self promotion. BCB licensure examination preparation.	Prerequisites: A grade of C or better in BAW110.		Occ	L+L 4.0 8.0 8.0	T
BAW116	2024 Fall	Student Salon II		Apply concepts learned in the classroom and the student salon to develop real life scenarios while servicing a client and/or becoming a future business owner in the beauty industry.	Prerequisites: A grade of C or better in BAW114.		Occ	L+L 4.0 8.0 8.0	T
BAW118	2024 Fall	Hair Stylist State Licensure		Preparation for the written and practical examinations for Arizona Barbering & Cosmetology Board (BCB) licensure as related to hairstyling. Focus on BCB testing procedures for the written and practical examinations, as well as applicable Arizona State laws for a Hairstylist. Final salon business practices and services.	Prerequisites: A grade of C or better in BAW114.		Occ	L+L 4.0 8.0 8.0	T

BAW119	2024 Fall	Nail Essentials		Introduction to nail services in the beauty industry. Focus on knowledge and skills of providing nail services on actual clients in a salon setting.	Prerequisites: A grade of C or better in BAW116.		Occ	L+L 4.0 8.0 8.0	T
BAW120	2023 Fall	Massage Therapy Basics		Introduction to massage therapy. Includes sanitation, hygiene, safety, contraindications, ethics, healthy therapeutic relationships, professional communication, overview of the human body (integumentary, muscular, and skeletal systems), healthcare terminology, muscle theory, client care, self-care, and Swedish massage.	Prerequisites: None.		Occ	L+L 3.5 7.0 7.0	T
BAW121	2023 Fall	Massage Therapy Advanced		A massage basics course covering: sanitation, hygiene, safety, contraindications, ethics, healthy therapeutic relationships, professional communication, overview of the human body (integumentary, muscular, and skeletal systems), healthcare terminology, muscle theory, client care, self-care, and Swedish massage.	Prerequisites: None.		Occ	L+L 3.5 7.0 7.0	T
BAW212	2024 Fall	Skin Essentials		Introduction to skin services in the beauty industry. Focus on knowledge and skills of providing skin services on actual clients in a salon setting.	Prerequisites: A grade of C or better in BAW119.		Occ	L+L 4.0 8.0 8.0	T
BAW214	2024 Fall	Student Salon III		Prepares cosmetology students to be industry ready and prepared to perform services in their chosen field of expertise after licensure with the Arizona Barbering and Cosmetology Board (BCB).	Prerequisites: A grade of C or better in BAW212.		Occ	L+L 4.0 8.0 8.0	T
BAW218	2024 Fall	Cosmetology State Licensure		Prepares cosmetology students for the written and practical examinations for Arizona Barbering and Cosmetology Board licensure.	Prerequisites: A grade of C or better in BAW214.		Occ	L+L 2.0 4.0 4.0	T
BAW220	2023 Fall	Massage Therapy Mastery I		Advanced anatomy and massage. Focuses in detail on the skeletal and muscular components and manipulations of the upper body. Includes review of bones and muscles of the upper body and the kinesiology that develops from their interactions. Practical application of advanced	Prerequisites: A grade of C or better in BAW121 or permission of Program Director.		Occ	L+L 3.5 7.0 7.0	T

				anatomy in deep-tissue massage for the upper body. Emphasis on the integration of deep tissue, Thai massage, myofascial, and structural massage. Introduction to Subjective, Objective, Assessment, and Plan (S.O.A.P.) notes.					
BAW221	2023 Fall	Massage Therapy Mastery II		Advanced anatomy and massage. Focus on the skeletal and muscular components and manipulations of the lower body. Review all of the bones and muscles of the lower body and the kinesiology that develops from their interactions. Practical application of advanced anatomy in deep-tissue massage for the lower body. Includes client assessment, treatment planning, and documentation for clients with common needs and clients with unique needs (such as athletes, expecting mothers, infants, older adults, obese individuals, people with disabilities, and end of life care). Also includes entrepreneurial skills conducive to the industry of massage therapy.	Prerequisites: A grade of C or better in BAW220 or permission of Program Director.		Occ	L+L 3.5 7.0 7.0	T
BAW298AA	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
BAW298AB	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				aspects of independent study and individualized learning to be combined to maximize student development.					
BAW298AC	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
BHS150	2018 Fall	Introduction to Behavioral Health and Social Services		Survey of the behavioral health and social services professions, including scope of practice and training requirements. Exploration of employment opportunities in the field and self-assessment/academic planning for a career in mental health. Overview of mental health disorders and first responder skills in a mental health crisis situation.	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Social-Behavioral Sciences - [SB]	Occ	LEC 3.0 3.0 3.0	S
BHS155	2022 Fall	Professional Resiliency and Well-Being		Exploration of building human resilience and well-being to prevent burnout, traumatic stress, and compassion fatigue for social services and mental health professionals, healthcare providers, emergency first responders, and other relationship-intensive occupations. Causes, symptoms, and effects of traumatic stress, burnout compassion fatigue and other work-related stress. Focus on enhancing quality of life and improving a healthy lifestyle by incorporating evidenced-based	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				practices in psychological and emotional resilience training, cognitive behavioral therapy, mindfulness, positive psychology, prevention, peer support, and self-care, including nutrition, exercise, and sleep.					
BHS160	2023 Fall	Ethical, Legal, and Professional Issues in Counseling Services		Explores relevant ethical, legal, and professional issues inherent in the behavioral health and social services field, including expectations of and limitations on providers. Key areas of inquiry include boundaries and dual relationships, mandated reporting, confidentiality, scope of practice, beneficence and non-maleficence, rights and responsibilities, professional relationships, and credentialing/regulating agencies.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS165	2020 Fall	Applied Therapeutic Communication Skills		Theory and practice of communication skills to establish and maintain effective helping relationships and enhance the therapeutic alliance. Emphasis on verbal communication, nonverbal communication, paraverbal communication, rapport building, empathetic and active listening skills, resolving interpersonal conflicts, appropriate feedback, and developing and maintaining personal and professional relationships.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS170	2018 Fall	Case Management and Clinical Documentation		Overview and application of the principles, practices, and function of case management in human services. Case management service delivery and coordination for clients with psychological, developmental, and psychiatric and comorbid medical conditions. Documentation techniques necessary to maintain clinical records in a variety of behavioral healthcare settings.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS175	2023 Fall	Trauma-Informed Care and Recovery Treatment		Comprehensive overview of various types of trauma, neurobiological effects of traumatic stress, and ethics associated in working with a trauma	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				survivor. Concepts and skills needed to become a fully functioning trauma-informed caregiver professional in the mental health and primary care setting.					
BHS180	2019 Spring	Child, Family, and Adult Advocacy		The role of advocacy in relation to multiple systems affecting children, families, and adults. Emphasis on identifying appropriate supports, community resources, and "wrap-around" services to help foster healthy family and child development, adult recovery, and social welfare.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS185	2020 Fall	Cultural Competence in Behavioral Health		Exploration of cultural diversity and its potential impact on behaviors, emotions, cognitions and perceptions, relationships, and values. Intercultural communication skills through the examination of cultural and racial diversity, sexual and gender identity, social justice, and religious and spiritual diversity. Consideration of its implications for the therapeutic process and the importance of self-awareness and effective communication skills for professionals in the behavioral health and social sciences.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS190	2023 Fall	Supervised Practice in Behavioral Health and Human Services		Supervised, entry-level work-based experience in mental health, social service, or a related behavioral health care provider setting. 80 hours of designated volunteer or paid work-based learning.	Prerequisites: A grade of C or better in BHS150, or BHS155, or BHS160, or permission of Department or Division.		Occ	LAB 1.0 1.0 0.0	C
BHS205	2023 Fall	Introduction to Individual Counseling Theories		Introduction to the major evidence-based therapeutic models and interventions in social and behavioral sciences. Defines the key concepts, techniques and procedures of each theoretical model.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS210	2023 Fall	Addictions, Substance Use Disorders, and Recovery		Introduction to the historical and current developments in the field of addiction, as well as sociological, psychological, and physiological aspects of addictive behaviors and	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				substance use. Introduces contemporary treatment methods within addiction practice, including self-help groups, levels of care, symptom identification, and models of prevention, and intervention. Examines factors that predict relapse and support recovery.					
BHS215	2023 Fall	Introduction to Group Therapy		Overview of the methods and techniques for influencing change in group settings. Examination of theories and concepts essential to provision of group counseling in behavioral health and addiction settings.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS216	2019 Spring	Group Process		Evaluate and demonstrate the methods and techniques for influencing change in group settings.	Prerequisites: A grade of C or better in BHS151 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
BHS220	2020 Fall	Introduction to Integrated Behavioral Healthcare		Introduction to key concepts related to the provision of integrated health care services, as well as role of wellness and prevention in community health services. The course will introduce students to the theory and clinical practice of integrated behavioral health in primary care, as well as evidence-based approaches to promote wellness in individuals and communities.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS230	2018 Fall	Crisis and Trauma Stabilization		Theoretical and applied foundation designed for behavioral health service providers working with people in crisis. Examines the phenomena and dynamics of crises and emergencies, as well as the related strategies/modalities.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS235	2018 Fall	Emergency Mental Health Crisis Response and Recovery		Comprehensive study of natural and human-caused disasters and their effects on the trauma survivor. Introduction to basic emergency mental health interventions to help stabilize those experiencing crisis following critical incident disasters.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

BHS251	2020 Fall	Harm Reduction in Addiction, Substance Use, and Social Services		Introduction to harm reduction principles, policies, programs, and practices that aim to reduce the adverse health, social and economic consequences of the use of legal and illegal drugs. This course will introduce behavioral health and social service providers as well as paraprofessional counselors to the theory and practice of harm reduction strategies in addiction, social service, and community settings.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS255	2020 Fall	Health and Wellness Coaching in Professional Resiliency		Comprehensive overview of the art, science, and role of coaching and teaching resiliency for the following issues: personal and work-related stress, burnout, traumatic stress, and compassion fatigue. Develop pedagogical techniques and practical application of evidence-based interventions in biobehavioral self-regulation, mindfulness, cognitive restructuring, positive psychology, peer support, and holistic self-care. Designed to develop skills as a health and wellness coach in professional resiliency for enhancing health and quality of life.	Prerequisites: A grade of C or better in BHS155.		Occ	LEC 3.0 3.0 3.0	S
BHS262	2023 Fall	Behavioral Health Service Techniques for the Elderly		Specific counseling skills and appropriate intervention strategies for working with the elderly. Focus on the particular psychological, sociological and physical problems of this age group.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS266	2020 Fall	Violence and Abuse Services		Techniques, strategies, and treatment modalities necessary for the helping professional working with the victims and perpetrators of violence and abuse.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS267	2023 Fall	Introduction to Play Therapy		Exploration and application of therapeutic play techniques and strategies for the helping professional working with children.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS269	2020 Fall	Grief Support Techniques		Techniques, strategies, and treatment modalities necessary for the helping professional working with the	Prerequisites: None.		Occ	LEC 3.0	S

				bereaved and others affected by traumatic loss.				3.0 3.0	
BHS271	2020 Fall	Developmental Disabilities Assistance Training		Introduction to the field of developmental disability assistance. Also includes common causes of developmental disabilities, treatments and other behavioral conditions that may affect such individuals.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS272	2020 Fall	Child and Adolescent Mental Health and Interventions		Strategies for training and reinforcing positive interaction with children. Covers behavior management strategies and techniques to prevent behavioral problems, replace behaviors and manage consequences.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS275	2018 Fall	Infant and Early Childhood Mental Health		Foundational knowledge of mental health during infancy and early childhood. Exploration of social-emotional development and relational influences on mental health. Emphasis on identifying early warning signs, making appropriate referrals, and employing a multidisciplinary child and family team approach to services.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS281	2023 Fall	Introduction to Art Therapy		Exploration of the process, dynamics and objectives of the therapeutic art experience. Emphasis on Art Therapy from both the psychological and artistic perspectives. Highlights topics in the history, theory and practice of Art Therapy.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BHS298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
BHS298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual	Prerequisites: Permission of		Occ	LAB 2.0	Z

				student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			2.0 0.0	
BHS298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
BHS300	2023 Fall	Research Methods for Evidence-Based Practice		Overview of the uses, limitations, and ethics of research methodology in the behavioral sciences, and the qualitative and quantitative methods associated with common research designs. Prepares students to conduct evaluations of literature published research, use empirical evidence as the basis for interventions, and evaluate the effectiveness of their own interventions. Focuses on applications of descriptive and inferential statistics using statistical software.	Prerequisites: A grade of C or better in PSY230, or permission of Instructor.		Acad	L+L 4.0 4.0 4.0	T
BHS310	2023 Fall	Fundamentals of Family Systems Counseling		Study of the family as a system and the concepts and principles applicable to helping individuals from a systemic perspective. Examines family processes, including functional and dysfunctional patterns, difficulties that families may experience as they move through their developmental stages, and the family's interactions	Prerequisites: A grade of C or better in BHS205, or permission of Instructor or Department.		Acad	LEC 3.0 3.0 3.0	S

				with individuals and communities. Introduction to family systems theory as it applies to the predominant models of family therapy.					
BHS320	2023 Fall	Behavioral Development Across the Lifespan		Critical analysis of human development throughout the lifespan, including physical, cognitive, emotional, and social development. Prepares students in the behavioral sciences to conceptualize clients through a developmental perspective. Overview of both normal human development and developmental psychopathology. Focus on child, adolescent, and adult development through the study of major theories and models, with implications for helping professionals.	Prerequisites: A grade of C or better in BHS262 or BHS272 or BHS275, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
BHS340	2023 Fall	Psychopathology Across Cultures		Overview of the scientific study of mental illness and substance use disorders (psychopathology). Evaluates theories of psychopathology from sociological, psychological, and behavioral perspectives. Examines the most prevalent categories of mental disorders from several different theoretical and treatment perspectives. Focus on diagnostic features, etiology, epidemiology, prognosis, and treatment issues related to various psychiatric disorders. Legal, ethical, and cultural issues pertaining to psychopathology also discussed, in addition to prevention and intervention strategies.	Prerequisites: A grade of C or better in (BHS150 and BHS185), or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
BHS385	2023 Fall	Multicultural Approaches to Behavioral Health Care		Advanced application of multicultural competencies, focusing on necessary awareness, knowledge, and skills needed in behavioral health settings. Examination of the dimensions of personal identities and intersectionality in the conceptualization, planning, and	Prerequisites: A grade of C or better in BHS185, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S

				implementation of interventions in human services fields.					
BHS400	2023 Fall	Biological and Environmental Bases of Behavior		Examination of human behavior from biophysiological, psychosocial-cognitive, and social-cultural perspectives using relevant theories. Focuses on the nervous system, brain function, and cognition, as well as the role of psychopharmacology in behavioral healthcare.	Prerequisites: A grade of C or better in BIO160, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
BHS410	2023 Fall	Co-Occurring Substance Use and Mental Disorders		Advanced instruction in co-occurring behavioral health and substance use disorders from the bio-psycho-social model for application in the behavioral health field. Includes philosophies and practices of empirically supported models. Emphasis on causes, consequences, assessment, treatment, recovery, and harm reduction.	Prerequisites: A grade of C or better in (BHS210 and BHS340), or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
BHS420	2023 Fall	Relational Approach to Trauma		Exploration of the science of trauma and recovery within the family context. Includes the dynamic elements of trauma treatment with the integration of systemic and family treatment models. Examines the lifelong impact of traumatic stress and complex trauma during the early years of life. Focus on evidence-based treatment and interventions from a family theory perspective for individual, relational, and systematic traumatization.	Prerequisites: A grade of C or better in BHS175, or permission of Instructor or Department.		Acad	LEC 3.0 3.0 3.0	S
BHS430	2023 Fall	Concepts and Principles of Applied Behavior Analysis		An in-depth consideration of the scientific theories, concepts, and principles of understanding and modifying behavior. Focus on applying behavior analysis for data-based decisions to resolve challenging behaviors and foster prosocial behaviors. Students will learn basic principles and procedures, such as functional behavior assessment, assessment of reinforcers, and implementation of a	Prerequisites: A Grade of C or better in (BHS205 and BHS320), or permission of Instructor or Department.		Acad	LEC 3.0 3.0 3.0	S

				behavior intervention plan to reach socially meaningful outcomes.					
BHS490	2023 Fall	Advanced Supervised Practice in Behavioral Health and Human Services		Advanced, supervised work experience in mental health, social service, or a related behavioral health care provider setting. 160 hours of designated volunteer or paid work-based learning.	Prerequisites: AAS in Behavioral Health Sciences or permission of Instructor.		Acad	LAB 2.0 2.0 0.0	C
BIO100	2024 Fall	Biology Concepts		This course will introduce students to the basic principles and concepts of biology, from the smallest molecules to the largest ecosystems. Students will learn about the methods of scientific inquiry that biologists use to study life.	Prerequisites: None.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO101	2024 Fall	Introduction to Human Genetics for Non-Majors		Study of inheritance in humans, at the organismal, cellular and molecular levels. Includes exploration of gene expression, isolation and manipulation of DNA, Mendelian genetics, pedigree analysis, as well as chromosomal abnormalities and genetic diseases.	Prerequisites: None.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO102	2025 Fall	Cells to Systems: An Introduction to Biology for Non-Majors		Study of living things. Builds from basic molecular components to structure and physiology of cells and organ systems of animals and plants.	Prerequisites: None.	BIO102 is appropriate for non-biology majors. Course may include dissection of fetal pig and/or viewing of plastinized body parts. Laboratory work is done in small groups.	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T

BIO105	2018 Fall	Environmental Biology		Fundamentals of ecology and their relevance to human impact on natural ecosystems.	Prerequisites: None.	Course Attribute(s): General Education Designatio n: Natural Sciences (Quantitati ve) - [SQ]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO107	2018 Fall	Introduction to Biotechnology		Introduction to biotechnology and its global impact on society. Covers applications, laboratory techniques, limitations and the international economic benefits, risks, and legal and moral issues associated with biotechnology	Prerequisites: None.	Course Attribute(s): General Education Designatio n: Natural Sciences (Quantitati ve) - [SQ]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO108	2023 Fall	Plants and Society		A global study of plants in relation to humans; as a source of food, fiber, drugs, and other products; for aesthetic value, survival, and energy.	Prerequisites: None.	Course Attribute(s): General Education Designatio n: Natural Sciences (Quantitati ve) - [SQ]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO109	2024 Fall	Natural History of the Southwest		Study of the common plants and animals of the Southwest including their distribution, adaptation, behavior, and ecology. Introduction to basic field and laboratory techniques used in the study of natural history. Specific field problems presented dealing with plant and animal analysis and ecological interrelationships.	Prerequisites: None.		Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO111	2024 Fall	Microbes and Society		A study of microorganisms and the roles they play in everyday life.	Prerequisites: None.		Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO116	2024 Spring	Introduction to Animal Behavior		Scientific study of animal behavior for non-majors. Includes experimental	Prerequisites: None.	Course Attributes:	Acad	LEC 4.0	T

				exploration of current hypotheses for genetic and environmental influences, communication, reproductive strategies, habitat selection, and sociality.		General Education Designation: Natural Sciences (General) - [SG]		3.0 3.0 LAB 0.0 3.0 3.0	
BIO145	2025 Fall	Marine Biology		A survey of marine environments and their biotic communities with emphasis on the natural history of marine organisms.	Prerequisites: None.		Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO149AK	1990 Fall	Field Biology: Ecological and Environmental Field Experience		Field expeditions in which ecological and environmental principles and concepts are observed and studied.	Prerequisites: None.	BIO149AK may be repeated for a total of four (4) credit hours.	Acad	LAB 1.0 7.0 1.0	H
BIO149AL	2002 Fall	Field Biology: Ecological and Environmental Field Experience		Field expeditions in which ecological and environmental principles and concepts are observed and studied.	Prerequisites: None.	BIO149AL may be repeated for a total of four (4) credit hours.	Acad	LAB 2.0 14.0 2.0	F
BIO149AM	1990 Fall	Field Biology: Ecological and Environmental Field Experience		Field expeditions in which ecological and environmental principles and concepts are observed and studied	Prerequisites: None.		Acad	LAB 3.0 21.0 1.0	H
BIO149AN	1990 Fall	Field Biology: Ecological and Environmental Field Experience		Field expeditions in which ecological and environmental principles and concepts are observed and studied	Prerequisites: None.		Acad	LAB 4.0 28.0 1.0	H
BIO149SV	2020 Spring	Field Biology: Ecological and Environmental Field Experience		Field expeditions in which ecological and environmental principles and concepts are observed and studied.	Prerequisites: None.	BIO149SV may be repeated for a total of eight (8) credit hours.	Acad	L+L 1.0 1.34 1.34	G

BIO156	2020 Fall	Introductory Biology for Allied Health		An introductory biology course for allied health majors with an emphasis on humans. Topics include fundamental concepts of cell biology, histology, microbiology, and genetics.	Prerequisites: A grade of C or better in RDG100 or RDG100LL or higher or eligibility for CRE101 as indicated by appropriate reading placement test score. One year of high school or one-semester of college level chemistry is strongly recommended.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO156XT	2020 Fall	Introductory Biology for Allied Health		An introductory biology course for allied health majors with an emphasis on humans. Topics include fundamental concepts of cell biology, histology, microbiology, and genetics.	Prerequisites: A grade of C or better in RDG100 or RDG100LL or higher or eligibility for CRE101. One year of high school or one-semester of college level chemistry is strongly recommended.		Acad	LEC 4.0 3.0 3.0 LAB 0.0 4.0 4.0	T
BIO160	2020 Spring	Introduction to Human Anatomy and Physiology		Principles of scientific method. Structural organization, homeostasis and control mechanisms of the body. Specific chemistry concepts. Structure and function of the major systems of the body.	Prerequisites: None.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO181	2023 Fall	General Biology (Majors) I		The study and principles of structure and function of organisms at the molecular and cellular levels. A detailed exploration of the chemistry of life, the cell, and genetics.	Prerequisites: A grade of C or better in RDG100, or RDG100LL, or higher, or eligibility for CRE101. One year of high school or one semester of college-level biology and chemistry is strongly recommended.		Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T

BIO181XT	2023 Fall	General Biology (Majors) I		The study and principles of structure and function of organisms at the molecular and cellular levels. A detailed exploration of the chemistry of life, the cell, and genetics.	Prerequisites: A grade of C or better in RDG100, or RDG100LL, or higher, or eligibility for CRE101. One year of high school or one semester of college-level biology and chemistry is strongly recommended.		Acad	LEC 4.0 3.0 3.0 LAB 0.0 4.0 4.0	T
BIO182	2023 Fall	General Biology (Majors) II		The study and principles of structure and function of living things at cellular, organismic, and higher levels of organization. A detailed exploration of the mechanisms of evolution, biological diversity, biology of organisms, and ecology.	Prerequisites: A grade of C or better in BIO181, or BIO181XT, or permission of Department or Division Chair.	Course Attribute(s): General Education Designation: Natural Sciences (General) - [SG] Arizona Shared Unique Number SUN# BIO 1182	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO182XT	2023 Fall	General Biology (Majors) II		The study and principles of structure and function of living things at cellular, organismic, and higher levels of organization. A detailed exploration of the mechanisms of evolution, biological diversity, biology of organisms, and ecology.	Prerequisites: A grade of C or better in BIO181, or BIO181XT, or permission of Department or Division Chair.		Acad	LEC 4.0 3.0 3.0 LAB 0.0 4.0 4.0	T
BIO192	2018 Fall	Recitation in Biology		Discussion, guided practice and problem solving related to a topically focused area of biology.	Prerequisites: None. Corequisites: Any 100-level BIO Biology course or permission of Instructor.	BIO192 may be repeated for credit.	Acad	L+L 1.0 1.0 1.0	T
BIO194AA	2018 Fall	Special Topics in Biology		Conceptual and research basis of a current topic in biology.	Prerequisites: Permission of Instructor.	BIO194AA may be repeated for credit.	Acad	LEC 1.0 1.0 1.0	S

BIO194AB	2018 Fall	Special Topics in Biology		Conceptual and research basis of a current topic in biology. Includes integrated laboratory and/or field applications of related methodologies.	Prerequisites: Permission of Instructor.	BIO194AB may be repeated for credit.	Acad	L+L 1.0 2.0 2.0	T
BIO194AC	2018 Fall	Special Topics in Biology		Conceptual and research basis of a current topic in biology. Includes laboratory and/or field applications of related methodologies.	Prerequisites: Permission of Instructor.	BIO194A C may be repeated for credit.	Acad	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T
BIO195AA	2018 Fall	Principles and Practice of Scientific Research		Students will learn the use of the scientific method; how, why and where research is conducted; the ethical protocol in the scientific process; how peer review works, and how to formulate scientifically testable hypotheses and design supporting experiments. Students will apply the scientific method in laboratory and/or field research projects, will learn and use appropriate laboratory techniques, and will communicate research design, data collection, and data interpretation in conventional scientific formats.	Prerequisites: A grade of C or better in (BIO181 or CHM151 or PHY111) or permission of Instructor.	BIO195AA may be repeated for credit.	Acad	L+L 1.0 2.0 2.0	T
BIO195AB	2018 Fall	Principles and Practice of Scientific Research		Students will learn the use of the scientific method; how, why and where research is conducted; the ethical protocol in the scientific process; how peer review works, and how to formulate scientifically testable hypotheses and design supporting experiments. Students will apply the scientific method in laboratory and/or field research projects, will learn and use appropriate laboratory techniques, and will communicate research design, data collection, and data interpretation in conventional scientific formats.	Prerequisites: A grade of C or better in (BIO181 or CHM151 or PHY111) or permission of Instructor.	BIO195AB may be repeated for credit.	Acad	L+L 2.0 4.0 4.0	T
BIO195AC	2018 Fall	Principles and Practice of Scientific Research		Students will learn the use of the scientific method; how, why and where research is conducted; the ethical protocol in the scientific	Prerequisites: A grade of C or better in (BIO181 or CHM151 or PHY111)	BIO195A C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T

				process; how peer review works, and how to formulate scientifically testable hypotheses and design supporting experiments. Students will apply the scientific method in laboratory and/or field research projects, will learn and use appropriate laboratory techniques, and will communicate research design, data collection, and data interpretation in conventional scientific formats.	or permission of Instructor.				
BIO201	2024 Fall	Human Anatomy and Physiology I		Study of structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system.	Prerequisites: A grade of C or better in (BIO156, or BIO156XT, or BIO181, or BIO181XT, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.	Course Attribute(s): General Education Designation: Natural Sciences (General) - [SG] Arizona Shared Unique Number SUN# BIO 2201	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO201XT	2024 Fall	Human Anatomy and Physiology I		Study of structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system.	Prerequisites: A grade of C or better in (BIO156, or BIO156XT, or BIO181, or BIO181XT, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.	Course Attribute(s): General Education Designation: Natural Sciences (General) - [SG]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 4.0 4.0	T

BIO202	2024 Fall	Human Anatomy and Physiology II		Continuation of structure and function of the human body. Topics include endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems, pregnancy and development, and fluid and electrolyte balance.	Prerequisites: A grade of C or better in BIO201 or BIO201XT.	Course Attribute(s): General Education Designation: Natural Sciences (General) - [SG] Arizona Shared Unique Number SUN# BIO 2202	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO205	2023 Fall	Microbiology		Study of microorganisms and their relationship to health, ecology, and related fields.	Prerequisites: A grade of C or better in (BIO156, or BIO156XT, or BIO181, or BIO181XT, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.	Course Attribute(s): General Education Designation: Natural Sciences (General) - [SG] Arizona Shared Unique Number SUN# BIO 2205	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO208	2023 Fall	Nucleic Acid Methods		Intensive introduction to laboratory methods for the isolation, purification, manipulation analysis and quantification of nucleic acids.	Prerequisites: A grade of C or better in [ABS173 and ABS175 and (BIO156 or BIO181)] or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
BIO209	2023 Fall	Biomolecular Separation		Introduction to industrial laboratory biotechnology with intensive focus on the recovery of heterologous proteins and other biomolecules from cultivated cells and the subsequent recovery, purification and characterization of these molecules.	Prerequisites: A grade of C or better in [ABS173 and ABS175 and (BIO156 or BIO181)] or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T

BIO210	2018 Fall	Advanced Lab Instrumentation		Provides training in the principles, operation and interpretation of data from laboratory instrumentation.	Prerequisites: A grade of C or better in BIO208, or BIO209, or permission of Instructor.		Acad	L+L 3.0 6.0 6.0	T
BIO211AA	2009 Spring	Biotechnology Seminar: Biomedical Applications		Special topics in biotechnology with an emphasis on current issues not covered in other life science courses	Prerequisites: None.	BIO211AA may be repeated for a total of two (2) credit hours	Acad	LEC 1.0 1.0 1.0	S
BIO211AB	2009 Spring	Biotechnology Seminar: Laboratory Protocol		Special topics in biotechnology with an emphasis on current issues not covered in other life science courses	Prerequisites: A grade of C or better in BIO211AA or permission of Instructor.	BIO211AB may be repeated for a total of two (2) credit hours	Acad	LEC 1.0 1.0 1.0	S
BIO211AE	2023 Fall	Biotechnology Seminar: Business and Regulatory Issues		Selected topics in biotechnology with an emphasis on current issues not covered in other life science courses.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
BIO213	2023 Fall	Biotechnology Refresher		Opportunity for students who need more practice with biotechnology laboratory techniques to review their skills.	Prerequisites: A grade of C or better in (BIO208 or BIO209) and permission of Program Director.	BIO213 may not be substitut ed for any of the prerequisit e courses or BIO210 in satisfactio n of degree requireme nts. BIO213 may be repeated for a total of four (4) credit hours.	Acad	L+L 2.0 6.0 6.0	T

BIO215AB	2023 Fall	Biotechnology Internship		Internship experience in a biotechnology laboratory. Setting, achieving, and evaluating goals for hands-on learning experience in a biotechnology laboratory. Development of skills and knowledge needed to work in a biotechnology laboratory.	Prerequisites: A grade of C or better in (BIO208 or BIO209 or BIO213) and permission of Program Director.	BIO215AB requires 160 clock hours in the laboratory setting. BIO215AB may be repeated for a total of six credit hours.	Acad	LAB 2.0 2.0 0.0	C
BIO215AC	2023 Fall	Biotechnology Internship		Internship experience in a biotechnology laboratory. Setting, achieving, and evaluating goals for hands-on learning experience in a biotechnology laboratory. Development of skills and knowledge needed to work in a biotechnology laboratory.	Prerequisites: A grade of C or better in (BIO208 or BIO209 or BIO213) and permission of Program Director.	BIO215A C requires 240 clock hours in the laboratory setting. BIO215A C may be repeated for a total of six credit hours.	Acad	LAB 3.0 3.0 0.0	C
BIO220	2018 Fall	Biology of Microorganisms		Detailed study of microbial cells, their structure, genetics, physiology and taxonomy.	Prerequisites: A grade of C or better in BIO181. Corequisites: (CHM152 and CHM152LL) or (CHM154 and CHM154LL).		Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
BIO234	2021 Spring	Fundamental Evolutionary Biology		Fundamentals of evolutionary theory including natural selection, adaptation, species concepts, speciation, extinction, basics of phylogenetics, molecular and population genetics, and the evolution of sex and sociality.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: BIO182 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
BIO240	2023 Fall	General Genetics		In depth examination of the field of genetics.	Prerequisites: A grade of C or better in BIO181, or		Acad	LEC 4.0	S

					BIO181XT, or permission of Instructor.			4.0 4.0	
BIO249	2021 Fall	Applied Biosciences: Biotechnology Internship		Internship/work experience in a biotechnology laboratory. Setting, achieving, and evaluating goals for hands-on learning experiences in a biotechnology laboratory. Development of skills and knowledge needed to work in a biotechnology laboratory.	Prerequisites: Permission of Instructor.	BIO249 requires a minimum of 320 clock hours in the biotechnology laboratory setting.	Acad	LAB 4.0 4.0 0.0	C
BIO270	2012 Spring	Sustainable Biological Systems		Course to introduce concepts in Ecology covering abiotic and biotic systems, population biology and ecology, community ecology, biotic communities, disturbance and succession, biogeography, fire ecology, evolution in changing environments, human population biology, and issues in ecology.	Prerequisites: A grade of C or better in BIO181.		Acad	LEC 3.0 3.0 3.0	S
BIO282AA	2013 Fall	Service-Learning Experience in Biology		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	BIO282AA may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
BIO282AB	2013 Fall	Service-Learning Experience in Biology		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	BIO282AB may be repeated for a total of six (6) credit hours. Standard	Acad	LAB 2.0 2.0 0.0	L

						grading available according to procedures outlined in catalog.			
BIO282AC	2013 Fall	Service-Learning Experience in Biology		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	BIO282AC may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
BIO290AA	2023 Fall	Biology Internship		Internship experience with a public or private agency, non-profit organization or special interest group related to some aspect or application of biology.	Prerequisites: Permission of Instructor.	BIO290AA requires a minimum of 80 clock hours in the internship setting. BIO290AA may be repeated for a total of two (2) credit hours.	Acad	LAB 1.0 1.0 0.0	C
BIO290AB	2023 Fall	Biology Internship		Internship experience with a public or private agency, non-profit organization or special interest group related to some aspect or application of biology.	Prerequisites: Permission of Instructor.	BIO290AB requires a minimum of 160 clock hours in the internship	Acad	LAB 2.0 2.0 0.0	C

						setting. BIO290AB may be repeated for a total of four (4) credit hours.			
BIO290AC	2023 Fall	Biology Internship		Internship experience with a public or private agency, non-profit organization or special interest group related to some aspect or application of biology.	Prerequisites: Permission of Instructor.	BIO290A C requires a minimum of 240 clock hours in the internship setting. BIO290A C may be repeated for a total of six (6) credit hours.	Acad	LAB 3.0 3.0 0.0	C
BIO292	2018 Fall	Advanced Recitation in Biology		Discussion, guided practice and problem solving related to advanced topics in biology.	Prerequisites: None. Corequisites: Any 200-level BIO Biology course or permission of Instructor.	BIO292 may be repeated for credit.	Acad	L+L 1.0 1.0 1.0	T
BIO292UR	2025 Spring	Biology Undergraduate Research		Provides students with group and/or individualized undergraduate research opportunities under faculty supervision in order to maximize student development. Appropriate research facilities and equipment are made available for student use.	Prerequisites: Permission of Instructor, or Department or Division Chair.	BIO292U R may be repeated for credit.	Acad	LAB 1.0 1.0 0.0	C
BIO294AA	2018 Fall	Special Topics in Biology-Advanced		Advanced evidence-based study of a current topic in biology from a research and theoretical perspective.	Prerequisites: Permission of Instructor.	BIO294AA may be repeated for credit.	Acad	LEC 1.0 1.0 1.0	S
BIO294AB	2018 Fall	Special Topics in Biology-Advanced		Advanced evidence-based study of a current topic in biology from a research and theoretical perspective. Includes integrated laboratory and/or	Prerequisites: Permission of Instructor.	BIO294AB may be repeated for credit.	Acad	L+L 1.0 2.0 2.0	T

				field applications of related methodologies.					
BIO294AC	2018 Fall	Special Topics in Biology-Advanced		Advanced evidence-based study of a current topic in biology from a research and theoretical perspective. Includes integrated laboratory and/or field applications of related methodologies.	Prerequisites: Permission of Instructor.	BIO294A C may be repeated for credit.	Acad	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T
BIO295AA	2017 Fall	Independent Research in Biology		Original scientific investigation of biological phenomenon.	Prerequisites: A grade of C or better in (BIO156 or BIO181) and permission of Instructor.	BIO295AA requires a minimum of 80 hours of independent laboratory and/or field study. BIO295AA may be repeated for credit.	Acad	LAB 1.0 1.0 0.0	Z
BIO295AB	2017 Fall	Independent Research in Biology		Original scientific investigation of biological phenomenon.	Prerequisites: A grade of C or better in (BIO156 or BIO181) and permission of Instructor.	BIO295AB requires a minimum of 160 hours of independent laboratory and/or field study. BIO295AB may be repeated for credit.	Acad	LAB 2.0 2.0 0.0	Z
BIO295AC	2017 Fall	Independent Research in Biology		Original scientific investigation of biological phenomenon.	Prerequisites: A grade of C or better in (BIO156 or BIO181) and permission of Instructor.	BIO295A C requires a minimum of 240 hours of	Acad	LAB 3.0 3.0 0.0	Z

						independent laboratory and/or field study. BIO295A C may be repeated for credit.			
BIO296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
BIO296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's		Acad	LAB 2.0 10.0 0.0	Z

					major or career interest or with permission of the Instructor.				
BIO296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
BIO296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z
BIO298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual	Prerequisites: Permission of		Acad	LAB 1.0	Z

				student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			1.0 0.0	
BIO298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
BIO298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
BLT101	2000 Spring	Introduction to Construction Trades		Introduction to trade and craft apprenticeships in Arizona, including concrete, carpentry, millwright, pipefitting, steamfitting and plumbing, sheet metal, painter, decorator and drywall taper, electrician and ironworker	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
BLT120	1995 Fall	Techniques of Building Inspection		Theory and practice of zoning, foundation, structural, mechanical and electrical inspection in modern residential and commercial construction	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

BLT121	1994 Fall	Electrical Codes		Principles of safe electrical installations and proper inspection procedures. Topics include conduit installation, transformer service, raceways, control circuits, grounding and bonding, hazardous occupancies and the National Electrical Code	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BLT122	1996 Fall	Basic Engineering for Building Inspectors and Contractors I		Basic engineering mechanics, gravity loads, shears, bending moments, wood frame construction, deck joints, beams, columns, bracing and shear walls.	Prerequisites: A grade of C or better in BLT120 and MAT187 or equivalent or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
BLT124	1997 Fall	Designing for the Americans with Disabilities Act(ADA)		In-depth analysis of federal standards described in the Americans with Disabilities Act (ADA). Reviews the state of Arizona's enforcement document (AzDAAG). Focuses on helping designers, architects, and building officials create barrier-free buildings and facilities	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BLT125	1990 Fall	Residential Electrical Codes		National Electrical Code requirements for safe electrical installations and proper inspection procedures in residential buildings. Topics include branch circuitry, feeder calculations, services grounding, overcurrent protection, wiring methods, types and proper usage of material, swimming pool installation	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BLT126	2015 Fall	Soil Mechanics		Soil conditions as related to modern building requirements. Topics include bearing value, classification and identification, exploration and samplings, behavior of fills, compaction, subsurface drainage, and field sampling.	Prerequisites: A grade of C or better in MAT150 or MAT151 or MAT152 or satisfactory score on District placement exam.		Occ	LEC 3.0 3.0 3.0	S
BLT127	1994 Fall	Plumbing Codes		Code requirements and construction practices. Topics include underground and above ground plumbing, venting and finish plumbing	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BLT128	1994 Fall	Mechanical Codes		Code requirements and construction practices. Topics include duct work,	Prerequisites: None.		Occ	LEC 3.0	S

				conductors and fuel supply, insulation, and controls				3.0 3.0	
BLT129	1994 Fall	Materials of Construction		Fundamental characteristics of modern construction materials and the effective use of these materials in construction	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BLT131	1996 Spring	Applied Electric Codes		National Electric Code (NEC) administration and application. NEC requirements for safe installation of system control equipment and design of electric utilization systems. Identification of wiring systems and permitted uses. Application of NEC requirements for hazardous locations, specific occupancies, and special uses of electric equipment	Prerequisites: None.		Occ	LEC 4.0 4.0 4.0	S
BLT132	1996 Spring	Applied Plumbing Codes		Plumbing code administration. Application, design and installation of drainage/waste and venting systems in private and public buildings. Application of plumbing codes for design and installation of water systems	Prerequisites: None.		Occ	LEC 4.0 4.0 4.0	S
BLT140	2000 Spring	Environmentally Responsible Building		An overview of environmentally responsible building and a historical survey of building methodologies. Introduces design concepts and strategies related to the mitigation of environmental impacts. Examines building processes, environmental issues and the interdependent nature of our built environment. Topics include human impacts, climate and geography, sustainability, renewable energies, water use and energy, resource efficiency, building materials, indoor air quality and waste reduction	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BLT142	2011 Summer I	Green Building Codes, Standards and Rating Systems		Surveys green building rating systems, environmental building standards and green construction codes; addresses the broader scope of public health, safety and general welfare in the context of regulations and the natural environment; examines site development and land	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				use, material resource conservation, energy efficiency, water resource conservation, indoor environmental quality, building commissioning, operation and maintenance; includes exercises demonstrating the use of tools and applying the principles discussed during the course.					
BLT191	2021 Fall	Applied Plumbing Codes		Uniform plumbing code and plumbing systems installation requirements. Code administration as well as requirements relative to the installation and maintenance of plumbing systems.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BLT200	2000 Fall	Construction Management: Field Operations		Skills and techniques necessary for management of construction field operations. Includes job scheduling, inspection techniques, personnel relations, safety, and the scope and supervision of the overall construction process.	Prerequisites: A grade of C or better in DFT126 and GTC121 or departmental permission.		Occ	LEC 3.0 3.0 3.0	S
BLT201	2002 Fall	Construction Management: Office Operations		Develops the skills and techniques necessary for successful management of construction office operations. Includes establishing and financing the business, marketing, office operations, and relationships with other construction industry entities	Prerequisites: A grade of C or better in DFT122 or DFT126 or GTC121 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
BLT263AK	2003 Spring	Building Codes: IBC		Designed specifically to acquaint students with safety principles of building construction under the International Building Code (IBC), including structural requirements for wood, masonry and concrete, fire resistance of building construction, fire resistant materials, and ratings and occupancy requirements	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
BLT263AL	2003 Spring	Building Codes: IRC		Designed specifically to acquaint students with safety principles of building construction under the International Residential Code, including structural requirements for wood, masonry and concrete, fire resistance of building construction,	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				fire resistant materials, and ratings and occupancy requirements					
BLT296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
BLT296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
BLT296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and	Prerequisites: Completion of at least		Occ	LAB 3.0	Z

				employers to accomplish an outcome related to the career objectives of the students.	twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.			15.0 0.0	
BLT296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
BLT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
BLT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
BLT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
BME101	2020 Fall	Introduction to Biomedical Equipment Technology		Introduces fundamental concepts of the field of biomedical equipment technology. Emphasis on the responsibilities of the technician, electrical safety, and knowledge of devices and their functions, maintenance, and repair.	Prerequisites: A grade of C or better in ELE111, BIO160 and (HCC145 or HCC145AA).		Occ	LEC 3.0 3.0 3.0	S
BPC100AA	1996 Fall	Business-Personal Computers I		Introduction to the use of personal computers in the business environment. Computer hardware components, operating system functions and concepts. Running application software	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
BPC100AB	1996 Fall	Business-Personal Computers II		Use the personal computer to create, store and retrieve information. Procedures for running and using	Prerequisites: A grade of C or better in BPC100AA or		Occ	LEC 0.5	S

				business application software to produce documents and spreadsheets	permission of Instructor.			0.5 0.5	
BPC100AD	2018 Fall	Computing Fundamentals		Fundamental computer concepts and terminology for business and personal computers	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
BPC100BD	2018 Fall	Key Software Applications		Covers basic features of software applications for business and personal computers	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
BPC100CD	2018 Fall	Living Online		Fundamental network and Internet concepts and terminology for business and personal computers. Covers basic features of electronic mail applications	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
BPC100DD	2018 Fall	Internet and Computing Fundamentals		Fundamental computer and Internet concepts and terminology for business and personal computers. Covers basic features of software applications	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
BPC101	2018 Fall	Introduction to Computers		Computer software applications for the personal computer, including electronic spreadsheet and word processing, keyboarding review, a desktop environment, database management, computer graphics and operating system commands. Individualized advanced applications of software selected to solve specific problems on the personal computer.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
BPC101AA	2018 Fall	Introduction to Computers I		Computer software applications for the personal computer, including electronic spreadsheet and word processing, keyboarding review, and a desktop environment.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
BPC101AB	1997 Fall	Introduction to Microcomputers I: Macintosh		Microcomputer software applications for the Macintosh personal computer, including electronic spreadsheet and word processing, keyboarding review, and a desktop environment	Prerequisites: None.		Occ	LEC 1.0 2.0 1.7	S
BPC101BA	2018 Fall	Introduction to Computers II		Computer software applications for the personal computer, including database management, computer graphics, electronic spreadsheet, and	Prerequisites: A grade of C or better in BPC101AA.		Occ	L+L 1.0 1.0 1.0	T

				word processing, and operating system commands					
BPC103AK	2001 Summer I	Using Word: Level I		Use of Word to create, manipulate and print documents on a microcomputer	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
BPC104AD	1992 Fall	Using Excel: Level I		Use of Excel to create, edit, save and print worksheets	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
BPC104BD	1994 Summer I	Using Excel: Level II		Use of Excel to enhance worksheets to include graphing and formatting data, using complex formula and function expressions to build and analyze data, and special print options to output worksheets and graphs	Prerequisites: A grade of C or better in BPC104AD or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
BPC104CD	2018 Spring	Using Excel: Level III		Use of Excel to produce worksheets utilizing macros for template development and automation of repetitious tasks, and worksheet methods for the storage and management of data.	Prerequisites: A grade of C or better in BPC104BD or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
BPC106AH	2018 Fall	MS Outlook: Level I		Messaging and word processing functions of a Microsoft Outlook electronic work state	Prerequisites: None.		Occ	L+L 0.5 0.5 0.5	T
BPC106BH	2018 Fall	Microsoft Outlook: Level II		Microsoft Outlook features including sort, filter and group items; templates and forms; information sharing by public folders and Net Folders; share and fax contacts; and record activities in the Journal. Outlook environment customization also covered	Prerequisites: A grade of C or better in BPC106AH or permission of Instructor.		Occ	L+L 0.5 0.5 0.5	T
BPC110	2018 Fall	Computer Usage and Applications		Introduction to business and personal computer operations and usage. Software applications for analyzing and solving business problems including word processing, spreadsheet, database, and presentation graphics	Prerequisites: None.	Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]	Occ	L+L 3.0 4.0 4.0	T

BPC111AA	2018 Fall	Computer Keyboarding I	OAS111AA	Mastery of essential microcomputer keyboarding skills. Emphasis on touch typing of alphabetic and numeric keys and symbols	Prerequisites: None.		Occ	L+L 1.0 1.7 1.7	T
BPC111AB	2018 Fall	Computer Keyboarding II		Further development of microcomputer keyboard speed and accuracy. Emphasis on touch typing with speed and accuracy development of numerals as related to preparation and handling of documents.	Prerequisites: A grade of C or better in BPC/OAS111AA or permission of Instructor.		Occ	L+L 1.0 1.7 1.7	T
BPC113	2018 Fall	Micro-Alphabetic Indexing		Mastery of essential microcomputer filing skills. Emphasis on indexing and alphabetizing individual and business names; subject, geographic, and numeric methods; and cross-referencing.	Prerequisites: None.		Occ	L+L 1.0 1.7 1.7	T
BPC119	2018 Fall	Basic Data Entry Activities		Development of speed and accuracy of data entry skills. Includes vocabulary, keyboard drills, and data entry simulations.	Prerequisites: A grade of C or better in (BPC111AA or OAS111AA or OAS101AA) or permission of Instructor. OAS118 recommended but not required.		Occ	LAB 1.0 2.0 2.0	T
BPC125	2018 Fall	Microcomputer Set Up and Maintenance		How to install and maintain a microcomputer (personal computer). Steps used to set up a new or add options to a previously installed microcomputer. Installation of internal options (memory, graphics, modems, etc.), as well as external options and devices (printers, monitors, communications, etc.). Troubleshoot (identify and repair or have repaired) microcomputer problems	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
BPC128	2018 Fall	Introduction to Desktop Publishing		Presents basic concepts of commercially prepared software used to do desktop publishing. Incorporates a combination of narrative and pictorial/graphic creation and presentation, including set-up, text entry, graphic generation, text and graphic merging, and other computer-based functions	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T

BPC128AF	2018 Fall	Introduction to Desktop Publishing: MS Publisher		Presents basic concepts of commercially prepared software used to do desktop publishing. Incorporates a combination of narrative and pictorial/graphic creation and presentation, including set-up, text entry, graphic generation, text and graphic merging, and other computer-based functions	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
BPC138AA	2018 Fall	Windows Desktop Design and Publishing		Use of Windows based microcomputers and appropriate commercial software package to compose and print textual and graphic materials of high quality. Includes overview of micro operating system, word processing of copy, use of graphics programs, layout of design elements, and printing alternatives.	Prerequisites: A grade of C or better in CIS105 or BPC110 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
BPC160	2019 Fall	AppleCare: Service Fundamentals		Prepares students to become certified in repairing and troubleshooting iOS or macOS devices. It prepares the students for the AppleCare Certified technician exams: Apple Certified iOS Technician (ACIT) and Apple Certified Mac Technician (ACMT). Students will learn the Apple service style for customer interactions, safety precautions, and basic troubleshooting skills.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
BPC170	2020 Fall	A+ Exam Prep: Computer Hardware Configuration and Support		Explore technical aspects of personal computers, including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis placed on hardware installation, maintenance, mobile devices, and hardware troubleshooting. Helps prepare students for the CompTIA A+ examinations.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
BPC171	2018 Fall	Recycling Used Computer Technology		Use of hardware maintenance knowledge and skills to refurbish used computers.	Prerequisites: A grade of C or better in BPC170 or Corequisites: BPC170 or	BPC171 may be repeated for a total of three	Occ	L+L 1.0 2.0 2.0	T

					permission of Instructor.	(3) credit hours.			
BPC210	2018 Fall	Advanced Computer Usage and Applications		Advanced application of software for business and personal computers including word processing, spreadsheet, database, and presentation. Includes integration of applications and Internet	Prerequisites: A grade of C or better in BPC110 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
BPC225	2018 Fall	Computer Configuration and Enhancement		Configuration and enhancement of a computer. Emphasis on configuration of hardware and software to optimize computer performance. Includes memory configuration and the identification and troubleshooting of configuration problems	Prerequisites: A grade of C or better in BPC125 or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
BPC250	2018 Fall	Post-Advanced Computer Usage and Applications		Post-advanced applications of software for business and personal computers including word processing, spreadsheet, database, and presentation. Includes integration of applications and Internet	Prerequisites: A grade of C or better in BPC210 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
BPC260	2024 Fall	AppleCare Exam Prep: iOS Device Repair		Prepares students for AppleCare Hardware Certification exams for iOS devices and to perform warranty-level hardware repairs.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
BPC262	2024 Fall	AppleCare Exam Prep: Mac Computer Models Repair		Prepares students for AppleCare Hardware Certification exams for MacOS computer models and to perform warranty-level hardware repairs.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
BPC265	2024 Fall	Jamf Training Foundation		The Jamf Training Foundation offers a core understanding of Jamf Pro and Jamf Protect as well as an enterprise-focused examination of the macOS, iOS, and iPadOS platforms. The hands-on and example-based environment provides experience in the configuration of Jamf Pro, Jamf Protect, device enrollment, distributing App Store apps, building and managing packages to deploy to computers, configuration and settings for computers and mobile devices, device security, a scripting overview (Bash), and an introduction to the security standards. This offering	Prerequisites: A grade of C or better in BPC260 and BPC262.		Occ	L+L 3.0 4.0 4.0	T

				includes content and certification opportunities from the Jamf 100, 170, and 200 courses.					
BPC270	2018 Fall	A+ Exam Prep: Operating System Configuration and Support		Explore advanced technical aspects of maintaining and servicing computers. Emphasis placed on OS installation, maintenance, mobile devices, security, software troubleshooting, and on proper usage of tools, safety procedures, and professionalism. Helps prepare students for the CompTIA A+ examinations.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
BPC274	2022 Fall	Advanced Server Computer Maintenance: Server+ Prep		Explores the technical aspects of computer servers, including hardware installation and management; operating system configuration, access control and virtualization; and overall diagnostic and resolution of system hardware, software, connectivity, storage and security issues. Includes an emphasis on physical and network data security techniques and implementation of backup techniques to remediate disaster recoveries. Helps prepare students for the CompTIA Server+ examination.	Prerequisites: A grade of C or better in (CIS126++ and MST150++), or BPC270, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
BPC275	2021 Spring	CompTIA Exam Prep		Focuses on reviewing key concepts, practicing skills and preparing to successfully demonstrate existing knowledge on CompTIA certification exams. The course is designed to provide an overview of exam topics, study and test-taking strategies. It also will include structured study time, group discussions, and the use of practice exams to assess test readiness.	Prerequisites: A grade of C or better in BPC170, or BPC270, or permission of the Instructor.	Students should be finishing a CompTIA class, looking for CompTIA certificate renewal, or have industry or other prior training in CompTIA topics and concepts. BPC275 may be	Occ	L+L 2.0 3.0 3.0	T

						repeated for a total of six (6) credit hours.			
BPC278	2018 Fall	Software Installation - MS Windows		Installing and configuring microcomputer software. Emphasis placed on the installation, configuration, upgrade, and related problem resolution of microcomputer operating system and applications software.	Prerequisites: A grade of C or better in CIS105 or BPC114 or CIS114 (any module whose course number suffix begins with a D) BPC117 or CIS117 (any module whose course number suffix begins with a D) and BPC170 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
BUS305	2025 Fall	Business Analytics		Overview of quantitative and qualitative data analysis concepts and practices that assist with the decision-making process of managers in business. Topics include how data is used in different industries and functional areas of business; the collection, analysis and interpretation of data; internal and external communication of decisions and recommendations based on analysis, and ethical considerations.	Prerequisites: A grade of C or better in (ACC212, CIS105, GBS205, GBS221, and GBS233), or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
BUS310	2025 Fall	Finance Principles		Overview of the principles and practices of financial management in a business environment. Topics include financial analysis and financial risk, capital investment analysis and decision making, and the capital structure of the firm. Focus on analyzing financial information, identifying issues, and solving business problems to make sound business decisions. Emphasis on the ethical application of financial principles and methods for solving the problems of financial policy that managers face.	Prerequisites: A grade of C or better in ACC212, or permission of Program Director.		Acad	LEC 3.0 3.0 3.0	S

CAD100	2018 Fall	Fundamentals of 2D AutoCAD		Utilize AutoCAD software to generate two-dimensional (2-D) drawings and components in a generic installation. Apply basic AutoCAD commands and properties to format, draw, edit, layer, dimension, import/export, and manage drawing files. Creation, manipulation, and hardcopy production of 2-D drawing files from major AutoCAD command and display environments and plot options	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
CAD101	2018 Fall	Elements of CAD Graphics (AutoCAD)		Computer generation of drafting and design components using pure elements and basic geometric procedures. Incorporates concept illustration based on standard pictorial methods and develops multi-view projection techniques and presentation methods. Introduction to the fundamentals of three-dimensional (3D) modeling and the construction and printing of 3D objects.	Prerequisites: A grade of C or better in CAD100 or Corequisites: CAD100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
CAD105	2018 Fall	Fundamentals of Revit Architecture		Introduction to Revit Architecture. Utilize Revit software to develop and generate basic 3-D models and components. Create, edit, dimension, and manage 2-D and 3-D drawing views and projects. Produce drawing files and plots using various display environments and plot options.	Prerequisites: A grade of C or better in CAD100 or (previous architectural and CAD experience, and permission of Department or Division).		Occ	L+L 3.0 6.0 6.0	T
CAD106	2020 Spring	Fundamentals of Civil 3D		Introduction to Civil 3D. Utilize Civil 3D software to develop and generate basic 3D models and components. Create, edit, dimension, and manage 2D and 3D drawing views and projects. Produce drawing files and plots using various display environments and plot options.	Prerequisites: A grade of C or better in CAD100 or (previous civil and CAD experience, and permission of Department or Division).		Occ	L+L 3.0 6.0 6.0	T
CAD120AH	2018 Fall	Getting Started with CAD: Microstation		Basic Commands; drawing aids; input devices; use of default settings	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T

CAD125AH	2018 Fall	Drawing Database Management: Microstation		Operating the system file manager. Establishing, updating, managing, and maintaining a CAD drawing database	Prerequisites: A grade of C or better in CAD120AH or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
CAD145	2018 Fall	Design Principles for Industry		Survey of the basic standards and procedures for drawing setups and design documentation in the fields of architecture, manufacturing, and civil technology. Multi-source hard copy design presentation.	Prerequisites: A grade of C or better in (CAD100 and CAD101) or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
CAD150AH	2018 Fall	Two-Dimensional CAD: Microstation		Constructing scaled two-dimensional drawing using CAD.	Prerequisites: A grade of C or better in CAD125AH or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
CAD160	2018 Fall	Residential Architectural Drafting		Basic skills associated with board drafting in the architectural field	Prerequisites: A grade of C or better in (CAD105 CAD110 and CAD115) or permission of Instructor.		Occ	L+L 2.0 4.0 4.0	T
CAD164	2018 Fall	Residential Working Drawings		Team projects in the development of a set of architectural working drawings for a residence.	Prerequisites: A grade of C or better in CAD145 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
CAD165	2021 Fall	Architectural Software (AutoCAD Architecture)		Introduction to AutoCAD Architecture, a modeling software used by architecture professionals. Procedures unique to advanced software and pertinent to architectural documentation. Emphasis on residential working drawings.	Prerequisites: A grade of C or better in CAD145 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
CAD167	2018 Fall	Architectural Drawings I (Revit): Residential CAD		Use of Revit architectural modeling software to develop 3-D architectural models, working drawings, construction documentation, and renderings. Emphasis on residential working drawings.	Prerequisites: A grade of C or better in CAD105 or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
CAD186	2020 Spring	Site Development I		Use coordinate geometry and survey point databases to create topographic maps utilizing civil engineering/surveying application software. Volumetric analysis of earthwork (cut and fills) utilizing civil	Prerequisites: A grade of C or better in CAD106 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T

				engineering/surveying application software. Production of base mapping, earthwork, grading, and drainage plan utilizing civil engineering/surveying application software.					
CAD201	2018 Fall	Three-Dimensional (3D) Modeling and Advanced CAD Techniques		Advanced Computer Aided Drafting (CAD) techniques including the automation and semi-automation of design documentation, external referencing and attribute creation and manipulation. Development of three-dimensional (3D) models including construction, manipulation, rendering and 2D/3D output.	Prerequisites: A grade of C or better in (CAD100 and CAD101) or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
CAD235	2021 Fall	Modeling, Rendering and Animation for Technical Presentations		Entry level course in technical modeling, visualization, and animation. Uses 3D modeling software, rendering, and animation tools to visualize and solve design issues. Development of professional quality presentation materials for design projects.	Prerequisites: A grade of C or better in CAD201 or Corequisites: CAD201 or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
CAD256	2021 Fall	CAD Customization and Management		Emphasis on developing customized user interfaces and basic programming skills. Installation and configuration of software processes. File management techniques; file archival, batch plotting, file conversion, and CAD standards.	Prerequisites: A grade of C or better in DFT254AA or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
CAD265	2021 Fall	Architectural Software (AutoCAD Architecture) II: Commercial CAD		Use of AutoCAD Architecture, an architectural modeling software to generate features associated with commercial building design. CAD treatment of selected details and other structural practices common to nonresidential buildings. Emphasis on the practices and standards of working drawings.	Prerequisites: A grade of C or better in CAD165.		Occ	L+L 3.0 6.0 6.0	T
CAD267	2018 Fall	Architectural Drawings (REVIT) II: Commercial CAD		Use of REVIT architectural modeling software utilized by the architectural industry to generate plans and features associated with commercial building design. Focus on CAD development of selected plans,	Prerequisites: A grade of C or better in CAD167 or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T

				details, and structural practices common to nonresidential buildings.					
CAD269	2018 Fall	Computer Aided Landscape Design	AGL269	Using AutoCAD to create landscape design drawings and wire frames in Sketchup for elevations, sections and perspective sketches.	Prerequisites: A grade of C or better in : (AGB139 or CAD100 or CAD101) and AGL189 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
CAD274	2018 Fall	Residential Design CAD		Developing designs with plans and details based on current design vogues. CAD problem solving associated with design	Prerequisites: A grade of C or better in (CAD152 and CAD164) or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
CAD282	2018 Fall	HVAC and Sheet Metal Design		Drawing, design, and specification of heating, ventilating, and air conditioning (HVAC) systems. Basic types of heating and cooling systems, heat loss calculations, sheet metal development, and solar design	Prerequisites: A grade of C or better in (CAD150 and [two of CAD262 CAD264 CAD266 CAD268]) or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
CAD286	2018 Fall	Site Development II		Use a coordinate geometry and survey point database to create construction drawings utilizing civil engineering/surveying software.	Prerequisites: A grade of C or better in CAD186.		Occ	L+L 3.0 6.0 6.0	T
CAD287	2020 Spring	Advanced Revit Techniques		Advanced use of Revit architectural modeling software utilized by the architectural industry. Develop custom families with parameters and formulas, generate conceptual mass plans, prepare design phasing for renovation and tenant improvement projects, and work with advanced features associated with architectural building design.	Prerequisites: A grade of C or better in CAD167 or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
CAD292	2018 Fall	Current Developments in CAD Technology		The exploration and analysis of the newest software packages and/or plug-ins on the market designed to enhance or replace existing Computer Aided Drafting (CAD) software. Designed to introduce and develop skills in the latest state-of-the-art tools pertinent to industry today.	Prerequisites: A grade of C or better in CAD100 or permission of Department or Division.	DFT292 may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
CAN101	2022 Fall	Introduction to Cannabis Industry		Introductory overview of the cannabis industry. Explores the historical, legal,	Prerequisites: None.		Occ	LEC 3.0	S

				social, and political aspects of cannabis use, cannabis careers and business management, including business plans, for the cannabis industry. Includes how industry trends and regulations have influenced supporting industries and consumer behaviors.				3.0 3.0	
CAN105	2023 Fall	Accounting, Finance and Funding in the Cannabis Industry		Overview of the cannabis industry's financing, funding, accounting, and tax practices. Includes capital ventures and accounting procedures unique to the cannabis industry.	Prerequisites: A grade of C or better in CAN101.		Occ	LEC 2.0 2.0 2.0	S
CAN110	2022 Fall	Social Equity and Current Issues in the Cannabis Industry		Social equity programs, trends, current issues and the societal impact in the cannabis industry.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
CAN115	2023 Fall	Human Resources and Operations Management in the Cannabis Industry		Overview of the human, facilities and capital management of the cannabis industry. Includes workforce development trends and best practices unique to the cannabis industry.	Prerequisites: A grade of C or better in CAN101.		Occ	LEC 1.0 1.0 1.0	S
CAN120	2022 Fall	Legal and Regulatory Environment in the Cannabis Industry		Study of cannabis industry laws, policies, regulations and ethics in non-use, medicinal-use, and adult-use U.S. states and territories.	Prerequisites: A grade of C or better in CAN101.		Occ	LEC 3.0 3.0 3.0	S
CAN125	2022 Fall	Supply Chain Management in the Cannabis Industry		Management of cannabis supply chain stages including: growing, extracting, laboratory testing, product development and manufacturing, shipping and distributing, and dispensary and retailing across all legislative environments (federal, medicinal-use, and adult-use in U.S. states and territories).	Prerequisites: A grade of C or better in CAN101.		Occ	LEC 2.0 2.0 2.0	S
CAP120	2021 Fall	Introduction to Counseling		Introduction to the field of counseling with a focus on skills and competencies needed as a mental health practitioner. Foundations of counseling including counseling theories, ethical considerations, prevention and intervention topics, and multicultural counseling practices.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

CAP220	2021 Fall	The Counselor in a Multicultural Society		Current theories and research on culture, race and ethnicity, gender and other aspects of cultural diversity in a multicultural society through the lens of counseling. Focus on personal perspectives, will explore themes, theories, topics and research related to power, privilege and oppression in the United States as applied to counseling discipline.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CAP240	2021 Fall	Introduction to Counseling Skills		Introduction to basic skills and techniques used in the counseling field. Focuses on active listening, self-awareness, and other related skills.	Prerequisites: A grade of C or better in CAP120.		Acad	LEC 3.0 3.0 3.0	S
CAP260	2021 Fall	Career and Professional Preparation for the Helping Professions		Overview of the process of career and life planning through self-awareness for students interested in helping fields. Focus on current occupational trends and outlook, the learning models of the individual, the world of work, and decision-making. Emphasis on individual application and workplace diversity. Design materials for use in the professional world such as resumes, online presence, career portfolio.	Prerequisites: A grade of C or better in ENG101.		Acad	LEC 3.0 3.0 3.0	S
CCS101	2008 Summer I	Chicana and Chicano Studies		Introduction to the wealth and diversity of Chicana and Chicano Studies research from a variety of disciplinary perspectives through the use of a series of historical and social scientific studies, novels, testimonios, and films	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
CCS111	2006 Spring	Introduction to Chicana and Chicano Culture		A study of Chicano popular culture, including cultural themes and artistic expression. Expression of the	Prerequisites: None.		Acad	LEC 3.0	S

				Chicano experience in American society from the perspective of the social sciences. Analyzes Chicano self-identity and social and cultural dynamics of the Chicano community				3.0 3.0	
CCS202	2017 Spring	Ethnic Relations in the United States	AFR202 ASB202	Basic concepts and processes, including historic overview, of interethnic relations in the United States: culture, race, ethnicity, ethnocentrism, prejudice, discrimination, racism, assimilation, acculturation, and individual and group responses to interethnic contact. Cultural knowledge and intercultural communication skills and perspectives as fundamental tools for successful management of social relations in a multicultural world.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Historical Awareness - [H] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
CCS210	2025 Fall	Multicultural Representation in the History of STEM	AFR/AIS/ETH210	Aims to fill a gap by exploring the perspectives, experiences, and contributions of individuals from various cultural backgrounds in the study of science, technology, engineering, and mathematics (STEM). Analyzes and synthesizes how different cultures have shaped scientific knowledge, examining the impact of diversity on innovation and problem-solving, and addressing barriers faced by underrepresented groups in STEM fields.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CCS212	2016 Spring	The Mexican American Novel		A study of the social, historical, and cultural backgrounds as well as the form and content of the Mexican American novel.	Prerequisites: ENG101 and ENH112 suggested but not required.		Acad	LEC 3.0 3.0 3.0	S

CCS282AA	2000 Fall	Volunteerism for Chicana and Chicano Studies: A Service Learning Experience		Service learning field experience within private/public agencies such as museums and libraries, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	CCS282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
CCS298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
CCS298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
CCS298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

				for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
CET102	2018 Fall	Surveying II		Surveying principles including triangulation, municipal and land surveys, topographic surveys, earthwork, state plane coordinate systems, stadia methods, practical astronomy, highway curves, superelevations and construction.	Prerequisites: A grade of C or better in CON241 or permission of Department or Division.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
CET103	1996 Spring	Construction Methods		Modern construction techniques: planning methods, critical path method (CPM), excavation and earthmoving practices, estimating and work scheduling, concrete design and placement practices. Includes reinforced concrete, prestressed concrete, carpentry, asphalt characteristics, proper proportioning of aggregate and important safety methods. Introduction to heavy construction equipment use	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CET104	1997 Spring	Community Planning and Development		Provides a comprehensive overview of the urban planning and development process. Introduces planning theories, methodologies, and strategies with practical applications from local and other urban communities. Topics include municipal planning, land use and zoning, circulation, water and waste water management, storm drainage and public utility services. Examines the economic development process, environmental and legal issues and focuses on the interdependent nature of development	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CET105	1996 Summer I	Highway Technology		Economics of highway locations, rights-of-way, curves, drainage problems, bridge structures, road building equipment, highway financing, and administrative	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				problems at the state, county and city levels					
CET150	2004 Spring	Introduction to Geodesy and Map Projections		Coordinate frames used in geodesy, photogrammetry, surveying, and mapping. Cartesian, spherical, and ellipsoidal coordinates. Introduction to kinematics, gravity field, and size and shape of earth. Positioning in three dimensions. Introduction to map projections and associated coordinate systems. Theory and application of the plane coordinate systems with emphasis on Arizona. Development of projections from Global Positioning System (GPS) observations.	Prerequisites: A grade of C or better in (CET102 and MAT182) or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
CET171	1996 Spring	Construction Contracts		Legal aspects of construction contracts, writing and interpretation of specifications, prequalifications, and use of performance bonds	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CET201	2018 Fall	Boundary Control and Legal Principles		Principles of land surveying, boundary controls, ethical and legal principles, and office practices.	Prerequisites: A grade of C or better in CON241 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
CET202	2018 Fall	Writing Legal Descriptions		Application of principles to actual case studies. Emphasis on proper form and clarity in legal description writing. Procedure for filing subdivision plats and preparation for land surveyors' registration examinations.	Prerequisites: A grade of C or better in CON241 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
CET205	2004 Spring	Photogrammetry		An introduction to the study of aerial cameras, equipment, flight procedures, and interpretation of aerial photographs, including stereoscopic principles used in planimetric and topographic maps, map projections, grids, and forms. Practical applications of principles stressed	Prerequisites: A grade of C or better in CET102 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
CET211	2000 Fall	Strength of Materials		A study of strength and application of the materials of engineering construction, including the mechanics of beams, shafts, and bolted and	Prerequisites: A grade of C or better in DFT107 or ELT102 or (MAT151 and MAT182) or MAT187		Occ	LEC 3.0 3.0 3.0	S

				welded connections under various loading conditions.	or equivalent or permission of Department or Division.				
CET241	2010 Fall	Fundamentals of Traffic Engineering		Basic study of traffic movement, ordinances, mechanical controls, planning, street and highway design, parking, and traffic engineering organization. Training for personnel as civil engineer technicians.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CET250	2004 Spring	Public Land Survey System		Overview of unique requirements to determine land boundaries according to the Manual of Instructions for the Survey of Public Lands of the United States, including history of the system, lotted sections, proportioning, subdividing, and evidence analysis. Emphasis on rules in order to perform any boundary survey, particularly for Arizona	Prerequisites: A grade of C or better in CET102 and CET201.		Occ	LEC 3.0 3.0 3.0	S
CET257	2018 Fall	Route and Construction Surveying		Principles and field practice of route and construction surveying, including route control surveys, construction control, topographic mapping, highway curves, and computations for roadways, utilities, bridges, buildings, small commercial sites, and subdivisions	Prerequisites: A grade of C or better in CET102 or permission of Department or Division.		Occ	L+L 3.0 5.0 5.0	T
CET296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or		Occ	LAB 1.0 5.0 0.0	Z

					career interest or with permission of Instructor.				
CET296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
CET296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z

CET296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
CET298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
CET298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

CET298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
CFS101AH	2025 Fall	Visual Art Experiences for Young Children		The creative use of visual art media and techniques with children between the ages of birth and age eight.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS101AJ	2023 Fall	Music Activities for the Young Child		Experiences with music in singing, rhythm instruments, creative movements, and games, as well as the development of music appreciation and basic listening skills.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS101AP	2023 Fall	Science Activities for the Young Child		Interpreting the study of science in early childhood education as a part of a dynamic growth process offered by the child's daily life experiences.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS101AR	2023 Fall	Learning With Toys		Use of creative imagination with toys to enable the child alone or with others to explore the world. Includes evaluating proper use of toys and appropriate developmental skills.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS106	2023 Fall	Stress Management in the Family		Impact of stress factors on the family. Managing time and stress in the home. Options for coping with anxiety.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS107	2023 Fall	Men and Children: Strengthening the Bond		Overview of the relationship between fathers or significant male figures and children from the role perspective of the involved, nurturing male. Strategies for assessing and organizing successful male involvement programs examined.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS109	1988 Fall	Parent/Child Communication		Communication between parents and children. Developing self-esteem, responsibility and empathic listening. Pitfalls to communication	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S

CFS111	2023 Fall	Relationships to Promote Learning in Young Children: Birth to Age Three		Overview of the relationship between the teacher/caregiver and child from the perspective of a reflective teacher. Students will learn the importance of assessing, understanding, and enhancing the development of emotional skills of young children to help guide and develop a child's self-image. Student will also be able to monitor, reflect, and plan self-care so they become effective teachers.	Prerequisites: None. CFS/ECH176 recommended.		Acad	LEC 1.0 1.0 1.0	S
CFS112	2024 Fall	Personal Growth and Family Relations		Personal development as related to the individual, the family, and their relations. Emphasis on interpersonal family relationships. Skills and techniques to facilitate and strengthen the individual and family relationships.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
CFS114	2023 Fall	Working with the Hyperactive Child		Causes of hyperactivity in children; focus on the family's role in identification, treatment and school/community support.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS116	2023 Fall	Discipline and Guidance		Age appropriate principles for disciplining and guiding young children's behavior in child care settings, including interpersonal and environmental strategies. Observational opportunities provided.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS120	2024 Fall	Contemporary Issues In Early Childhood		Designed to develop understanding of a broad range of contemporary issues that impact the child in today's society. Course directed at pre-service and in-service professionals.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS121AA	2023 Fall	Single Parent Family-Adjustment		Overview of issues facing single parent families. Examination of adjustment issues with emphasis on relationships. Methods of adapting family life to meet the needs and variations of one-parent families.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS123	2023 Fall	Health and Nutrition In Early Childhood Settings		Creating and maintaining healthy environments and practices in programs serving young children. Emphasis on assessing the child's	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S

				health status, nutrition and food service, communicable disease recognition, transmission, and prevention, infection control, regulations and regulatory agencies, current topics, resources, and innovative practices.					
CFS125	2023 Fall	Safety in Early Childhood Settings		Fundamental concepts of promoting a safe, but challenging learning environments. Establishing and maintaining safety procedures in the early childhood setting. Emphasis on indoor and outdoor equipment and activities, risk analysis, accident, evacuation, and emergency plans, regulations, regulatory agencies and resources, current topics, and innovative practices.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS130	2024 Fall	Demystifying Adolescence		A holistic overview of the physical, social, and emotional development of adolescents. Emphasis on effective skills necessary for working with adolescents and their families.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS140	2002 Fall	Special Topics: Child and Family Studies		Explores special topics related to child and family studies. Topics vary and include concepts relevant to those pursuing careers in or employed in early childhood care or to those working with families in programs, agencies, organizations, and resource centers that provide services to families.	Prerequisites: None.	CFS140 may be repeated for a total of two (2) credit hours with change of topic.	Acad	LEC 0.5 0.5 0.5	S
CFS157	1995 Fall	Marriage and Family Life		Study of marriage and the family as a social system, including models of family analysis, intra- and interpersonal relations, and cross-cultural and historical patterns	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
CFS159	2025 Fall	The Modern Family		An examination of the modern American family. An emphasis on the changing functions and roles of individuals within today's society and	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

				an analysis of the basic challenges confronting the family, including alternative family styles.					
CFS160	2023 Fall	Using Music, Speech, and Movement with Children's Literature		Using elements of music, speech, and movement with children's literature, including rhymes, chants, songs, and books to enhance children's social, physical, cognitive, and emotional development.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS163	2009 Fall	Family Child Care: Introduction to Business Management		Emphasis on small business management and effective policies and procedures for family child care providers. Licensing, legal, and regulatory issues in a home setting are examined	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS164	2009 Fall	Family Child Care: Curriculum and Environment		Family child care planning for multi-age groupings of children through age eight. Role of the environment as well as various curriculum programs will be explored and evaluated. Exploration of culturally rich, inclusive and child-centered environment in his/her own child care setting. Issues of professionalism, family partnerships, observation, guidance, and health/safety practices are examined	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS164AA	2009 Fall	Family Child Care: The Environment		Family child care environments for multi-age groupings of children through age eight. Exploration of culturally rich, inclusive, and child-centered environment in his/her own child care setting. Issues of health/safety practices are examined	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS164AB	2009 Fall	Family Child Care: Programming, Guidance and Observation		Family child care programming for multi-age groupings of children through age eight. Various curriculum programs will be explored and evaluated. Issues of observation and guidance are examined	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS164AC	2009 Fall	Family Child Care: Family Partnerships and Professionalism		Issues of professionalism, family partnerships, communication, and ethical practices are examined	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS167	2023 Fall	School-Age Child Care Provider		Issues related to school-age child care. Past, current, and future trends;	Prerequisites: None.		Acad	LEC 3.0	S

				regulations, insurance liabilities and coverage, shared facilities, and community resources. Techniques for managing/administering services and personnel, communicating with parents, and evaluating the care/program. Planning and scheduling the school-age program. Includes overview of child growth and development, types of routines and activity schedules.				3.0 3.0	
CFS176	2023 Fall	Child Development	ECH176	Study of the science of human development from conception through adolescence. Includes observation skills, parent and adult roles in the lives of children, and contemporary issues.	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
CFS177	2025 Fall	Parent-Child Relationships		Methods to strengthen relationships and negotiate conflicts with children. Focus on effective interpersonal skills and guidance techniques.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS178	2023 Fall	Survey of Early Childhood Education		Orientation to basic concepts of day care and nursery programs. History and philosophy of child care services including state regulations governing those services. Observation opportunities provided.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS179	1988 Fall	Child Care: A Multifaceted Career		Overview of the child care field. Focus on enhancing children's self esteem, providing for children's nutritional needs, and developing adequate safety and sanitation practices	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS181	2023 Fall	Enhancing Infant and Toddler Development		Principles of development in children from birth through 30 months. Emphasis on individuality of child and the adult role in providing a safe and stimulating environment for the development of the child.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS182	2023 Fall	Parenting the Early Adolescent: Ages Ten to Fourteen		Emphasis on the early adolescent developmental period, ages ten to fourteen, and the importance of the parent-child relationship, as well as	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S

				strategies to ensure successful teen years.					
CFS183	2023 Fall	Contemporary Issues in Adolescence		Current issues that impact adolescent development and behavior explored. Comprehensive and specific strategies for addressing these issues as parents or professionals working with teens emphasized. Issues related to adolescent sexuality, abuse, mental health, violence, and risk behaviors included.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS190	2023 Fall	Home-Based Visitation		Emphasis on development of skills needed to successfully complete home-based client visitation. Opportunities for field-based observations provided.	Prerequisites: None.		Acad	L+L 3.0 4.0 4.0	T
CFS192	2023 Fall	Child Care Center Staff Development		Presents strategies to administrators and supervisors in child care centers for developing the personal and professional growth of child care staff.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS193	2023 Fall	Financial Management in Child Care Centers		Provides strategies for financial management and administration of finances in a child care center. Specific concerns of participants addressed.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS194AA	2023 Fall	Early Childhood Program Management: Staffing and Managing		Methods and techniques for recruiting, staffing, and managing in early childhood programs.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS194AB	2023 Fall	Early Childhood Program Management: Human Relations		Basic human relations in early childhood organizations and the influence of the individual's personal needs on the overall needs and objectives of the organization.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS194AC	2023 Fall	Early Childhood Program Management: Organizational Structure		Provides a broad perspective of the organizational life of an early childhood environment.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS195	2023 Fall	Early Childhood Personnel Supervision		Covers supervision concepts and applications for early childhood programs.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S

CFS196	2023 Fall	Ethics and the Early Childhood Educator		Ethical issues in the early childhood field.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS197	2023 Fall	Leadership in Early Childhood Education		Provides concepts for understanding and managing leadership roles and responsibilities in the early childhood field.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS204	2023 Fall	Reflective Supervision		Reflective supervisory processes to enhance learning and professional development. Includes professional development stages to provide supervisors with tools to support professional growth. Also covers challenges and barriers to the supervisor and employee/practitioner relationship.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS205	2023 Fall	Human Development		Explores the growth and development process over the human life span. Research and theoretical approaches; physical, cognitive, social, and personality development from birth through adulthood and death.	Prerequisites: None.	Course Attribute(s): General Education Designatio n: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
CFS206	2023 Fall	Child and Family Organizations: Management and Administration		Examination of management and administration of community- based child and family organizations within the context of organizational behaviors. Focus on attributes of effective organizations: the impact of organizational culture and learning, work-place diversity and employee motivation.	12-13-2022		Acad	LEC 3.0 3.0 3.0	S
CFS207	2023 Fall	Organization and Community Leadership in Child and Family Organizations		Examination of organization and community leadership as it applies to the management and administration of community- based child and family services organizations. Provides overview of leadership styles and function.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS208	2023 Fall	Child and Family Organizations: Fiscal		Examination of fiscal accountability and resource development as it applies to the management and	Prerequisites: None.		Acad	LEC 3.0	S

		Management and Grant Writing		administration of community-based child and family social service organizations. Provides overview of grant development processes beginning with research into governmental and private funding sources through fiscal and grant audit processes. Includes budget development, risk management, and cost control issues.				3.0 3.0	
CFS209	2023 Fall	Child and Family Organizations: Project Management		Focuses on concepts and strategies associated with effective project management in community-based child and family organizations. Emphasis on planning, evaluation and project management models.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS210	2005 Spring	Family Life Education		Provides an overview of the professional work within the field of family life education. Emphasis on developing flexible, culturally sensitive and effective professional skills	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS220	2004 Spring	Introduction to Parenting and Family Development		Overview of the field of family and parent development. Focuses on parenthood as a developmental process and cultural influences on child rearing. A family systems perspective introduced and applied to understanding families with children	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS225	2011 Summer II	Foundations of Parent Education		Professional development as related to work with parents. Emphasis on developing effective skills with parents, professionals and paraprofessionals involved with the child. Skills and techniques to facilitate and strengthen the individual and family relationships.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS235	2023 Fall	Developing Child: Theory into Practice, Prenatal to Age Eight		Understanding and working with young children, birth through age eight. Analysis of young children's physical, social, emotional, cognitive and linguistic development within their home, school, and cultural contexts. Typical and atypical development. Implications for teachers and parents. Emphasis on observations and planning curriculum based on	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S

				theories, research, and child-specific data.					
CFS240	2023 Fall	Human Behavior in Context		Considers the influences of physical and social environments in which human behavior occurs. Includes multiple roles and perspectives of the individual, the family, society and the professional.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS242	2023 Fall	Curriculum Planning for Diversity		Practical early childhood classroom applications for a diverse population, including integration of cultures, generations, genders, and races into the classroom, facilitation of second language acquisition, and practical teaching strategies which are also developmentally appropriate.	Prerequisites: A grade of C or better in CFS/ECH176.	Course Attribute(s): General Education Designation: Cultural Diversity - [C]	Acad	LEC 3.0 3.0 3.0	S
CFS243	2004 Spring	Cross-Cultural Parenting		Focus on the study of parents and children from a cross-cultural position. Emphasis on parenting styles and practices from a cultural directive and expectation perspective. Course designed for those seeking careers in Family Studies, Parent Education, Psychology, Social Work/Human Services	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS247	2004 Spring	Family Ties and Aging		Identification and examination of facets of family relationships and aging. Emphasis on study of central family connections for older people, unique family situations, and implications of family transitions. Course designed for those seeking careers in Family Studies, Parent Education, Psychology, Social Work/Human Services	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS249	2004 Spring	Transition to Adulthood		Emphasis on major elements of the transition to adulthood and key links to changes in family relationships. Focus on the realignment of intergenerational relationships and reassessment of family priorities. Course designed for those seeking careers in Family Studies, Parent Education, Psychology, Social Work/Human Services	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

CFS250	2023 Fall	Social Policy and Families		Examines the impact of social policy on family systems and the implications for professional roles and practice.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS251	2023 Fall	Transitions: Work to Retirement		Explores the work to retirement transitional issues that impact individuals and families. Emphasis on physical, cognitive and psychosocial dimensions of retirement.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS252	2023 Fall	Contemporary Issues in Aging		Current issues that impact aging development and behavior explored. Comprehensive and specific strategies for addressing these issues for professionals working with aging adults emphasized.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS256	1996 Spring	Management in the Family		Management as a means to the realization of individual and family values and goals; creation, allocation, and use of resources. Focus on decision making	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS257	2023 Fall	Working with Families with Diverse Needs		A collaborative approach to working with families with diverse needs. Examines the effect of specific challenges on the family system. Presents techniques for those working with families to facilitate stress management, conflict resolution, and utilization of community and personal resources to aid in the strengthening of the family unit.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS258	2004 Spring	Families in Society		Areas of concentration include family transition, diversity in structure and culture faced by contemporary families, problems, crisis and change affecting the stress on families as our society progresses into a more complicated future. The study of change as an integral part of all family's day-to-day experiences while recognizing that family ancestral and cultural dimensions are fundamental for all family groupings. Course designed for those seeking careers in Family Studies, Parent Education,	Prerequisites: A grade of C or better in CFS157 and CFS259 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S

				Psychology, Social Work/Human Services					
CFS259	1997 Fall	Sexuality over the Life Span		Examination of the physical, psychological, social, and cultural contributions to human sexuality. Emphasis on family life and cultural variation. Examination of facts and myths, current literature, and changing mores regarding human sexuality. Sexuality of males and females in contemporary society; impact of sexual trends on society; home/school issues in sexuality education.	Prerequisites: Permission of Department or Division. Student must be 18 years or older.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
CFS263	2023 Fall	Child and Family Studies Seminar		Classroom portion of Child and Family Studies Internship. Emphasizes the blend of job-related activities including career exploration, employment procedures, human relations, and on-the-job problems.	Prerequisites: Permission of Department or Division. Corequisites: CFS264AA or CFS264AB or CFS264AC initial enrollment in internship module.		Acad	LEC 1.0 1.0 1.0	S
CFS264AA	2023 Fall	Child and Family Studies Internship		Laboratory portion of Child and Family Studies Seminar. Five hours of work weekly. Supervision and evaluation by a coordinator.	Prerequisites: Permission of Department or Division Corequisites: CFS263 when initially enrolled in CFS264AA or CFS264AB or CFS264AC module.	CFS264A A may be repeated for a total of six (6) credit hours.	Acad	LAB 1.0 5.0 0.0	C
CFS264AB	2023 Fall	Child and Family Studies Internship		Laboratory portion of Child and Family Studies Seminar. Ten hours of work weekly. Supervision and evaluation by a coordinator.	Prerequisites: Permission of Department or Division Corequisites: CFS263 when initially enrolled in CFS264AA or CFS264AB or CFS264AC module.	CFS264A B may be repeated for a total of six (6) credit hours.	Acad	LAB 2.0 10.0 0.0	C
CFS264AC	2023 Fall	Child and Family Studies Internship		Laboratory portion of Child and Family Studies Seminar. Fifteen hours of work weekly. Supervision and evaluation by a coordinator.	Prerequisites: Permission of Department or Division Corequisites:	CFS264A C may be repeated for a total	Acad	LAB 3.0 15.0 0.0	C

					CFS263 when initially enrolled in CFS264AA or CFS264AB or CFS264AC module.	of six (6) credit hours.			
CFS269	2025 Fall	Early Childhood Education Seminar	ECH269	Emphasizes professional experiences including employment procedures, human relations, employment related issues, and career exploration.	Prerequisites: Permission of Department or Division.	CFS/ECH 269 may be repeated for a total of three (3) credit hours.	Acad	LEC 1.0 1.0 1.0	S
CFS271	2024 Fall	Arranging the Environment	ECH271	Exploration of the influence of the environment on the behavior and development of young children. Considers indoor and outdoor spaces from the perspective of safety, age-related needs, spatial requirements, and usage.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS277	2023 Fall	Adult-Adolescent Interaction		Prepares social service workers, teachers, and parents to interact effectively with teenagers. Develops understanding of the interaction between adolescents and their families. Teaches practical strategies to deal with specific problem areas.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CFS281	2023 Fall	Adolescent School Success		An overview of factors that contribute to adolescent school success, including family-school interactions, special needs adolescents, and problem areas. Emphasis on strategies and resources to facilitate school success.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS282	2024 Fall	Inclusion of Young Children with Special Needs		An exploration of the educational, social, and behavioral concerns involved in the successful inclusion of children with special needs into typical preschool classrooms. Includes discussion of strategies for adaptations and modifications of the environment and accessing existing resources in the community.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS283	2023 Fall	Multicultural Early Child Education		Practical early childhood classroom applications for a diverse ethnic population, including integration of	Prerequisites: A grade of C or better in CFS/ECH176.		Acad	LEC 1.0	S

				multiculturalism into the classroom, facilitation of second language acquisition, and practical teaching strategies which are also developmentally appropriate.				1.0 1.0	
CFS284AA	2023 Fall	Early Childhood Teaching Internship	ECH284AA	Work experience in child care centers. 80 hours of designated work per credit.	Prerequisites: A grade of C or better in CFS/ECH176 and permission of Department or Division.	CFS/ECH 284AA may be repeated for a total of six (6) credit hours.	Acad	L+L 1.0 1.0 0.0	C
CFS284AB	2025 Fall	Early Childhood Teaching Internship	ECH284AB	Work experience in early care and education settings centers. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	CFS/ECH 284AB may be repeated for a total of six (6) credit hours.	Acad	L+L 3.0 3.0 0.0	C
CFS285	2023 Fall	Family-School Interaction		Interaction among parents, teachers and the school. Emphasis on methods used cooperatively by parents and teachers to provide for education and developmental needs.	Prerequisites: A grade of C or better in CFS/ECH176 or CFS278 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CFS285AA	2023 Fall	Family-School Interaction: Preschool		Interaction among parents, teachers and the preschool. Emphasis on methods used cooperatively by parents and preschool teachers to provide for education and developmental needs.	Prerequisites: A grade of C or better in CFS/ECH176 or CFS278 or permission of Instructor.		Acad	LEC 1.0 1.0 1.0	S
CFS287	2023 Fall	Professional Development in Early Childhood Education	ECH287	Emerging professionalism within the field of early childhood education. Consideration of job responsibilities, rewards, ethics and current issues facing practitioners. Includes assessment and career planning.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CFS290AA	2023 Fall	Child Abuse: Identification and Reporting in Child Care Settings		Identification, recording, and reporting by child care providers of sexual abuse, physical abuse, or neglect of young children.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CHA104	2010 Fall	Community Health Work		Preparation of Community Health workers for outreach health prevention, advocacy, education,	Prerequisites: None.	A minimum of 30	Occ	LEC 3.0	S

				referral, and intervention working with individuals, communities and families. Includes history of community health work programs, community systems, and resources for clients and families often in disparity.		hours of service learning experience in a community-based setting involving interacting with various agencies within the community, managing home visits, dealing with challenging situations, and empowering and mobilizing for action.		3.0 3.0	
CHI101	2018 Fall	Elementary Chinese (Mandarin) I		Introduction to the basic grammar, pronunciation and vocabulary of the Mandarin Chinese language. Includes the study of Chinese culture, practice of listening, speaking, reading, and writing skills	Prerequisites: None.	General Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN#: CHI 1101	Acad	L+L 5.0 6.0 6.0	T
CHI102	2018 Fall	Elementary Chinese (Mandarin) II		Study of grammar and vocabulary along with the study of Chinese culture. Emphasis on pronunciation and speaking skills.	Prerequisites: A grade of C or better in CHI101 or permission of Department or	General Education Designation: Global Awareness	Acad	L+L 5.0 6.0 6.0	T

					Division. Completion of prerequisites within the last three years is required.	s - [G] Arizona Shared Unique Number SUN#: CHI 1102			
CHI115	1995 Spring	Beginning Chinese Conversation I		Introduction to Chinese sound system, basic grammar, and vocabulary necessary to develop speaking ability in Mandarin Chinese. Designed for students seeking speaking and listening ability with little emphasis on writing and reading Chinese characters	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CHI116	2014 Fall	Beginning Chinese Conversation II		Continued development of speaking and listening skills for effective communication in Mandarin Chinese. Includes elements of Chinese culture	Prerequisites: A grade of C or better in CHI115 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
CHI201	2018 Fall	Intermediate Chinese I		Continued development of speaking, reading, and writing proficiency in Mandarin Chinese through building vocabulary, phrases, idioms, and grammatical patterns. Includes study of Chinese culture	Prerequisites: A grade of C or better in CHI102 or permission of Department or Division. Completion of prerequisites within the last three years is required.	General Education Designation: Global Awareness s - [G] Arizona Shared Unique Number SUN#: CHI 2201	Acad	L+L 5.0 6.0 6.0	T
CHI202	2018 Fall	Intermediate Chinese II		Advanced development of speaking, reading, and writing skills in Mandarin Chinese, and continued exploration of Chinese culture	Prerequisites: A grade of C or better in CHI201 or permission of Department or Division. Completion of prerequisites within the last three years is required.	General Education Designation: Global Awareness s - [G] Arizona Shared Unique Number	Acad	L+L 5.0 6.0 6.0	T

						SUN#: CHI 2202			
CHI225	2014 Fall	Intermediate Chinese Conversation I		Continued development of oral and aural skills for effective communication in Mandarin Chinese	Prerequisites: A grade of C or better in CHI116 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
CHI226	2014 Fall	Intermediate Chinese Conversation II		A continuation of conversational skills for effective communication in Mandarin Chinese	Prerequisites: A grade of C or better in CHI225 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
CHI296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
CHI296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to		Acad	LAB 2.0 10.0 0.0	Z

					students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
CHI296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
CHI296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor.		Acad	LAB 4.0 20.0 0.0	Z

					Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
CHI298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
CHI298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
CHI298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

CHM100	2021 Fall	Preparation for Fundamental Chemistry		A preparatory course designed to review fundamental math and chemistry principles for students inexperienced or insecure with these concepts. Stresses individualized instruction. Designed to prepare students for CHM130.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CHM107	2023 Fall	Chemistry and Society		A survey of chemistry and its impact on society and the environment.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CHM107LL	2018 Fall	Chemistry and Society Laboratory		Laboratory experience in support of CHM107.	Prerequisites: A grade of C or better in CHM107 or Corequisites: CHM107.	General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM107	Acad	LAB 1.0 3.0 3.0	T
CHM130	2024 Fall	Fundamental Chemistry		A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry.	Prerequisites: A grade of C or better in [(CHM100, or high school algebra, or MAT140 or higher, or an EdReady-Quantitative Reasoning, Algebra and Statistics score of 70 or higher, or an EdReady-College Algebra score of 80 or higher) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101 as indicated by appropriate reading placement)], or permission of the Instructor, or Department or Division Chair.	Students may receive credit for only one of the following: CHM130 and CHM130LL, or CHM130AA. Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with:	Acad	LEC 3.0 3.0 3.0	S

						CHM130L L Arizona Shared Unique Number SUN# CHM 1130 in combinati on with: CHM130L L			
CHM130AA	2024 Fall	Fundamental Chemistry with Lab		A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry.	Prerequisites: A grade of C or better in [(CHM100, or high school algebra, or MAT140 or higher, or an EdReady-Quantitative Reasoning, Algebra and Statistics score of 70 or higher, or an EdReady-College Algebra score of 80 or higher) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101 as indicated by appropriate reading placement)], or permission of the Instructor, or Department or Division Chair.	Student may receive credit for only one of the following: CHM130 and CHM130L L, or CHM130A A. Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ] Arizona Shared Unique Number SUN# CHM 1130 (Primary SUN: CHM130 & CHM130L L)	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T

CHM130LL	2024 Fall	Fundamental Chemistry Laboratory		Laboratory experience in support of CHM130.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CHM130.	Students may receive credit for only one of the following: CHM130 and CHM130L L, or CHM130A A. Course Attribute(s)): Natural Sciences (Quantitati ve) - [SQ] in combinati on with: CHM130 Arizona Shared Unique Number SUN# CHM 1130 in combinati on with: CHM130	Acad	LAB 1.0 3.0 3.0	T
CHM138	2021 Fall	Chemistry for Allied Health		Elements of fundamental and organic chemistry. Includes the general chemical behavior of inorganic matter and the structure of organic and biochemical systems. Course designed for specific allied health programs at MCCD. May not be applicable to other allied health programs or transferable.	Prerequisites: A grade of C or better in [CHM100 or MAT090 or MAT091 or MAT092 or (MAT103AA and MAT103AB) or higher or satisfactory score on math placement exam], or one year of high school chemistry taken within the last five years with a grade of C or better,		Acad	LEC 3.0 3.0 3.0	S

					or permission of the Instructor, or Department or Division Chair.				
CHM138LL	2018 Fall	Chemistry for Allied Health Laboratory		Laboratory experience in support of CHM138, Chemistry for Allied Health.	Prerequisites: None. Corequisites: CHM138.		Acad	LAB 1.0 3.0 3.0	T
CHM140AA	2023 Fall	General Chemistry for Engineers with Lab		Generalized study of the principles of chemistry as they relate to fields of engineering.	Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of Instructor, or Department or Division Chair. Completion of prerequisites within the last two years is recommended.	Course Attributes: General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	L+L 6.0 9.0 9.0	T
CHM150	2024 Fall	General Chemistry I		Detailed study of principles of chemistry for science majors and students in pre-professional curricula.	Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or	Completion of all prerequisites within the last two years is recommended. Student may receive credit for only one of the	Acad	LEC 4.0 4.0 4.0	S

					permission of the Instructor, or Department or Division Chair.	following: CHM150 and CHM151L, or CHM151 and CHM151L, or CHM150A, or CHM151A. Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM151L			
CHM150AA	2024 Fall	General Chemistry I with Lab		Detailed study of principles of chemistry for science majors and students in pre-professional curricula.	Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of the Instructor, or Department or Division Chair.	Completion of all prerequisites within the last two years is recommended. Student may receive credit for only one of the following: CHM150 and CHM151L, or	Acad	LEC 5.0 4.0 4.0 LAB 0.0 3.0 3.0	T

						CHM151 and CHM151L L, or CHM150A A, or CHM151A A. Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]			
CHM151	2024 Fall	General Chemistry I		Detailed study of principles of chemistry for science majors and students in pre-professional curricula.	Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of the Instructor, or Department or Division Chair.	Completion of all prerequisites within the last two years is recommended. Students may receive credit for only one of the following: CHM150 and CHM151L L, or CHM151 and CHM151L L, or CHM150A A, or CHM151A A. Course Attribute(s): General	Acad	LEC 3.0 3.0 3.0	S

						Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM151L L Arizona Shared Unique Number SUN# CHM 1151 in combination with: CHM151L L			
CHM151AA	2024 Fall	General Chemistry I with Lab		Detailed study of principles of chemistry for science majors and students in pre-professional curricula.	Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of the Instructor, or Department or Division Chair.	Completion of all prerequisites within the last two years is recommended. Student may receive credit for only one of the following: CHM150 and CHM151L, or CHM151 and CHM151L, or CHM150A	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T

						A, or CHM151A A. Course Attribute(s)): General Education Designatio n: Natural Sciences (Quantitati ve) - [SQ]			
CHM151LL	2024 Fall	General Chemistry I Laboratory		Laboratory experience in support of CHM150 or CHM151.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CHM150 or CHM151.	Student may receive credit for only one of the following: CHM150 and CHM151L L, or CHM151 and CHM151L L, or CHM150A A, or CHM151A A. Course Attribute(s)):General Education Designatio n: Natural Sciences (Quantitati ve) - [SQ] in combinati on with: CHM151L L Arizona Shared Unique Number	Acad	LAB 1.0 3.0 3.0	T

						SUN# CHM 1151 in combinati on with: CHM151L L			
CHM152	2024 Fall	General Chemistry II		A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics.	Prerequisites: A grade of C or better in [(CHM150 or CHM151) and CHM151LL], or CHM150AA, or CHM151AA, or permission of the Instructor, or Department or Division Chair.	Completi on of CHM152L L required to meet the Natural Science requireme nt. Student may receive credit for only one of the following: CHM152 and CHM152L L, or CHM152A A.	Acad	LEC 3.0 3.0 3.0	S
CHM152AA	2024 Fall	General Chemistry II with Lab		A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics.	Prerequisites: A grade of C or better in [(CHM150 or CHM151) and CHM151LL], or CHM150AA, or CHM151AA, or permission of the Instructor, or Department or Division Chair.	Completi on of prerequisit es within the last two years recommen ded. Student may receive credit for only one of the following: CHM152	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T

						and CHM152L L, or CHM152A A. Course Attributes: Arizona Shared Unique Number SUN#: CHM 1152			
CHM152LL	2024 Fall	General Chemistry II Laboratory		Laboratory experience in support of CHM152.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CHM152.	Student may receive credit for only one of the following: CHM152 and CHM152L L, or CHM152A A.	Acad	LAB 1.0 3.0 3.0	T
CHM195AA	2018 Fall	Principles and Practice of Scientific Research		Students will learn the use of the scientific method; how, why and where research is conducted; the ethical protocol in the scientific process; how peer review works, and how to formulate scientifically testable hypotheses and design supporting experiments. Students will apply the scientific method in laboratory and/or field research projects, will learn and use appropriate laboratory techniques, and will communicate research design, data collection, and data interpretation in conventional scientific formats.	Prerequisites: A grade of C or better in CHM151 or permission of Instructor.	CHM195A A may be repeated for credit.	Acad	L+L 1.0 2.0 2.0	T
CHM195AB	2018 Fall	Principles and Practice of Scientific Research		Students will learn the use of the scientific method; how, why and where research is conducted; the ethical protocol in the scientific process; how peer review works, and	Prerequisites: A grade of C or better in CHM151 or permission of Instructor.	CHM195A B may be repeated for credit.	Acad	L+L 2.0 4.0 4.0	T

				how to formulate scientifically testable hypotheses and design supporting experiments. Students will apply the scientific method in laboratory and/or field research projects, will learn and use appropriate laboratory techniques, and will communicate research design, data collection, and data interpretation in conventional scientific formats.					
CHM195AC	2018 Fall	Principles and Practice of Scientific Research		Students will learn the use of the scientific method; how, why and where research is conducted; the ethical protocol in the scientific process; how peer review works, and how to formulate scientifically testable hypotheses and design supporting experiments. Students will apply the scientific method in laboratory and/or field research projects, will learn and use appropriate laboratory techniques, and will communicate research design, data collection, and data interpretation in conventional scientific formats.	Prerequisites: A grade of C or better in CHM151 or permission of Instructor.	CHM195A C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
CHM230	2023 Fall	Fundamental Organic Chemistry		Chemistry of representative groups of organic compounds, emphasizing biological applications.	Prerequisites: A grade of C or better in (CHM130 and CHM130LL) or (CHM150 or CHM151 and CHM151LL), or permission of the Instructor, or Department or Division Chair.	Completion of prerequisites within the last two years recommended. CHM230 course content is designed to meet the needs of students in such areas as agriculture, home economic	Acad	LEC 3.0 3.0 3.0	S

						s, nursing, pre-physician assistant, and physical education among others. Students may receive credit for only one of the following: CHM230 and CHM230L L or CHM230A A. Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM230L L Arizona Shared Unique Number SUN#: CHM 2230			
CHM230AA	2023 Fall	Fundamental Organic Chemistry with Lab		Chemistry of representative groups of organic compounds, emphasizing biological applications.	Prerequisites: A grade of C or better in [(CHM130 and CHM130LL) or CHM130AA] or	Students may receive credit for only one	Acad	LEC 4.0 3.0 3.0 LAB	T

					<p>[[((CHM150 or CHM151) and CHM151LL) or CHM151AA)] or permission of the Instructor or Department or Division Chair.</p>	<p>of the following: (CHM230 and CHM230L L), or CHM230A A. Completion of prerequisites within the last two years recommended. CHM230A A course content is designed to meet the needs of students in such areas as agriculture , home economic s, nursing, pre-physician assistant, and physical education among others. Course Attribute(s): Arizona Shared Unique Number SUN# CHM</p>	<p>0.0 3.0 3.0</p>	
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						2230 (Primary SUN: CHM230 & CHM230L L)			
CHM230LL	2023 Fall	Fundamental Organic Chemistry Laboratory		Laboratory experience in support of CHM230	Prerequisites: A grade of C or better in CHM130LL or CHM151LL or equivalent or Corequisites: CHM230.	CHM230L L students may receive credit for only one of the following: (CHM230 and CHM230L L), or CHM230A A. Completi on of prerequisit es within the last two years recommen ded. Designed for students in agriculture , dental hygiene, home economic s, nursing, and physical therapy. Course Attribute(s): General Education	Acad	LAB 1.0 3.0 3.0	T

						Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM230 Arizona Shared Unique Number SUN#: CHM 2230			
CHM235	2018 Fall	General Organic Chemistry I		Rigorous introduction to chemistry of carbon-containing compounds. Reaction mechanisms and recent methods of synthesis emphasized.	Prerequisites: A grade of C or better in (CHM152 and CHM152LL), or CHM152AA, or (CHM154 and CHM154LL), or permission of the Instructor, or Department or Division Chair.	Completion of prerequisites within the last two years recommended. Course Attribute(s): Arizona Shared Unique Number SUN#: CHM 2235	Acad	LEC 3.0 3.0 3.0	S
CHM235AA	2023 Fall	General Organic Chemistry I with Lab		Rigorous introduction to chemistry of carbon-containing compounds. Reaction mechanisms and recent methods of synthesis emphasized.	Prerequisites: A grade of C or better in (CHM152 and CHM152LL), or CHM152AA, or (CHM154 and CHM154LL), or permission of the Instructor, or Department or Division Chair.	Student may receive credit for only one of the following: CHM235 and CHM235L, or CHM235AA.	Acad	LEC 4.0 3.0 3.0 LAB 0.0 4.0 4.0	T

						Completion of prerequisites within the last two years recommended. Course Attribute(s): Arizona Shared Unique Number SUN# CHM 2235 (Primary SUN: CHM235 & CHM235LL)			
CHM235LL	2018 Fall	General Organic Chemistry I Laboratory		Laboratory experience in support of CHM235.	Prerequisites: A grade of C or better in CHM235 or Corequisites: CHM235. Completion of prerequisites within the last two years recommended.	Course Attribute(s): Arizona Shared Unique Number SUN#: CHM 2235	Acad	LAB 1.0 4.0 4.0	T
CHM236	2020 Spring	General Organic Chemistry IIA		Study of chemistry of carbon-containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized.	Prerequisites: A grade of C or better in (CHM235 and CHM235LL) or CHM235AA or permission of the Instructor or Department or Division Chair.	Students may receive credit for only one of the following: CHM236 and CHM236LL, or CHM236AA. Completion	Acad	LEC 3.0 3.0 3.0	S

						n of prerequisites within the last two years recommended. Course Attribute(s): Arizona Shared Unique Number SUN# CHM 2236			
CHM236AA	2023 Fall	General Organic Chemistry IIA with Lab		Study of chemistry of carbon-containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized.	Prerequisites: A grade of C or better in (CHM235 and CHM235LL) or CHM235AA, or permission of the Instructor, or Department or Division Chair.	Student may receive credit for only one of the following: CHM236 and CHM236L, or CHM236A. Completion of prerequisites within the last two years recommended. Course Attribute(s): Arizona Shared Unique Number SUN# CHM 2236	Acad	LEC 4.0 3.0 3.0 LAB 0.0 4.0 4.0	T

						(Primary SUN: CHM236 & CHM236L)			
CHM236LL	2018 Fall	General Organic Chemistry IIA Laboratory		Laboratory experience in support of CHM236.	Prerequisites: A grade of C or better in CHM236 or Corequisites: CHM236. Completion of prerequisites within the last two years recommended.	Course Attribute(s): Arizona Shared Unique Number SUN#: CHM 2236	Acad	LAB 1.0 4.0 4.0	T
CHM260	2023 Fall	Fundamental Biochemistry		Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates and lipids; the utilization and synthesis of these materials by living systems and the relationship of the processes to energy production and utilization.	Prerequisites: A grade of C or better in [(CHM230 and CHM230LL) or CHM230AA] or [(CHM235 and CHM235LL) or CHM235AA] or permission of the Instructor or Department or Division Chair.	Completion of prerequisites within the last two years recommended. Designed for students in agriculture, dental hygiene, home economics, nursing, and physical therapy.	Acad	LEC 3.0 3.0 3.0	S
CHM260LL	2018 Fall	Fundamental Biochemistry Laboratory		Laboratory experience in support of CHM260.	Prerequisites: A grade of C or better in CHM260 or Corequisites: CHM260. Completion of prerequisites within the last two years recommended.		Acad	LAB 1.0 3.0 3.0	T

CHM282AA	2014 Summer	Service-Learning Experience in Chemistry		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	CHM282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
CHM282AB	2014 Summer	Service-Learning Experience in Chemistry		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	CHM282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L
CHM282AC	2014 Summer	Service-Learning Experience in Chemistry		Unpaid Service-Learning experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	CHM282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L

CHM295AA	2024 Fall	Special Topics in Chemistry		Specialized chemistry-related content not represented in the main curriculum.	Prerequisites: None.	CHM295A A may be repeated for credit.	Acad	L+L 1.0 1.0 1.0	T
CHM295AB	2024 Fall	Special Topics in Chemistry		Specialized chemistry-related content not represented in the main curriculum.	Prerequisites: None.	CHM295A B may be repeated for credit.	Acad	L+L 2.0 2.0 2.0	T
CHM295AC	2024 Fall	Special Topics in Chemistry		Specialized chemistry-related content not represented in the main curriculum.	Prerequisites: None.	CHM295A C may be repeated for credit.	Acad	L+L 3.0 3.0 3.0	T
CHM296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
CHM296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least		Acad	LAB 2.0 10.0 0.0	Z

					one class which is related to student's major or career interest or with permission of the Instructor.				
CHM296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
CHM296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z

CHM298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
CHM298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
CHM298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
CHS104	2024 Fall	Hair Essentials I		Introduction to the basic theory and procedures in cosmetology hair essentials.	Prerequisite: Program admission.		CLK	230	
CHS106	2024 Fall	Hair Essentials II		Hair-shaping techniques and chemical application procedures in cosmetology hair essentials.	Prerequisites: CHS104 or Program Manager's permission.		CLK	165	
CHS114	2024 Fall	Student Salon I		Continuation of cosmetology theory and practical concepts at an intermediate level. Theory will be	Prerequisites: A grade of C or better in CHS106, or		CLK	225	

				focusing on professional development, salon ecology, anatomy and hair decisions. Practical skills will be demonstrated daily on clients and manikins. Rubrics on procedures are done monthly. One day a month on Arizona Barbering and Cosmetology Board (BCB) state licensure focus.	permission of Program Manager.				
CHS116	2024 Fall	Student Salon II		Apply concepts learned in the classroom and the student salon to develop real life scenarios while servicing a client and/or becoming a future business owner in the beauty industry.	Prerequisites: CHS114 or Program Manager's permission.		CLK	130	
CHS119	2024 Fall	Nail Essentials		Introduction to nail services in the beauty industry.	Prerequisites: CHS116 or Program Manager's permission.		CLK	230	
CHS212	2024 Fall	Skin Essentials		Introduction to skin services in the beauty industry.	Prerequisites: CHS119 or Program Manager's permission.		CLK	165	
CHS214	2024 Fall	Student Salon III		Prepares cosmetology students to be industry ready and prepared to perform services in their chosen field of expertise after licensure with the Arizona Barbering and Cosmetology Board (BCB).	Prerequisites: CHS212 or Program Manager's permission.		CLK	225	
CHS218	2024 Fall	Cosmetology State Licensure Focus		This course is designed to prepare cosmetology students for the written and practical examinations for Arizona Barbering and Cosmetology Board licensure.	Prerequisites: CHS214 or Program Manager's permission.		CLK	130	
CIS100	2018 Fall	Internet: A Tool for Learning		Use of the Internet to promote learning. Focus on Internet services and access. Information provided on browsing, Internet addresses, naming conventions, search concepts and techniques, using bookmarks and capturing information	Prerequisites: None.		Occ	L+L 0.5 0.5 0.5	T
CIS101	2024 Fall	Technician IT Fundamentals		Survey of computer fundamentals. Focus on basic knowledge and skills, including components and hardware, word processing, presentations, spreadsheets, and email. Helps	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T

				prepare students for the CompTIA ITF+ examination.					
CIS102	2003 Fall	Interpersonal and Customer Service Skills for IT Professionals		Examines behaviors necessary to develop and support an effective client service organization. Focuses on methods of increasing the effectiveness of help-desk professionals when responding to a range of customer conditions	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	F
CIS102DA	2020 Fall	Customer User Support		Examines skills, tools and strategies necessary for becoming a computer help-desk or end-user support professional.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS103	2021 Fall	Introduction to Social Media		Identify and explain social media and Web 2.0 technologies for personal, academic, professional, and business applications. Create and maintain accounts on various sites to socialize, write, and share multimedia, while understanding the related ethics, privacy and security issues.	Prerequisites: None.	Students must be 13 years or older to enroll in CIS103 as students are required to create social media accounts for course participation.	Occ	L+L 3.0 4.0 4.0	T
CIS105	2018 Fall	Survey of Computer Information Systems		Overview of computer technology, concepts, terminology, and the role of computers in business and society. Discussion of social and ethical issues related to computers. Use of word processing, spreadsheet, database, and presentation software. Includes uses of application software and the Internet for efficient and effective problem solving. Exploration of relevant emerging technologies.	Prerequisites: None.	Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS] Arizona Shared Unique Number	Occ	L+L 3.0 4.0 4.0	T

						SUN#: CIS 1120			
CIS107	2018 Fall	The Electronic Game Industry		Introduction to the electronic game industry, including history, market, distribution and publishing channels, business models, team roles, and career landscape. Technical topics covered include software engineering, artificial intelligence, game physics, computer graphics, and networking.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS108	2018 Fall	Electronic Portfolio Development		Compile, reflect on, and select prior learning experiences and artifacts. Design, produce, and publish an online portfolio that documents prior learning. Includes techniques for presenting the electronic portfolio for evaluation.	Prerequisites: A grade of C or better in (CIS105 or BPC110) or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
CIS109AM	2001 Fall	Networking Technology I		Computer networking basics. Network services, transmission media, and connectivity devices covered. Open Systems Interconnection (OSI) Reference Model	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CIS111	2014 Fall	Ethics in Information Technology		Ethical issues that arise as a result of increasing use of computers, and the responsibilities of those who work with computers, either as computer science professionals or end users. Critical inquiry and review of ethical challenges in information technology business, including professional and corporate responsibility, government regulation, fiduciary responsibilities of information, infringement of intellectual property, security risk assessment, Internet crime, identity theft, employee surveillance, privacy, compliance, social networking, and the ethics of IT corporations.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CIS113AE	2018 Fall	Microsoft Word: Word Processing Level I		Using word processing software to create, name and manage files, edit text, and do basic formatting of documents.	Prerequisites: None.	CIS113AE may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 2.0 2.0	T

CIS113BE	2018 Fall	Microsoft Word: Word Processing Level II		Using more advanced features of word processing software to format documents, create lists, mail-merged documents, and documents with themes and styles.	Prerequisites: A grade of C or better in CIS113AE or permission of Instructor.	CIS113BE may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 1.0 1.0	T
CIS113CE	2018 Fall	Microsoft Word: Word Processing Level III		Utilizing more advanced features of word processing software to incorporate style and theme elements, use desktop publishing capabilities, and insert tables.	Prerequisites: A grade of C or better in CIS113BE or permission of Instructor.	CIS113CE may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 1.0 1.0	T
CIS113DE	2018 Fall	Microsoft Word: Word Processing		Using word processing software to create, name and manage files, edit text, format, apply themes and styles, create and modify tables, apply desktop publishing features, and print a variety of types of documents.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS114AE	2018 Fall	Excel: Level I		Computer spreadsheet skills for solving business problems using Excel, including calculations, forecasting, and projections.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
CIS114BE	2018 Fall	Excel: Level II		Additional Excel spreadsheet techniques, including macro programming, database searching, extraction, and linking to obtain prescribed reports and graphs.	Prerequisites: A grade of C or better in CIS114AE or permission of Instructor.	CIS114BE may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 1.0 1.0	T
CIS114CE	2012 Spring	Excel: Level III		Additional Excel spreadsheet techniques, including complex macros, statistics, and matrix manipulation. Project design using multiple, integrated spreadsheets	Prerequisites: A grade of C or better in CIS114BE or permission of Instructor.		Occ	LEC 1.0 1.0 1.0	S
CIS114DE	2018 Fall	Excel Spreadsheet		Computer spreadsheet skills for solving business problems using Excel, including calculations, forecasting, projections, macro programming, database searching, extraction, linking, statistics, and matrix manipulation. Production of graphs and reports. Project design using multiple, integrated spreadsheets.	Prerequisites: None.	CIS114DE may be repeated for a total of nine (9) credit hours.	Occ	L+L 3.0 4.0 4.0	T

CIS116	2018 Fall	Computer Graphics: Introduction to Microsoft Visio		Introduction to use of Visio graphics software to create and edit drawings using predefined shapes and templates. Use of Visio tools to create simple drawings with text, symbols and labels.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
CIS117AM	2018 Fall	Database Management: Microsoft Access - Level I		Introduction to the basic elements of a current version of the Microsoft Access database management program, for casual and beginning users.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
CIS117BM	2018 Fall	Database Management: Microsoft Access - Level II		Exploration of additional components of the Microsoft Access database management program.	Prerequisites: A grade of C or better in CIS117AM or permission of Instructor.	CIS117B M may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 1.0 1.0	T
CIS117CM	2018 Fall	Database Management: Microsoft Access - Level III		Application of the features of the Microsoft Access program to some common database management problems	Prerequisites: A grade of C or better in CIS117BM.		Occ	L+L 1.0 1.0 1.0	T
CIS117DM	2021 Spring	Microsoft Access: Database Management		Introduction to Microsoft Access. Emphasis on features, design, and database management.	Prerequisites: None.	CIS117D M combines the contents of CIS117A M, CIS117B M and CIS117C M. CIS117D M may be repeated for a total of nine (9) credit hours.	Occ	L+L 3.0 4.0 4.0	T
CIS118AB	2018 Fall	PowerPoint: Level I		Use of PowerPoint software to produce professional-quality presentation visuals	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T

CIS118BB	2018 Fall	PowerPoint: Level II		Use of PowerPoint software to add movement and sound to desktop presentations to enhance audience attention.	Prerequisites: A grade of C or better in CIS118AB.	CIS118BB may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 1.0 1.0	T
CIS118DB	2018 Fall	Desktop Presentation: PowerPoint		Use of PowerPoint to produce professional-quality presentation visuals with animation and sound.	Prerequisites: None.	CIS118DB may be repeated for a total of nine (9) credit hours.	Occ	L+L 3.0 4.0 4.0	T
CIS119DO	2020 Fall	Introduction to Oracle: SQL		Use of Oracle tools and methodologies to fulfill real-world business information requirements. Hands-on exercises for designing, creating, and maintaining database structures to store, retrieve, update, and display data in a relational database using the SQL programming language. Creating and maintaining database objects. Advanced retrieval techniques.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS119DP	2018 Fall	Oracle: Database Administration		Basic administrative tasks performed by a database administrator (DBA). Conceptual understanding and hands-on applications of the Oracle database architecture and interaction of its components.	Prerequisites: A grade of C or better in CIS119DO, or permission of Instructor. (CIS126++ or CIS121++ or MST152++) is recommended.		Occ	L+L 3.0 4.0 4.0	T
CIS120AJ	2018 Fall	Introduction to Digital Photo Editing		Introduction to digital photography and image editing. Digital photo editing use of electronic techniques to select, manipulate, and edit images.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
CIS120DA	2020 Fall	Introduction to Adobe Premiere		Foundations of video import, export, and editing. Includes parts and function of a video camera, preproduction and production, incorporating photographs, titles, graphics, animation and audio, capturing, editing, rendering and outputting digital video. Prepares	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T

				students for the Adobe Certifications related to Adobe Premiere.					
CIS120DB	2020 Fall	Introduction to Adobe Illustrator		Provides students with the knowledge and skills to use Adobe Illustrator graphics software on a computer. Basic foundation course in the use of electronic techniques to create, manipulate, and edit images, text, abstract art, graphics design, color graphics and business charts; determine file formats appropriate for web and print; utilize tools to optimize graphics and create a PDF file.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS120DC	2020 Fall	Introduction to Adobe Animate		Focuses on entry-level skill expectations for digital animation using Adobe Animate. Covers basic animation techniques used in the creation, manipulation, and editing of animation graphics. Prepares students for the Adobe certifications related to Adobe Animate.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS120DF	2020 Fall	Introduction to Adobe Photoshop		Focuses on entry-level skills and knowledge for digital imaging using Adobe Photoshop. Prepares students for the Adobe Certifications related to Photoshop.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS120DG	2018 Fall	Fireworks: Web Graphics		Use of graphics software to create and edit vector and bitmap (raster) graphics. Creation and manipulation of paths and special effects. Covers slices, buttons, pop-up menus, navigation bars, and animations for use in web sites.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS120DK	2018 Fall	Introduction to Digital Video Editing		Introduction to digital video editing comprises of a foundation for video import, export, and editing functions. Includes parts and function of a video camera, preproduction and production, incorporating photographs, titles, graphics, animation and audio, capturing, editing, rendering and outputting digital video.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS120DL	2020 Fall	Introduction to Adobe After Effects		Includes creating visual effects for video projects. Explores techniques and methodologies used to create	Prerequisites: A grade of C or better in CIS120DA or		Occ	L+L 3.0	T

				shots for big budget special effects. Topics include color and light matching, keying, motion tracking, rotoscoping and working with film.	CIS120DK, or permission of Instructor.			4.0 4.0	
CIS120DO	2020 Fall	Introduction to Adobe Audition		Introduction to editing audio files in a multitrack editing environment using Adobe Audition. Includes the import of files in a variety of formats that were generated using other software and how to export files.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS120DP	2018 Fall	Adobe Acrobat Pro: Portable Document Format (PDF) Files		Introduction to creating PDF (Portable Document Format) files using Adobe Acrobat for web viewing and printing. Addresses creation of interactive PDF documents including security settings, navigation links, and form fields.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS121AB	2018 Fall	Microsoft Command Line Operations		Use of the Microsoft command line interface: basic concepts, internal and external commands, subdirectories, and editor.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
CIS121AE	2018 Fall	Windows Operating System: Level I		Specific topics include Windows basics, navigating and customizing the desktop, maintaining hardware and software, improving performance, configurations, securing your computer, taskbar, organizing, searching and managing folders and files, installing and uninstalling applications, Internet Explorer fine tuning, security, and searching, including advanced search techniques, keyboard shortcuts, and current topics.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
CIS121AH	2020 Fall	Microsoft PowerShell/Command Line Operations		Day-to-day command line administration tasks of Microsoft Windows. PowerShell used to create scripts to administer Microsoft windows environment.	Prerequisites: None. MST150++ suggested but not required.		Occ	L+L 3.0 4.0 4.0	T
CIS121AI	2018 Fall	Mac Operating System		Specific topics include getting started with Mac OS; working with disks, folders, and files; installing and using applications; setting system preferences; printing, faxing, and scanning; getting and living online; using iLife; sharing a Mac with other	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T

				users; creating a home network; and maintaining the Mac.					
CIS122AE	2018 Fall	Windows Operating System: Level II		Additional capabilities of the Windows program that configure devices and customize the presentation of the operating system. System tools, control panel utilities, the My Computer, Network Neighborhood, and Microsoft Exchange desktop icons. Other helpful utilities presented.	Prerequisites: A grade of C or better in CIS121AE or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
CIS124AA	2018 Fall	Project Management Software: Level I		Utilization of project management software packages by managers and advanced business students to solve critical management planning tasks. Evaluation of management opportunities utilizing software packages to monitor project progress and resource allocation. Includes "what-if" analyses, and preparation of management reports	Prerequisites: None.		Occ	L+L 1.0 1.7 1.7	T
CIS124BA	2018 Fall	Project Management Software: Level II		Advanced use of project management software. Covers features and functions to solve critical management planning tasks. Project communications, scheduling, resource allocation, tracking processes and importing and exporting data also covered. Project consolidation emphasized.	Prerequisites: A grade of C or better in CIS124AA or permission of Instructor.		Occ	L+L 1.0 1.7 1.7	T
CIS126AA	2018 Fall	UNIX Operating System: Level I		Use of the UNIX operating system: system components, built-in commands, files and directories, editors, and UNIX Shell and command lines.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
CIS126AL	2018 Fall	Linux Operating System I		Introduction to the Linux Operating system. Develop knowledge and skills required to install, configure a Linux-based workstation including basic network functions.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
CIS126BA	1999 Fall	UNIX Operating System: Level II		Installation, configuration, and maintenance of the UNIX operating system	Prerequisites: A grade of C or better in CIS126AA.		Occ	LEC 1.0 1.0 1.0	S

CIS126CA	1999 Fall	UNIX Operating System: Level III		Create login scripts and batch files, and maintain system communications	Prerequisites: A grade of C or better in CIS126BA.		Occ	LEC 1.0 1.0 1.0	S
CIS126DA	2018 Fall	UNIX Operating System		Use of a UNIX operating system including system components, built-in commands, files, and directories, editors, and UNIX shell and command lines. Installation, configuration, and maintenance of a UNIX operating system. Create scripts and batch files, and maintain system communications.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS126DL	2018 Fall	Linux Operating System		Introduction to the Linux Operating system. Develop knowledge and skills required to install, configure and troubleshoot a Linux-based workstation including basic network functions. Learn basic command line and Graphical User Interface (GUI) desktop environment utilities and applications. Fundamental abilities to achieve the entry-level industry certification covered.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS126RH	2018 Fall	Red Hat System Administration I		Introduction to core administration skills needed to manage a Red Hat Enterprise Linux system. This Red Hat Academy course helps prepare for the Red Hat certification exams using a hands-on, task-focused curriculum.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS128	2018 Fall	Databases in Practice Management		Use of a Practice Management Database (Electronic Health Record software) for installation and maintenance of an Electronic Health Record. Application of policies and procedures for data control, security, privacy, and confidentiality of health information in electronic health information management systems.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS129	2018 Fall	Introduction to Microsoft Sharepoint		Designed to provide basic skills enabling the end user to navigate, manage documents and collaborate using Microsoft Sharepoint.	Prerequisites: A grade of C or better in BPC110, or CIS105, or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T

CIS130DA	2018 Fall	3D Studio Max: Modeling		Introduction to 3D modeling using 3D Studio Max. Emphasis will be placed on Polygonal, Solid, and Surface modeling tools. Students will also understand concepts such as modifiers, sub-object editing, extruding, Booleans, lofting, lathing and compound object modeling. Introduction to basic lighting, texturing and rendering techniques.	Prerequisites: A grade of C or better in CIS105.		Occ	L+L 3.0 4.0 4.0	T
CIS130DB	2018 Fall	3D Studio Max: Animation		Introduction to three-dimensional animation tools and principles, with an emphasis on character construction and animation. 3D Studio Max will be the primary application for use in this class.	Prerequisites: A grade of C or better in CIS105.		Occ	L+L 3.0 4.0 4.0	T
CIS131AA	1998 Fall	Doing Business on the Internet		Overview of different ways businesses are taking advantage of and using the Internet. Includes how companies are selling items and services over the Internet; techniques used to expand customer contacts; marketing strategies; availability of government and financial information; future potential and disadvantages; using the Internet for customer service; establishing a World Wide Web site. Some previous computer experience preferred	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
CIS132	2018 Fall	HTML/CSS		Overview of foundational HyperText Markup Language (HTML) and Cascading Style Sheets (CSS) coding. Create web pages and sites that adhere to web standards and best practices using current web coding standards.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS133AA	2018 Fall	Internet/Web Development Level I-A		Overview of the Internet and its resources. Hands-on experience with various Internet communication tools	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
CIS133DA	2019 Fall	Internet/Web Development Level I		Overview of the Internet/World Wide Web (WWW) and its resources. Hands-on experience with various Internet/WWW resource discovery, information retrieval, and social media tools. Design and Development of	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T

				multi-page websites using current Hyper Text Markup Language (HTML) and Cascading Style Sheets (CSS) standards..					
CIS136	2019 Summer	Content Management Systems: WordPress		Overview of WordPress Content Management System. Includes hands-on design and creation of web pages and blogs for the World Wide Web. Designed to cover best practices for web site/blog creation.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS138DA	2019 Summer	Desktop Design and Publishing Using Adobe InDesign		Use of Adobe InDesign to compose and print textual and graphic materials of high quality. Includes word processing of copy, use of graphics programs, layout of design elements, printing alternatives, and file formats.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS140	2021 Fall	Survey of Multimedia Technology		Introduction to multimedia technology and its uses. Overview of the various hardware and software used in developing and delivering multimedia. Emphasis on how multimedia is used in education and training. Provides a basic understanding of the process used to define and develop multimedia applications.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.		Occ	L+L 2.0 3.0 3.0	T
CIS143	2021 Spring	Introduction to Critical Infrastructure Protection		History and overview of critical infrastructure protection and its ties within the Department of Homeland Security prior to and after September 11, 2001. Focus on risk management associated with sectors specific industries and provides an overview of the public and private partnerships, along with laws and standards developed to protect critical infrastructures.	Prerequisites: A grade of C or better in CIS111 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
CIS150	2020 Fall	Programming Fundamentals		Structured program design and logic tools. Use of computer problems to demonstrate and teach concepts using appropriate programming language.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

CIS150AB	2020 Fall	Object-Oriented Programming Fundamentals		Structured and Object-Oriented design and logic tools. Use of computer problems to demonstrate and teach concepts using an appropriate programming language.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS151	2018 Fall	Computer Game Development - Level I		Introduction to object-oriented game development, game design, and game theory. Use of computer software to demonstrate and teach concepts using an appropriate game development platform to model real-time simulations and create computer games using object oriented tools. Introduction to developing PC games, educational software, and training software using windows based object oriented developments tools.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS154	2018 Fall	Database Modeling and Design		Top-down, systematic approach to defining a database design based on analysis of business information and requirements. Identifying and evaluating standard data model and design patterns. Developing an entity-relationship (ER) diagram that accurately reflects the business. Mapping the ER diagram to an initial database design and revising for complex entities, attributes, and relationships.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS156	2021 Fall	Python Programming: Level I		Introduction to Python programming. Includes general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS159	2018 Fall	Visual Basic Programming I		Use of the Visual Basic programming language to solve problems using suitable examples from business or other disciplines	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS162	2020 Spring	C Programming I		Beginning C programming. Includes features needed to construct	Prerequisites: A grade of C or better		Occ	L+L 3.0	T

				programs, functions, pointers, input and output options, data types, structures, and unions, and disk file operations.	in CIS105 or permission of Instructor.			4.0 4.0	
CIS162AB	2018 Fall	C++: Level I		Introduction to C++ programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]	Occ	L+L 3.0 4.0 4.0	T
CIS162AC	2018 Fall	Visual C++: Level I		Introduction to Visual C++ programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS162AD	2018 Fall	C#: Level I		Introduction to C# programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.	Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]	Occ	L+L 3.0 4.0 4.0	T
CIS162RS	2022 Spring	Rust Programming		Beginning Rust programming. Includes features needed to construct programs, functions, pointers, input and output options, data types, structures, unions, and disk file operations.	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS163AA	2018 Fall	Java Programming: Level I		Introduction to Java programming. Includes features needed to construct Java Applets, Java Applications, control structures, methods, arrays,	Prerequisites: A grade of C or better in CIS105 or	Course Attribute(s): General Education	Occ	L+L 3.0 4.0 4.0	T

				character and string manipulation, graphics, and object-oriented programming	permission of Instructor.	Designation: Computer/ Statistics/ Quantitative Applications - [CS]			
CIS164AB	2018 Fall	Oracle: PL/SQL Programming		Writing PL/SQL procedures, functions, and packages. Creating and managing PL/SQL program units and database triggers in Oracle development environment. Managing dependencies and manipulating large objects	Prerequisites: A grade of C or better in CIS119DO or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS165	2020 Fall	Introduction to IOS Application Development		Introduction to iOS device programming utilizing the XCode application, and the programming languages Objective-C and/or Swift, utilizing various iOS frameworks. Understand iOS hardware and feature basics. Go through the entire design process from concept to final product delivery.	Prerequisites: A grade of C or better in CIS150++, or CIS156, or CIS159, or CIS162++, or CIS163AA, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS165DA	2020 Fall	Introduction to Android Application Development		Beginning with an overview of Android features, this class explores the required software tools and programming techniques for developing Android device applications from creating the user interface, working with activities, intents and views, to using databases, providing data persistence, accessing device services, to debugging and publishing applications.	Prerequisites: A grade of C or better in CIS150++, or CIS156, or CIS159, or CIS162++, or CIS163AA, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS165DB	2018 Fall	C#/VB.NET: Windows 8 App Development		Building upon desktop application development with Visual Studio using VB.NET or C# languages, developing apps for Windows 8 utilizes Extensible Application Markup Language (XAML) for interface design. Windows 8 utilizes UI design standards that are unique from previous versions. Develop apps for Windows 8 smartphones and tablets that utilize touch input methods,	Prerequisites: A grade of C or better in CIS159 or CIS162AD or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

				translate into different resolutions, states, and orientations, and can tap into mobile features such as location and acceleration sensors. Includes working with external data and packaging for Windows Store distribution.					
CIS165DC	2018 Fall	Xamarin/C# Cross-Platform Development		Develop cross-platform mobile apps for iOS, Android, and Windows devices using the Xamarin.Forms Platform and C#, utilizing the Visual Studio IDE. Focusing on Xamarin.Forms projects, the course includes PCL and SAP approaches to shared code, developing interfaces with XAML or in C# code, emulator testing, data binding, backgrounding, packaging for deployment. Coding techniques include Layouts and shared controls (views), MVVM pattern, LINQ, SQLite, and Dependency Injection for platform specific coding.	Prerequisites: A grade of C or better in CIS162AD, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS166	2019 Fall	Web Scripting/Program ming		Software development for Web sites, including client-side script and Common Gateway Interface (CGI) scripting. Covers Web-based transaction processing and use of databases in conjunction with the Web. Includes security issues.	Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS166AA	2020 Spring	Introduction to JavaScript		Introduction to basic JavaScript programming concepts including syntax. Covers Hypertext Markup Language (HTML), programming logic and debugging, as well as forms manipulation and animation.	Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS166AC	2019 Fall	Web Scripting with Active Server Pages (ASP).NET		Introduction to web scripting using Microsoft's ASP.Net (Active Server Pages). Web application development using Hypertext Markup Language (HTML), ASP.Net Web Forms, programming logic, and Structured Query Language (SQL).	Prerequisites: A grade of C or better in CIS133DA and (CIS159 or CIS162AD) or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS166AE	2019 Fall	Web Scripting with PHP: Hypertext		Introduction to web scripting with PHP (PHP: Hypertext Preprocessor). Web application development using	Prerequisites: A grade of C or better in CIS133DA or		Occ	L+L 3.0	T

		Preprocessor (PHP)		Hypertext Markup Language (HTML), PHP, programming logic, and Structured Query Language (SQL).	permission of Instructor.			4.0 4.0	
CIS171	2019 Spring	Survey of Blockchain Technology		This survey class will introduce you to the exciting world of distributed ledger technology (i.e. the blockchain), cryptocurrencies such as Bitcoin and Ether as well as smart contracts. The emphasis is on the blockchain's role in revolutionizing business. Basic knowledge of computer operation and the ability to browse the Internet are recommended.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS175SA	2018 Fall	Interconnecting Cisco Network Devices		Procedures for interconnecting existing computer networks. Emphasis on internetworking, layer usage, and software configuration. Covers router and switch usage, protocol suite and wide-area networking, as well as Internet protocol address and routing configuration. Also includes frame relay and X.25 configuration, access list traffic management, and alternate router access information.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS190	2020 Fall	Introduction to Networking		Overview of networks. Emphasis on the elements of a network, current issues and products, and use of a network. Includes terminology, hardware and software components, connectivity, resource monitoring and sharing, electronic mail and messaging, and security issues. Helps prepare students for the CompTIA Network+ examination.	Prerequisites: None. Corequisites: CIS105 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS201	2024 Fall	Introduction to Operational Technology		Differences between Operational Technology (OT) and Information Technology (IT). Focus on the components and their uses within an OT system. Addresses the inherent threats, physical and cyber related, to an OT system when connected to an IT system needed to be addressed in order to maintain security and resilience.	Prerequisites: A grade of C or better in CIS270, or ITS110, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

CIS202	2024 Fall	Introduction to Smart Grid Security		Focus on differences between control systems, used to control physical and computer information systems, used to process data, in the Power and Utility industry. Power Systems industry, system elements, functions and security risks are covered.	Prerequisites: A grade of C or better in (CIS270 or ITS110) and CIS143, or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
CIS203	2024 Fall	Principles of the Risk Management Framework		History and overview of the Federal Information Security Modernization Act (FISMA) and its effect on cybersecurity management and oversight. Focus of the Risk Management Framework (RMF) and its use in the process of authorizing information systems to operate under the FISMA guidelines.	Prerequisites: A grade of C or better in CIS270, or ITS110, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS213DE	2018 Fall	Advanced Microsoft Word: Word Processing		Using advanced word processing software features to perform tasks such as mail merge, collaboration, web pages, math functions, macros, photo enhancements, graphics, tables, forms and manage long documents.	Prerequisites: A grade of C or better in CIS113DE or (CIS113AE and CIS113BE and CIS113CE) or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS214DA	2021 Fall	Advanced Excel for Data Analytics		Advanced Excel spreadsheet features for data analytics including advanced functions, PivotTables, Data Modelling, Dashboard creation and forecasting for Business Intelligence (BI). Includes capstone project of an interactive dashboard using a multi-table Excel Data Model.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [CIS114DE and (CIS117DM or CIS276DA or CIS276DB)], or permission of Instructor.	A basic understanding of statistics is required.	Occ	L+L 3.0 4.0 4.0	T
CIS214DE	2019 Spring	Advanced Excel Spreadsheet: Level II		Advanced Excel spreadsheet features including formatting techniques, macros and Visual Basic for applications. Templates, built-in functions and lists as well as analysis tools including Pivot Tables and Goal Seek covered. Import and export data, workgroup collaboration and Internet features of Excel emphasized.	Prerequisites: A grade of C or better in CIS114DE or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

CIS215	2023 Fall	Foundations of Data Analytics and Programming		Overview of data analytics and programming, concepts, terminology, and how analytics and programming are used professionally in business. Use of office application software, dashboards and Integrated Development Environments (IDEs). Includes exploration of relevant emergent technologies.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: CIS105 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS216	2023 Fall	Data Governance, Management, and Quality		Overview of data governance, data management, and data quality concepts and terminology, and the roles of individuals and businesses with respect to data governance, data management and data quality in analytics. Use of word processing, spreadsheet, database and presentation software. Will demonstrate and use data governance, data management and data quality frameworks and models.	A grade of C or better required in all Prerequisites. Prerequisite or Corequisites: CIS215 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS217AM	2018 Fall	Advanced Microsoft Access: Database Management		Advanced database concepts including database design, primary and secondary key selection and relationships between tables. Queries, sub forms, macros, events, Visual Basic modules and Access Internet features also covered	Prerequisites: A grade of C or better in CIS117CM or CIS117DM.		Occ	L+L 3.0 4.0 4.0	T
CIS220DC	2018 Fall	Flash: Advanced Animation and ActionScript		Advanced Flash programming, action scripting, tweening, advanced buttons and user input, movie clips, using dynamic sound and text, managing information flow, Object-Oriented Programming concepts in relation to Flash.	Prerequisites: A grade of C or better in CIS120DC or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS220DF	2022 Fall	Adobe Photoshop Level II: Advanced Digital Imaging		Goes beyond the basic use of palettes, selections, layers, menus, and tool options, and focuses on using Photoshop software's advanced features to manipulate and correct digital and digitally produced images.	Prerequisites: A grade of C or better in CIS120DF or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS220DK	2020 Fall	Advanced Adobe Premiere		Includes an in-depth study of digital video editing using premiere, including preproduction, production and post production. Advanced techniques into a capstone project.	Prerequisites: A grade of C or better in CIS120DA, or CIS120DK, or		Occ	L+L 3.0 4.0 4.0	T

				Emphasis placed on enhanced workflow processes, integration of other applications into Premiere, multiple output formats, timesaving quick key setup and advanced production and editing tools.	permission of Instructor.				
CIS221AB	2018 Fall	Microsoft Power Shell		Microsoft Power Shell (PS) is used to aid system administrators of Microsoft Network Operating Systems (NOS) in automating many administrative tasks through shell script automation.	Prerequisites: A grade of C or better in BPC121AB CIS121AB or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
CIS224	2018 Fall	Project Management Microsoft Project for Windows		Introduction to project management concepts while working with MS Project to solve complex project management networks, including creating Gantt and PERT charts, tracking project progress, planning for restrictions, and integrating MS Project with other software packages such as Excel, Word, Powerpoint, and cc Mail.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS225	2018 Fall	Business Systems Analysis and Design		Investigation, analysis, design, implementation and evaluation of business computer systems.	Prerequisites: Any programming language or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS225AB	2018 Fall	Object-Oriented Analysis and Design		Methodologies and notations for fundamental object-oriented analysis and design including use cases, objects, classes, stereotypes, and relationships. Object-oriented iterative process for system development. A continuous application development exercise for applying the analysis and design concepts.	Prerequisites: Any programming language or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS226AL	2018 Fall	Internet/Intranet Server Administration-Linux		Configuration and management of internet/intranet services, including the Apache web server, Simple Mail Transfer Protocol servers (SMTP), Structured Query Language (SQL server), File Transfer Protocol (FTP), Network Time Protocol (NTP), and other network services used in home and small business environments.	Prerequisites: A grade of C or better in CIS126 (any module) or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

				Covers basic security configuration and testing.					
CIS227	2020 Spring	Assembly Language		Concepts and use of the Assembly programming language, including basic arithmetic operations, flow control, and memory management.	Prerequisites: A grade of C or better in CIS162++ or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS228	2018 Fall	Advanced Databases for Practice Management		Advanced installation, configuration and use of Practice Management Database (Electronic Health Record software) for implementation and maintenance of for vendor specific and open source Electronic Health Records (EHRs). Configuration of policies and procedures for data control, security, privacy, and confidentiality of health information in electronic health information management systems.	Prerequisites: A grade of C or better in CIS128 or permission of Instructor.		Occ	LEC 3.0 4.0 4.0	T
CIS230DA	2018 Fall	3D Studio Max: Materials		Emphasis on creating and applying materials and textures to three-dimensional environments. Techniques for creating skins, surfaces, and shading types for objects, environments and characters will be explored. Original textures, both life-like and imaginary, will be created using 3D Studio Max and a 2D computer graphics software application.	Prerequisites: A grade of C or better in CIS130DA or CIS120DF or CIS120DG or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS230DB	2018 Fall	3D Studio Max: Lighting and Rendering		Emphasis on lighting and rendering for three-dimensional environments. Techniques for illuminating scenes and characters will be explored. Prepare scenes for rendering to video, film and real-time rendering using 3D Studio Max.	Prerequisites: A grade of C or better in CIS130DA or permission of instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS231	2022 Fall	Ethereum Blockchain Application Development		Exploration of the theory behind Ethereum blockchain technology and the development of Ethereum smart contracts. In-depth emphasis on programming concepts relating to the creation and eventual deployment of smart contracts to the Ethereum blockchain.	Prerequisites: A grade of C or better in CIS171 or permission of Instructor.	CIS156, CIS159, CIS162++ , CIS163AA , or equivalent skills are	Occ	L+L 3.0 4.0 4.0	T

						recommen ded.			
CIS233AA	2019 Fall	Internet/Web Development Level II-A		Design and creation of pages on the World Wide Web using hypertext markup language (HTML). Hands-on experience authoring HTML and preparing sophisticated web documents.	Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
CIS233AC	2019 Fall	Internet Web Development: Dreamweaver Level I		Design and development of websites using Dreamweaver. Hands-on experience designing, developing, testing, and publishing web documents that contain client-side web technologies.	Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
CIS233BA	2005 Summer I	Internet/Web Development Level II-B		Hands-on experience designing Web presentations using advanced markup languages, programming languages, scripts, and multimedia	Prerequisites: A grade of C or better in CIS233AA or permission of Instructor.		Occ	LEC 1.0 1.0 1.0	S
CIS233DA	2021 Fall	Internet/Web Development Level II		Plan, design and create web sites using HTML and Advanced Cascading Style Sheets (CSS). Expedite the development process using CSS frameworks and libraries. Enhance user experience and web site functionality using supporting technologies. Exploration of User Interface (UI) and User Experience (UX), best practices, accessibility, strategies, and careers in web design and development.	Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS233DC	2019 Fall	Internet Web Development: Dreamweaver		Design and development of comprehensive and interactive websites using Dreamweaver. Hands-on experience designing, developing, testing, and publishing web documents that contain various client-side web technologies. Assists in preparing students for the Adobe Certifications related to Adobe Dreamweaver.	Prerequisites: A grade of C or better in CIS132 or CIS133DA or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS234	2019 Fall	XML Application Development		The use of Extensible Markup Language (XML) to make documents smarter, simplify Web automation, and to communicate between databases, both within and between	Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

				corporations. Includes techniques for XML generation, data extraction and sharing, and transformation and managing of XML files.					
CIS235	2019 Fall	e-Commerce		Introduction to Electronic Commerce on the Internet. Designing an electronic storefront including web page content and development, e-commerce site marketing, advertisement, legal and security considerations, credit card and other debit transaction covered. Also includes current issues in e-commerce.	Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS236	2019 Fall	Web-Based Teaching and Learning I		Experience using a web-based learning environment from an online student's perspective. Use communication tools, submit assignments, use evaluation tools, create homepages, and navigate online-learning environment. Introduction to basics of online pedagogy. Hands-on experience with a web-based learning environment.	Prerequisites: A grade of C or better in CIS133DA or permission of Instructor.		Occ	L+L 2.0 3.0 3.0	T
CIS237	2018 Fall	Web-Based Teaching and Learning II		Create an online or hybrid course using a web-based learning environment. Create, prepare, and manage content and resource files; locate and add resources; and manage a course homepage. Add, delete, and revise tools; create, maintain, and release quizzes and assignments; and manage a course. Track students, data, and revise student grades, submissions, and attendance. Hands-on experience with creating a course using a web-based learning environment	Prerequisites: A grade of C or better in CIS236 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS238DL	2018 Fall	Linux System Administration		Managing Linux Operating Systems including sophisticated manipulation of file structures, backup systems, printing processes, troubleshooting, user account management, hard disk maintenance and configuration, process monitoring and prioritizing, kernel customization, and system	Prerequisites: A grade of C or better in CIS126DL or CIS126RH or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

				resource control. Preparation for industry certifications such as the CompTIA Linux+, the Red Hat Certified System Administrator (RHCSA), the Red Hat Certified Engineer (RHCE) and the Linux Professional Institute (LPIC-1).					
CIS238RH	2020 Fall	Red Hat System Administration II		Continue to develop core administration skills needed to manage a Red Hat Enterprise Linux system. This Red Hat Academy course helps to prepare students for the Red Hat certification exams using a hands-on, task-focused curriculum.	Prerequisites: A grade of C or better in CIS126RH, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS239DL	2020 Fall	Linux Shell Scripting		Linux Shell Scripting syntax and methods including the automation of system tasks as well as interpreted user-level programming. Course includes the Linux Borne Again Shell (BASH) as well as a variety of industry competitors.	Prerequisites: A grade of C or better in CIS238DL or CIS238RH or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS240	1999 Spring	Local Area Network Planning and Design		Analysis of the needs and requirements for a local area network (LAN). Emphasis on basic systems analysis and design for a local area network, selection of appropriate hardware and software components. Includes current and future issues, needs analysis, cost estimation, selection of connectivity and network components, and issues relating to access, security, and support	Prerequisites: A grade of C or better in CIS190 or MST140 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
CIS240DL	2020 Fall	Linux Network Administration		In depth networking based on Linux servers and the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol suite. Integrating Linux servers and workstations into a network environment with multi-platform network operating systems including a variety of open-standard and proprietary protocols. Preparation for industry certifications such as the CompTIA Linux+, the Red Hat Certified System Administrator (RHCSA), the Red Hat Certified	Prerequisites: A grade of C or better in CIS238DL or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

				Engineer (RHCE) and the Linux Professional Institute (LPIC-1).					
CIS240RH	2020 Fall	Red Hat System Administration III		Provides solid understanding of how to automate services on a Linux system. Covers use of Ansible to automate provisioning, configuration, application deployment, and orchestration on Red Hat Enterprise Linux 8. Content aligns with the Red Hat Certified Engineer (RHCE - EX294) exam, a professional certification.	Prerequisites: A grade of C or better in CIS238RH or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS243	2018 Fall	Internet/Web Development Level III		Development of interactive websites with graphics, video, and sound using advanced web design techniques and tools. Design theory for maximizing web readership, interactive and multimedia elements, speed and accessibility optimization, and intuitive user interfaces	Prerequisites: A grade of C or better in CIS233DA or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS250	2019 Summer	Management of Information Systems		The study of business information systems and its management, communication, e-business strategies, emerging technologies, database concepts, and project management. Overview of systems analysis and design. Learn about the competitive and strategic uses of information systems and how they are transforming organizations and their management.	Prerequisites: A grade of C or better in CIS105.		Occ	L+L 3.0 4.0 4.0	T
CIS251	2018 Fall	Computer Game Development - Level II		Advanced object-oriented game development, advanced game design, and advanced game theory. Use of game development software tools to demonstrate advanced concepts for modeling real-time simulations and creating computer games using object oriented development tools. In depth coverage of game programming (scripting) techniques, and decision logic using object oriented techniques.	Prerequisites: A grade of C or better in CIS151 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS252	2022 Fall	Introduction to Kubernetes Administration		Provides students skills and knowledge to perform the responsibilities of a Kubernetes	Prerequisites: A grade of C or better in CIS238DL or		Occ	L+L 4.0	T

				administrator. Includes covering the cluster architecture, installation, configuration, workloads, scheduling, services, networking, storage and troubleshooting. Helps students prepare for the Certified Kubernetes Administrator (CKA) certification.	CIS238RH or permission of Instructor.			5.0 5.0	
CIS254	2022 Fall	Introduction to Kubernetes Application Development		Provides students skills and knowledge to perform the responsibilities of a Kubernetes application developer. Helps students prepare for the Certified Kubernetes Application Developer (CKAD) certificate.	Prerequisites: A grade of C or better in CIS126DL or CIS126RH or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS255	2022 Fall	Introduction to Kubernetes Security		Provide students with skills and knowledge on a broad range of best practices for securing container-based applications and Kubernetes platforms during build, deployment, and runtime. Helps students prepare for Kubernetes Security Specialist (CKS) Certification.	Prerequisites: A grade of C or better in CIS252 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS256	2021 Fall	Python Programming Level II		Advanced Python object-oriented programming concepts and applications. Emphasis on code documenting, versioning, unit testing strategies, and security practices for Python project/package development. Includes Python applications for data analysis, networking, database manipulation, and web application development.	Prerequisites: A grade of C or better in CIS156 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS256CN	2022 Fall	Python for Cybersecurity and Networking		Focus on practical applications of Python frameworks and libraries to support offensive and defensive cybersecurity operations and the management of network devices.	Prerequisites: A grade of C or better in (CIS156 and CNT140AB), or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS256DA	2022 Spring	Python for Data Analysis		Introduction to data analysis concepts using Python's rich set of tools, libraries, and packages. Includes basic data analysis, creation of meaningful data visualizations, and advanced topics such as supervised and unsupervised machine learning techniques.	Prerequisites: A grade of C or better in CIS156 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

CIS259	2006 Fall	Visual Basic Programming II		Use of the Visual Basic programming language to identify and solve advanced problems using suitable examples from business or other disciplines.	Prerequisites: A grade of C or better in CIS159 or permission of Instructor.		Occ	LEC 3.0 4.0 3.7	S
CIS260BI	2024 Fall	Data Visualization: Power Business Intelligence (BI)		This data visualization course covers the graphic representation of data and how to effectively and efficiently communicate it from singular and disparate data sources using Power Business Intelligence (BI). Helps students prepare for the Microsoft Power BI Data Analyst certification.	Prerequisites: A grade of C or better in CIS114DE and (CIS215 or CIS214DA) and (CIS276DA or CIS276DB) or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS260TB	2024 Fall	Data Visualization: Tableau		This data visualization course covers the graphic representation of data and how to effectively and efficiently communicate it from singular and disparate data sources using Tableau. Helps students prepare for the Tableau Certified Data Analyst certification.	Prerequisites: A grade of C or better in CIS114DE and (CIS215 or CIS214DA) and (CIS276DA or CIS276DB) or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS261	2022 Fall	Hyperledger Blockchain Application Development		Exploration of the theory behind Hyperledger blockchain technology and the development of Hyperledger smart contracts. In-depth emphasis on programming concepts relating to the creation and eventual deployment of smart contracts to the Hyperledger blockchain.	Prerequisites: A grade of C or better in CIS171 or permission of Instructor.	CIS156, CIS159, CIS162++ , CIS163AA , or equivalent skills are recommen ded.	Occ	L+L 3.0 4.0 4.0	T
CIS262AB	2018 Fall	C++: Level II		Advanced level C++ programming with emphasis on arrays, data management, dynamic memory allocation, object-oriented programming concepts, input/output operations, libraries, and debugging techniques. Includes overview of other advanced applications of C++.	Prerequisites: A grade of C or better in CIS162AB or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS262AD	2018 Fall	C# Level II		Advanced C# programming with emphasis on data structures, dynamic memory allocation, object-oriented programming, user interfaces, and database processing. Overview of	Prerequisites: A grade of C or better in CIS162AD or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

				web applications, network programming, and reporting tools					
CIS263AA	2018 Fall	Java Programming: Level II		Intermediate Java programming. Includes features needed to construct object-oriented programming, multithreading, multimedia, files, streams and data structure	Prerequisites: A grade of C or better in CIS163AA or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS265	2018 Fall	Advanced iOS Application Development		Advanced iOS device programming utilizing the Swift/XCode application, and the programming languages Objective-C and/or Swift, utilizing various iOS frameworks. Understand iOS hardware and feature basics. Go through entire design process from concept to final product delivery.	Prerequisites: A grade of C or better in CIS150++ and CIS165, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS265DA	2020 Fall	Advanced Android Application Development		Advanced Android device programming utilizing an Android Integrated Development Environment, and an Android-focused programming language such as Java or Kotlin, utilizing various advanced activity layouts, views, and intents. Covers advanced Object Oriented Programming (OOP) practices, local and cloud-based database backends, threading, incorporating device features and sensors, and unit testing.	Prerequisites: A grade of C or better in CIS165DA or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS266	2021 Fall	Network Integration Capstone		Application of project management, installation and troubleshooting to integrate multiple operating systems. Topics include: diagnostic and troubleshooting procedures, security vulnerability and penetration software to installation.	Prerequisites: A grade of C or better in [(CIS238DL or CIS238RH) and (CIS240DL or CIS240RH)], or CNT160AB, or [(MST155DC and MST157DC) and (CIS270 or CIS271DL or CIS271RH or CNT205)], or associated industry certifications, or permission of Instructor.		Occ	L+L 4.0 5.0 5.0	T

CIS267	2023 Fall	Pega System Architect Essentials		An overview of the Pegasystems low-code platform for Artificial Intelligence (AI)-powered decisioning and workflow automation. Topics covered will include case management, data and integration, security, Dev-Ops, the user experience, application development, reporting, and mobility. The course will prepare you to take the Certified Pega System Architect (CPSA) exam. Completing the CPSA exam is a requirement to pass the course.	Prerequisites: A grade of C or better in (CIS126DL or CIS126RH), CIS133DA, CIS263AA, and CIS276DA or permission of Instructor.		Occ	L+L 4.0 5.0 5.0	T
CIS270	2020 Fall	Essentials of Network and Information Security		Threats to security of information systems; responsibilities and basic tools for information security, including communication security, infrastructure security, organizational security and basic cryptography. Introduction to the language of network security and hardware, software and firmware components of an information security system for local, metropolitan, enterprise, and wide area networks. Helps prepare participants for the Comptia Security+ exam and the GIAC Security Essentials Certificate (GSEC).	Prerequisites: A grade of C or better in BPC270 or CIS190 or CNT140AB or MST150++ or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS271DL	2018 Fall	Linux Security		Implementing in-depth security methods and techniques in a Linux-based network environment. Utilize programs, utilities and configuration techniques to provide user-level, file system, and network security. Gain knowledge in a variety of security cracking techniques and how to guard against them. In all aspects of security, the standard of practicing professional ethics seriously emphasized. Preparation for industry certifications such as the SAIR/GNU LCP and LCA certificates, CompTIA's Linux+, RHCT, RHCE, and LPIC	Prerequisites: A grade of C or better in CIS240DL or Permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS271RH	2021 Fall	Red Hat System Administration IV		Provides solid understanding on containers, containerized applications, and orchestration of	Prerequisites: A grade of C or better in CIS238RH or		Occ	L+L 3.0	T

				containers using Kubernetes and Red Hat OpenShift on Red Hat Enterprise Linux.	permission of Instructor.			4.0 4.0	
CIS275DL	2020 Fall	Linux Capstone		The Linux Capstone course aggregates the skills, knowledge, communication, and critical thinking skills from the Linux Program. This course is to emulate a production environment that prepares students to work as a Linux Systems Administrator. The course helps to prepare students for Linux Industry certification exams.	Prerequisites: A grade of C or better in CIS240DL, or CIS240RH, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS276DA	2020 Fall	MySQL Database		A broad overview of the MySQL database. Includes Structured Query Language (SQL) instruction for data definition, data manipulation, and data retrieval. Develops knowledge and skills required to install MySQL, model and create new databases, manage users, authentication, and stored procedures, and develop backup/restore strategies.	Prerequisites: A grade of C or better in CIS105, or CIS117DM, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS276DB	2020 Fall	SQL Server Database		A broad overview of the Microsoft Structured Query Language (SQL) Server database. Includes SQL instruction for data definition, data manipulation, and data retrieval. Develops knowledge and skills required to install SQL Server, model and create new databases, manage users, authentication, and stored procedures, and develop backup/restore strategies.	Prerequisites: A grade of C or better in CIS105, or CIS117DM, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS276DC	2023 Fall	NoSQL		A broad overview of Not Only SQL (NoSQL) databases. Contrast NoSQL databases to the Structured Query Language (SQL) databases. Includes NoSQL instruction for data definition, data manipulation, and data retrieval. Develops knowledge and skills required to install NoSQL Servers, model and create NoSQL databases, manage users, authentication, and stored procedures equivalents, and develop backup/restore strategies.	Prerequisites: A grade of C or better in CIS215 and (CIS276DA or CIS276DB), or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

CIS280	2018 Fall	Current Topics in Computing		Critical inquiry of current topics in computing. Application of industry trends to solve problems and/or investigate issues	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CIS280AA	2018 Fall	Current Topics in Computing		Critical inquiry of current topics in computing. Application of industry trends to solve problems and/or investigate issues	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
CIS280AB	2018 Fall	Current Topics in Computing		Critical inquiry of current topics in computing. Application of industry trends to solve problems and/or investigate issues	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
CIS282AA	2023 Fall	Volunteerism for Computer Information Systems: A Service Learning Experience		Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	CIS282AA may be repeated for a total of six (6) CIS282 credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 1.0 1.0 0.0	L
CIS284	2018 Fall	Certified Internet Web (CIW) Associate Certification Preparation Course		Explain and implement Internet technologies, network infrastructure, and protocols. Utilize a variety of markup languages and web technologies to design web pages. Utilize job skills such as project management. Explore best practices/issues for web design, publishing, and e-commerce. Prepare for Certified Internet Web (CIW) Associate Examinations.	Prerequisites: A grade of C or better in CIS233DA or permission of Instructor.		Occ	L+L 4.0 5.0 5.0	T
CIS285	2024 Fall	Computer Information Systems Capstone Project		Students will create a capstone project with opportunities for individualized research and application of aggregate technology and professional knowledge and skills obtained throughout the student's program of study. Focus on	Prerequisites: Permission of Program Director or Instructor.		Occ	L+L 3.0 4.0 0.0	Z

				communication, problem solving, critical thinking, and project management skills.					
CIS286	2020 Fall	Technology Team Peer Mentorship		Students will have an opportunity to mentor other students and work as a team to develop and support a technology project related to their program of study paralleled by professional expertise and guidance from team members, faculty, and/or industry mentor. Focus on application of technology knowledge to the development of a team project to solve real world technology problems/needs with an innovative technology focus. Focus on the team experience and project and workforce development, management and research, as well as mentoring and collaborative professional behaviors needed to facilitate innovations for profitable commercial feasibility.	Prerequisites: A grade of C or better in EPS151. Corequisites: CIS285.		Occ	L+L 3.0 4.0 4.0	T
CIS288	2018 Fall	Digital Design Portfolio		Procedures for compiling, evaluating, and selecting prior learning experiences and artifacts for a digital portfolio. Covers techniques for the design, production, and publishing of an online portfolio documenting prior learning. Includes techniques for presenting the digital portfolio for evaluation.	Prerequisites: A grade of C or better in BPC/CIS133DA and (BPC/CIS120DB or BPC/CIS120DF or BPC/CIS138DA) or permission of Instructor.		Occ	L+L 2.0 3.0 3.0	T
CIS290AA	2011 Fall	Computer Information Systems Internship		Work experience in business or industry	Prerequisites: Permission of Instructor.		Occ	LAB 1.0 6.0 0.0	C
CIS290AB	2011 Fall	Computer Information Systems Internship		Work experience in business or industry	Prerequisites: Permission of Instructor.		Occ	LAB 2.0 12.0 0.0	C
CIS290AC	2011 Fall	Computer Information Systems Internship		Work experience in business or industry	Prerequisites: Permission of Instructor.		Occ	LAB 3.0 18.0 0.0	C
CIS293	2024 Fall	VMware ESXI Server Enterprise		Introduction to vSphere, vCenter and VMware ESXI server in the enterprise. Covers many aspects of	Prerequisites: A grade of C or better in BPC270, or	Upon successful completio	Occ	L+L 4.0	T

				virtualization for VMware ESXI server administration. Designed to develop knowledge and skills required to install, configure, and troubleshoot a VMware ESXI Server (vSphere) including basic network functions. Helps prepare you for the VMware Certified Professional - Datacenter Virtualization (VCP-DCV) exam.	CIS126DL, or CIS126RH, or CIS190, or CNT140AB, or MST150++, or permission of Instructor.	n of CIS293 and CIS294, the CIS department of a vITA approved institution will provide a voucher for the VMware Certified Professional-Data Center Virtualization (VCP-DCV) Exam and/or VMware Certified Technical Associate-Data Center Virtualization (VCTA-DCV) Exam. Check with your college/instructor to see if they participate in vITA.		5.0 5.0	
CIS294	2024 Fall	VMware vSphere Operate, Scale and Secure		Designed for experienced VMware vSphere users. Teaches advanced skills for configuring and maintaining a highly available and scalable virtual infrastructure. Addresses advanced	Prerequisites: A grade of C or better in CIS293, or permission of Instructor.	Upon successful completion of this course at	Occ	L+L 4.0 5.0 5.0	T

				features of vSphere and vCenter infrastructure.		MCCCD colleges that participate in VMware IT Academy (VITA), a voucher is provided which satisfies the authorized class requirement for the VMware Certified Professional-Data Center Virtualization (VCP-DCV) Exams and/or VMware Certified Technical Associate-Data Center Virtualization (VCTA-DCV) Exams. Check with your college/instructor to see if they participate in VITA.			
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CIS295	2024 Fall	VMware NSX: Install, Configure, Manage		Focuses on installing, configuring, and managing VMware NSX. Covers NSX as a part of software-defined networking and implementation of NSX features and functionality. Uses accompanying lecture and hands-on lab activities.	Prerequisites: A grade of C or better in CIS293, or permission of Instructor.		Occ	L+L 4.0 5.0 5.0	T
CIS296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
CIS296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or		Occ	LAB 3.0 15.0 0.0	Z

					career interest or with permission of Instructor.				
CIS298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
CIS298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
CIS298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
CIS314	2023 Fall	Data Privacy and Integrity		Overview of data privacy and data integrity, history, concepts, and terminology, and the importance of each in the analytics and programming professions. Discussion of international, national, state and local regulations and guidelines	Prerequisites: A grade of C or better in CIS215 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

				pertaining to data privacy and data integrity. Use of office application software and current technology. Exploration of relevant and emerging regulations, guidelines, and technologies.					
CIS315	2023 Fall	Data Protection		Overview of data protection concepts and terminology, and the roles of individuals and businesses with respect to the safeguarding of data and the mitigation of data corruption, data compromise and data loss. Use of word processing, spreadsheet, database and presentation software. Will demonstrate and use data protection frameworks, models and relevant tools.	Prerequisites: A grade of C or better in CIS156, CIS162AD, CIS215, and (CIS276DA or CIS276DB), or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS316	2023 Fall	Descriptive Analytics		Study of descriptive analytics and how to apply statistical tools and methods on historical and current datasets and multi-domain cases. Interpret current data, identify changes, trends and commonalities in data, and how to ascertain differences in performance over time while preparing data for advanced analysis.	Prerequisites: A grade of C or better in CIS114DE, CIS215, CIS256DA, and (CIS276DA or CIS276DB), or permission of Instructor. Prerequisites or Corequisites: CIS214DA or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS317	2023 Fall	Data Complexity		Intricacies of enterprise data and how to apply knowledge (background, concepts and experiences from prior courses) and skills (Integrated Development Environment (IDE) tools, and programming languages) on complex integrated and non-integrated disparate datasets, by testing, designing, and creating algorithms that lead to improved decision making.	Prerequisites: A grade of C or better in CIS214DA, CIS215, CIS256DA, CIS260BI, CIS260TB, CIS262AD, and (CIS276DA or CIS276DB), or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS318	2023 Fall	Predictive Analytics		Study of predictive analytics and how to apply statistical tools and methods on historical and current datasets and multi-domain cases previously analyzed for the purposes of yielding	Prerequisites: A grade of C or better in CIS215, CIS256, CIS256DA, CIS316 and GBS220, or		Occ	L+L 3.0 4.0 4.0	T

				accurate inferential and predictive analytic results. Apply advanced and emergent statistical tools and methods, while modeling practices and processes, that facilitate the maturation of organizational analytic capabilities toward a desired future state. Predict analytical outcomes that are repeatable, and consistent with hypotheses, which lead to improved business decisions.	permission of Instructor.				
CIS324	2023 Fall	Information Technology Project Management		Covers the general aspects of project management and emphasizes the important special considerations which apply to information technology projects. Covers principles for managing multiple IT projects and project portfolios, including use of waterfall and agile methodologies. Explores best practices for project management in information technology departments. Includes analysis of budgets, risk management, and cost estimation / justification techniques.	Prerequisites: A grade of C or better in CIS224.		Occ	LEC 3.0 3.0 3.0	S
CIS350	2023 Fall	Advanced Information Technology Management		Course expands upon fundamental concepts and focuses on management of information technology systems in organizations. Explores management processes and procedures for planning, implementation, and operation of information systems with an emphasis on operational management. Examines real world successes and failures of technology management. Equips students with knowledge of current information technology management and decision support systems.	Prerequisites: A grade of C or better in CIS250.		Occ	LEC 4.0 4.0 4.0	S
CIS360	2023 Fall	Data Analysis		Introduces processes of obtaining, preparing, analyzing and presenting visualized data using appropriate software. Provides an understanding of data interpretation and its practical application in a business. Introduces	Prerequisites: A grade of C or better in CIS156, CIS215, and ((MAT140 or MAT141 or MAT142 or MAT145 or		Occ	LEC 4.0 4.0 4.0	S

				data governance strategies ensuring data quality throughout the complete lifecycle of the data. Covers data analytics and mining techniques within the context of supporting data-driven decision making.	MAT146), or higher level mathematics course, or appropriate district placement).				
CIS376	2023 Fall	Database Management and Security		Overview of the functional areas, concepts and techniques of database management and security. Topics include business and regulatory requirements, database architecture and design, access control, retrieval concepts, data auditing, incident response and optimal database system performance, security and availability. Explores new directions in database management and security.	Prerequisites: A grade of C or better in CIS119DO, or CIS276DA, or CIS276DB.		Occ	LEC 4.0 4.0 4.0	S
CIS390	2023 Fall	Network Management		Course explores principles of network management architecture within the Information Technology (IT) life cycle, including network management principles; network design and optimal performance; network maintenance, common problems and solutions; business practices in network management; and effective stakeholder communication. Students will work individually and in teams to evaluate and design network systems and solutions to address business problems and end user needs.	Prerequisites: A grade of C or better in CIS105, and (CNT140AB or CIS190).		Occ	LEC 4.0 4.0 4.0	S
CIS411	2023 Fall	Ethics, Regulations, and Legal Issues in Information Technology		Covers ethical and regulatory issues in information technology (IT) and creates a foundation for analyzing and addressing evolving legal concerns. Provides an overview of laws concerning computer and network security, business policy, and legal boundaries for systems authorization. Examines ethical, legal, and professional ramifications on leadership practices in an organization's technology environment.	Prerequisites: A grade of C or better in CIS111 or ITS120.		Occ	LEC 3.0 3.0 3.0	S
CIS415	2023 Fall	Big Data		Study of the fundamentals and characteristics of Big Data. Evaluation	Prerequisites: A grade of C or better		Occ	L+L 3.0	T

				of existing Big Data processing platforms and tools. Developing skills to handle and implement Big Data projects, including machine learning concepts.	in CIS256, CIS256DA, CIS262AD and CIS318, or permission of Instructor.			4.0 4.0	
CIS416	2023 Fall	Presentation of Analytics and Programming Results and Solutions		Use of data analytic tools, programming methods, nominal (components/elements), and ordered steps to proficiently and effectively deliver comprehensive results and understanding, ranging from simple to complex data. Guide technical and non-technical audiences in understanding data and establish opportunities for the audience to believe it. Mitigate the problems that can be caused by poor decision making due to mis-understandings, mis-interpretations, mis-representations and disconnections among organizational members with respect to the meaning of results.	Prerequisites: A grade of C or better in CIS256, CIS260BI, CIS260TB, CIS262AD, (CIS276DA or CIS276DB), CIS317, and CIS318, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS470	2024 Fall	Enterprise Cyber Security		Provides overview of various concepts and principles in information technology (IT) security and the management of IT security plans to mitigate information security (IS/IT) related security risks. Covers evaluation of cybersecurity plans and policies and the impact of laws, regulations, and codes of professional behavior with respect to cybersecurity. Includes preparation of responses to cybersecurity incidents and overview of various concepts of IT security.	Prerequisites: A grade of C or better in CIS270.		Occ	LEC 4.0 4.0 4.0	S
CIS475	2023 Fall	Emerging Trends in Information Technology		Course focuses on identification of and research in the emerging trends in Information Technology (IT). Selected topics could be within the areas of Kubernetes, Edge Computing, Ethics in Artificial Intelligence (AI), Blockchain, Automation and AI, Telehealth Solutions, Internet of Things (IoT),	Prerequisites: A grade of C or better in (CIS190 or CNT140AB) and CIS270.		Occ	LEC 4.0 4.0 4.0	S

				Augmented Reality, Hyperautomation, Development Operations (DevOp), 5G, and/or other emerging issues. Course includes discussion of contemporary topics, research in selected areas, and course projects related to student interests.					
CIS480	2023 Fall	Data Analytics and Programming Capstone		Capstone project with opportunities for individualized research and application of aggregate technology and professional knowledge and skills obtained throughout the student's program of study. Focus on communication, problem solving, critical thinking, and project management skills.	Prerequisites: A grade of C or better in CLD120, CIS216, CIS224, CIS256, CIS262AD, CIS260BI, CIS260TB, (CIS276DA or CIS276DB), CIS315, CIS317, and CIS318, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CIS490	2023 Fall	Applied Data Analytics and Programming Internship		Work experience in business or industry with an emphasis on data analytics and programming for business, not-for-profit, or industry. Application and aggregate of technical knowledge, communication, problem solving, and critical thinking with a data analytics and programming focus.	Prerequisites: Enrollment in final semester before award completion and permission of Department/Division Chair, or Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	C
CLD110	2021 Summer	Amazon Web Services Cloud Foundations		Provides a detailed overview of cloud concepts, Amazon Web Services (AWS) core services, security, architecture, pricing, and support. Intended for students who seek an overall understanding of cloud computing concepts, independent of specific technical roles. Helps to prepare students for the AWS Certified Cloud Practitioner exam.	Prerequisites: None. CIS105 suggested but not required.		Occ	L+L 3.0 4.0 4.0	T
CLD120	2021 Summer	Amazon Web Services Cloud Architect Associate		Fundamentals of building IT infrastructure on Amazon Web Services (AWS). Focus on how to optimize use of the AWS Cloud by understanding AWS services and best practices for the AWS Cloud and how they fit into cloud-based solutions. Covers design patterns for	Prerequisites: A grade of C or better in CLD110 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

				architecting optimal IT solutions on AWS, as well as strategies and services implemented on AWS.					
CLD130	2022 Spring	Amazon Web Services Cloud Developing		Designed to provide technical knowledge and skills in cloud technology that can be developed with Amazon Web Services (AWS) software development kit (SDK). Focus on best practices for building and deploying secure applications in the AWS Cloud. Helps to prepare students for the AWS Certified Developer - Associate examination.	Prerequisites: A grade of C or better in CLD120 or equivalent AAWS Certified Solutions Architect - Associate certification. CLD110 and CNT140AB recommended.	Knowledge of at least one programming language, such as Python, C++, JavaScript, Ruby, C# (C-Sharp), is recommended.	Occ	L+L 3.0 4.0 4.0	T
CLD140	2022 Spring	Amazon Web Services Cloud Operations		Designed to provide technical information and skills required to implement automatable and repeatable deployments of networks and systems on Amazon Web Services (AWS). Describes specific AWS features and tools related to configuration and deployment. Emphasis on best practices in the AWS Cloud and recommended design patterns, problem-solving and troubleshooting. Helps prepare students for the AWS Certified SysOps Administrator - Associate exam.	Prerequisites: A grade of C or better in CLD120 or equivalent AAWS Certified Solutions Architect - Associate certification. CLD110 and CNT140AB recommended.	Knowledge of at least one programming language, such as Python, C++, JavaScript, Ruby, C# (C-Sharp), is recommended.	Occ	L+L 3.0 4.0 4.0	T
CLD417	2023 Fall	Cloud Analytics		Conduct cloud analysis with practical, real-world examples. Analyze data sets and create visual representation of that data, using a case-study approach. Hands-on experience working with cloud data at scale.	Prerequisites: A grade of C or better in CLD120, CIS215, CIS156, CIS162AD, CIS260BI, CIS260TB, and (CIS276DA or CIS276DB), or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CNS102	2012 Spring	Foundations for Apprenticeship		The demographics and industry projections of the building and construction trades. Structure and	Prerequisites: None.		Occ	LEC 1.0	S

				purpose of registered apprenticeship. Apprenticeship roles and responsibilities. Overview of fluctuation in employment and finances inherent to the construction trades. Emphasis on preparation for periods of high and low employment debt management within registered apprenticeship.				1.0 1.0	
CNS110	2011 Fall	Green Construction Overview		Overview of 'green construction'. Green energy vs. green building, U.S. Green Building Council (USGBC) and the building life cycle, five main areas of green building standards, Leadership in Energy and Environmental Design (LEED) accreditation, and LEED certification.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 0.5 0.5 0.5	S
CNS182	2017 Summer	Construction Estimating and Print Reading		Analysis and interpretation of construction drawings (blueprint reading); interpretation of symbols, annotations, conventions, and terms of trade. Emphasizes learning quantities of material, equipment, and labor for a construction project. Includes a focus on procedures used to apply timely unit costs. Covers Occupational Safety and Health Administration (OSHA) Safety Standards and their impact on construction cost.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CNS200	2018 Fall	Construction Management: Field Operation		Procedures and methods used by construction contractors to manage field operation during various phases of a project. Includes project team, job scheduling, personnel relations, use of the construction documentation on site, inspection techniques, safety issues, scope and supervision of the overall construction process.	Prerequisites: A grade of C or better in CON181 and CON244, or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
CNS201	2018 Fall	Construction Management: Office Operation		Skills and techniques required to manage construction office operations. Includes establishing and financing the business, marketing, office operations, and maintaining relationships with other construction	Prerequisites: A grade of C or better in (CON130, CON181, and CON244), or permission of		Occ	LEC 3.0 3.0 3.0	S

				industry entities through a systematic planning approach.	Department or Division.				
CNS205	2010 Fall	Sustainable Construction/LEED Certification		Fundamentals of major components of sustainable design and construction, including energy, health care facilities, cultural and natural resources, and other environmental and economic issues of sustainable built environments. Importance of a collaborative team effort with owner, developers, architects, engineers, and constructors will be integrated into the course. Issues impacting schedule and budgets of sustainable construction projects will be analyzed. Prepares student for the Leadership in Energy and Environmental Design (LEED) Certification Exam.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CNS230	2018 Fall	Computer Aided Design and Drafting (CADD) 3D for Construction & Architecture (CADD II)		Design, construction, and annotation of three-dimensional objects for construction and architecture industries using AutoCAD software.	Prerequisites: A grade of C or better in COM130 or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
CNS240	2018 Fall	Advanced Computer Aided Design and Drafting (CADD) for Construction & Architecture (CADD III)		Use of advanced AutoCAD two- and three-dimensional commands along with various customization codes and techniques specific to architecture and construction industries	Prerequisites: A grade of C or better in CNS230 or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
CNS250	2018 Fall	Civil Drafting I: Civil 3D		Application of civil drafting software (Civil 3D) for civil drafting and surveying. Use of coordinating geometry and survey point databases to create topographical maps. Interpreting and delineating topographical data and maps for site and route work. Applying the basics of coordinate geometry (COGO) to surveying language.	Prerequisites: A grade of C or better in CON130 or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
CNS251	2018 Fall	Civil Drafting II: Civil 3D		Advanced knowledge and skill in using civil drafting software (Civil 3D) in right-of-way improvement. Use of base maps in utility and street	Prerequisites: A grade of C or better in CNS250, or permission of		Occ	L+L 3.0 6.0 6.0	T

				improvement; use of street improvements in creation of maps and profiles; use of map and profiles in utility improvements.	Department or Division.				
CNS252	2018 Fall	Civil Drafting III: Civil 3D		Use of civil drafting software (Civil 3D) for site development. Includes use of engineering and surveying software in analysis and computation of earthwork and creation of site drawings.	Prerequisites: A grade of C or better in CNS251, or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
CNS271	2018 Fall	Home Inspection Structure		Home inspection practices for foundation, footings, roof, and framework, including floor, wall, and ceiling. Covers structural considerations and reporting practices.	Prerequisites: A grade of C or better in (CON244 and CON262) or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
CNS272	2018 Fall	Home Inspection Plumbing, Electrical and HVAC		Home inspection practices for plumbing, electrical, heating, cooling, and air conditioning, and defects of exposed parts of these systems in a house structure. Includes components of systems and reporting practices.	Prerequisites: A grade of C or better in CON244 and CON262, or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
CNS273	2018 Fall	Home Inspection: Insulation and Interiors		Home inspection practices for insulation and interiors, including walls, ceilings, floors, windows, and doors, and their possible defects. Covers reporting practices.	Prerequisites: A grade of C or better in CON244 and CON272, or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
CNS274	2018 Fall	Home Inspection: Roofing and Exteriors		Home inspection practices for roofing and exteriors of a house, and their defects. Covers reporting practices.	Prerequisites: A grade of C or better in (CON244 and CON262) or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
CNS282AA	2004 Spring	Volunteerism for Construction: A Service Learning Experience		Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Department or Division.	CNS282A A may not repeat specific assignment for more than three (3)	Occ	LAB 1.0 1.0 0.0	L

						credit hours. Standard grading available according to procedures outlined in college catalog.			
CNS282AB	2004 Spring	Volunteerism for Construction: A Service Learning Experience		Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Department or Division.	CNS282A B may not repeat specific assignment for more than three (3) credit hours. Standard grading available according to procedures outlined in college catalog.	Occ	LAB 2.0 2.0 0.0	L
CNS282AC	2004 Spring	Volunteerism for Construction: A Service Learning Experience		Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Department or Division.	Standard grading available according to procedures outlined in college catalog.	Occ	LAB 3.0 3.0 0.0	L
CNS285	2018 Fall	Introduction to Residential Plan Review		Application of international model code (building, mechanical, plumbing, and electrical) to contract documents for one- and two-family dwelling residential construction.	Prerequisites: A grade of C or better in (CON244 and CON262) or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S

CNS286	2018 Fall	Introduction to Commercial Plan Review		Application of international model codes (building, mechanical, plumbing, and electrical) to contract documents for commercial construction.	Prerequisites: A grade of C or better in (CON244 and CON263) or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
CNS290AA	2019 Spring	Construction Internship	CON290A A	Construction internship office/field experience with private/public agencies or citizen volunteer groups. Eighty (80) hours of designated work experience.	Prerequisites: Permission of Department or Division.	CNS290A A may be repeated for a total of three (3) credits. Standard grading available according to procedures outlined in college catalog.	Occ	LAB 1.0 6.0 0.0	C
CNS290AB	2019 Spring	Construction Internship	CON290A B	Construction internship office/field experience with private/public agencies or citizen volunteer groups. One hundred and sixty (160) hours of designated work experience.	Prerequisites: Permission of Department or Division.	Standard grading available according to procedures outlined in college catalog.	Occ	LAB 2.0 12.0 0.0	C
CNS290AC	2019 Spring	Construction Internship	CON290A C	Construction internship office/field experience with private/public agencies or citizen volunteer groups. Two hundred and forty (240) hours of designated work.	Prerequisites: Permission of Department or Division.	Standard grading available according to procedures outlined in college catalog.	Occ	LAB 3.0 18.0 0.0	C
CNS290AE	2009 Fall	Construction Internship		Construction internship office/field experience with private / public agencies or citizen volunteer groups.	Prerequisites: Permission of Department or Division.		Occ	LAB 5.0 25.0 0.0	P
CNS296WA	2007 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and	Prerequisites: Completion of at least		Occ	LAB 1.0	Z

				employers to accomplish an outcome related to the career objectives of the students.	twelve (12) college credits minimum 2.6 grade point average and ability to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.			5.0 0.0	
CNS296WB	2007 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and ability to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.	COMMON COMPET ENCY COURSE	Occ	LAB 2.0 10.0 0.0	Z
CNS296WC	2007 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and ability to obtain a		Occ	LAB 3.0 15.0 0.0	Z

					position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
CNS296WD	2007 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and ability to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.	COMMON COMPET ENCY COURSE	Occ	LAB 4.0 20.0 0.0	Z
CNS298AA	2007 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				combined to maximize student development.					
CNS298AB	2007 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
CNS298AC	2007 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
CNT140AB	2020 Fall	Introduction to Networks		Focus on the architecture, structure, functions, components, and models of the Internet and other computer networks. Principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced. Students will build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Preparation for Cisco certification examination.	Prerequisites: None.		Occ	L+L 4.0 6.0 6.0	T
CNT150AB	2020 Fall	Switching, Routing, and Wireless Essentials		Focus on configuring switches and routers for use in small and medium size networks. Including Virtual Local Area Networks (VLANs), VLAN trunking, Inter-VLAN routing, Spanning Tree Protocol (STP), EtherChannel, Dynamic Host Configuration Protocol (DHCP), First	Prerequisites: A grade of C or better in CNT140AB or permission of Instructor.		Occ	L+L 4.0 6.0 6.0	T

				Hop Redundancy, Local area Network (LAN) and Switch security, and Static routing. Knowledge and skills needed to implement a Wireless Local Area Network (WLAN) is also covered. Preparation for Cisco certification examination.					
CNT160AB	2020 Fall	Enterprise Networking, Security, and Automation		Focus on the configuration of routers and switches within small and medium size networks for advanced functionality including Open Shortest Path First (OSPF), Network security, Access Control Lists (ACLs), Network Address Translation (NAT), Wide Area Network (WAN) concepts, Virtual Private Networks (VPNs), Quality of Service (QOS), network management, design, troubleshooting, virtualization, and automation. Preparation for Cisco certification examination.	Prerequisites: A grade of C or better in CNT150AB or permission of Instructor.		Occ	L+L 4.0 6.0 6.0	T
CNT168	2018 Fall	CCNA Discovery - Designing and Supporting Computer Networks		Networking design and customer support including gathering requirements, designing basic networks, establishing proof-of-concept, and performing project management tasks. Lifecycle services, including upgrades, competitive analyses, and system integration, in the context of pre-sale support	Prerequisites: A grade of C or better in CNT158.		Occ	L+L 4.0 6.0 6.0	T
CNT171	2021 Spring	CCNA Exam Prep		Preparation for renewal of CCNA certification by reviewing the Open Systems Interconnection (OSI) model and industry standards including network topologies, IP addressing, subnet masks, access control list, basic network design and cable installation. Practice the skills to configure, customize, maintain and troubleshoot Cisco routers and switches for Local Areas Networks (LANs) and Wide Area Networks (WANs) using Cisco IOS command set. Review any new material	Prerequisites: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) certification, or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T

				introduced since the last CCNA exam version.					
CNT202	2021 Spring	Cisco Secure Firewall Appliance Configuration		Applications of Cisco Networking technologies in designing and implementing security solutions to reduce risk of revenue loss and vulnerability. Hands-on experience and skills in security policy design and management, security technologies, products and solutions, secure firewall design, installation, configuration and maintenance, Authentication, Authorization, and Accounting (AAA), Failover, and Virtual Private Network (VPN) implementation using firewalls.	Prerequisites: A grade of C or better in CNT160AB or permission of Instructor.		Occ	L+L 4.0 5.0 5.0	T
CNT203	2020 Fall	CCNA Cybersecurity Operations		Uses virtual environments to simulate real-world cybersecurity threat scenarios and create opportunities for practice with ethical hacking, security monitoring, analysis and resolution. Introduces current technical concepts, such as classification of network attacks, monitoring, analysis of network intrusion data, cryptography, prevention and mitigation of network attacks and application of incident response models to manage network security incidents.	Prerequisites: A grade of C or better in CNT150AB or permission of Instructor.	CNT203 is designed to help students prepare for the Cisco Certified Network Associate (CCNA) Cybersecurity Operations Certification examination.	Occ	L+L 4.0 6.0 6.0	T
CNT205	2021 Spring	Cisco Certified Network Associate Security		Associate-level knowledge and skills required to secure Cisco networks. Development of a security infrastructure, identification of threats and vulnerabilities to networks. Mitigation of security threats. Core security technologies. Installation, troubleshooting and monitoring of network devices to maintain integrity, confidentiality and availability of data and devices. Competency in the	Prerequisites: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) certification, or permission of Instructor.		Occ	L+L 4.0 6.0 6.0	T

				technologies that Cisco uses in its security structure.					
CNT206	2021 Spring	Cisco Certified Network Associate Wireless		Associate-level knowledge and skills required in Cisco wireless networks. Includes comprehensive hands-on labs to design, plan, implement, operate, secure, and troubleshoot wireless networks.	Prerequisites: A grade of C or better in CNT160AB or permission of Instructor.	Prepares students to earn Cisco Certified Network Associate Wireless (CCNA Wireless) designation by taking the Implementing Cisco Unified Wireless Networks Essentials (IUWNE) exam.	Occ	L+L 4.0 6.0 6.0	T
CNT240	2020 Fall	Cisco Certified Network Professional: Enterprise Core		Provides Cisco Certified Network Professional (CCNP) Enterprise knowledge and skills needed for professional-level networking technologies and architecture. Topics include virtualization, network assurance, security, and automation. Helps to prepare students to take the Cisco Enterprise Network Core Technologies (ENCOR) certification exam aligned with the CCNP Enterprise, CCIE Enterprise Infrastructure, CCIE Enterprise Wireless, and Cisco Certified Specialist - Enterprise core certifications.	Prerequisites: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) industry certification, or permission of Instructor.	Preparation for Cisco Certified Network Professional (CCNP) ENCOR exam.	Occ	L+L 8.0 12.0 12.0	T
CNT240AA	2020 Fall	Cisco Certified Network Professional: Enterprise Core I		Provides Cisco Certified Network Professional (CCNP) Enterprise knowledge and skills needed for professional-level networking technologies and architecture. Topics include virtualization, network assurance, security, and automation.	Prerequisites: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) industry certification, or	Preparation for Cisco Certified Network Professional (CCNP)	Occ	L+L 4.0 6.0 6.0	T

				Helps to prepare students to take the Cisco Enterprise Network Core Technologies (ENCOR) certification exam aligned with the CCNP Enterprise, CCIE Enterprise Infrastructure, CCIE Enterprise Wireless, and Cisco Certified Specialist - Enterprise core certifications.	permission of Instructor.	ENCOR exam.			
CNT240AB	2020 Fall	Cisco Certified Network Professional: Enterprise Core II		Provides Cisco Certified Network Professional (CCNP) Enterprise knowledge and skills needed for professional-level networking technologies and architecture. Topics include virtualization, network assurance, security, and automation. Helps to prepare students to take the Cisco Enterprise Network Core Technologies (ENCOR) certification exam aligned with the CCNP Enterprise, CCIE Enterprise Infrastructure, CCIE Enterprise Wireless, and Cisco Certified Specialist - Enterprise core certifications.	Prerequisites: A grade of C or better in CNT240AA.	Preparation for Cisco Certified Network Professional (CCNP) ENCOR exam.	Occ	L+L 4.0 6.0 6.0	T
CNT250	2020 Fall	Cisco Certified Network Professional: Enterprise Advanced Routing and Services		Provides Cisco Certified Network Professional (CCNP) Enterprise advanced knowledge and skills needed for professional-level networking technologies and architecture. Covers the implementation and troubleshooting of advanced routing technologies and services including Layer 3 VPN services, infrastructure security, and infrastructure services. Helps to prepare students to take the Implementing Cisco Enterprise Network Advanced Routing and Services (ENARSI) certification exam aligned with the CCNP Enterprise, Cisco Certified Specialist - Advanced Infrastructure Implementation certifications.	Prerequisites: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) industry certification, or permission of Instructor.		Occ	L+L 8.0 12.0 12.0	T
CNT250AA	2020 Fall	Cisco Certified Network		Provides Cisco Certified Network Professional (CCNP) Enterprise	Prerequisites: A grade of C or better		Occ	L+L 4.0	T

		Professional: Enterprise Advanced Routing and Services I		advanced knowledge and skills needed for professional-level networking technologies and architecture. Covers the implementation and troubleshooting of advanced routing technologies and services including Layer 3 VPN services, infrastructure security, and infrastructure services. Helps to prepare students to take the Implementing Cisco Enterprise Network Advanced Routing and Services (ENARSI) certification exam aligned with the CCNP Enterprise, Cisco Certified Specialist - Advanced Infrastructure Implementation certifications.	in CNT160AB, or Cisco Certified Network Associate (CCNA) industry certification, or permission of Instructor.			6.0 6.0	
CNT250AB	2020 Fall	Cisco Certified Network Professional: Enterprise Advanced Routing and Services II		Provides Cisco Certified Network Professional (CCNP) Enterprise advanced knowledge and skills needed for professional-level networking technologies and architecture. Covers the implementation and troubleshooting of advanced routing technologies and services including Layer 3 VPN services, infrastructure security, and infrastructure services. Helps to prepare students to take the Implementing Cisco Enterprise Network Advanced Routing and Services (ENARSI) certification exam aligned with the CCNP Enterprise, Cisco Certified Specialist - Advanced Infrastructure Implementation certifications.	Prerequisites: A grade of C or better in CNT250AA.		Occ	L+L 4.0 6.0 6.0	T
COM080	1999 Summer I	Conversation Circles		Practice in conversing in English for non-native speakers. Emphasis in developing conversational techniques to facilitate building and maintaining relationships.	Prerequisites: None.	COM080 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
COM095	1998 Fall	Basic Oral Communication Skills		Listening, speaking, and related academic performance skills, including note taking. Emphasis on	Prerequisites: None.		Acad	LEC 3.0	S

				activities designed to improve and synthesize these skills				3.0 3.0	
COM100	2018 Fall	Introduction to Human Communication		Introduces the theory and practice of human communication. Surveys communication topics related to interpersonal, small group, and public communication.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB] Arizona Shared Unique Number SUN#: COM 1100	Acad	LEC 3.0 3.0 3.0	S
COM100AA	2018 Fall	Introduction to Human Communication Part I		Introduces the theory and practice of human communication. Surveys communication topics related to interpersonal, small group, and public communication.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social-Behavioral Sciences - [SB] in combination with: COM100A B and COM100A C.	Acad	LEC 1.0 1.0 1.0	S
COM100AB	2018 Fall	Introduction to Human Communication Part II		Introduces the theory and practice of human communication. Surveys communication topics related to interpersonal, small group, and public communication.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social-Behavioral Sciences - [SB] in combination with: COM100A	Acad	LEC 1.0 1.0 1.0	S

						A and COM100A C.			
COM100AC	2018 Fall	Introduction to Human Communication Part III		Introduces the theory and practice of human communication. Surveys communication topics related to interpersonal, small group, and public communication.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social-Behavioral Sciences - [SB] in combination with: COM100A A and COM100A B.	Acad	LEC 1.0 1.0 1.0	S
COM101	2023 Fall	Interpersonal Communication in the Workplace		Elements and functions of communication; perception of self and others; verbal and nonverbal communication; listening skills; effective verbal responses; communicating ideas and feelings; role of communication in relationships with others.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
COM102	2023 Fall	Group Discussion in the Workplace		Concept of a decision-making group; role requirements in group discussion; characteristics and responsibilities of small-group leaders; tools for problem solving in a group; presenting proposals to management.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
COM105	1995 Fall	Relational Communication/ Senior Adults		Communication skills as they apply to personal relationships of older adults. Student's assessment of their individual communication skills in relations with family members, social and business acquaintances, and friends	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
COM110	2014 Spring	Interpersonal Communication		Theory and practice of communication skills which affect day-to-day interactions with other persons. Topics may include using verbal and nonverbal symbols, interactive listening, resolving interpersonal conflict, developing and	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and	Acad	LEC 3.0 3.0 3.0	S

				maintaining personal and professional relationships		Behavioral Sciences - [SB] Arizona Shared Unique Number SUN#: COM 1110			
COM110AA	1995 Fall	Interpersonal Communication Part I		Theory and practice of communication skills which affect day-to- day interactions with other persons. Topics may include using verbal and nonverbal symbols, interactive listening, resolving interpersonal conflict, developing and maintaining personal and professional relationships	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB] in combination with: COM110A B and COM110A C	Acad	LEC 1.0 1.0 1.0	S
COM110AB	1995 Fall	Interpersonal Communication Part II		Theory and practice of communication skills which affect day-to- day interactions with other persons. Topics may include using verbal and nonverbal symbols, interactive listening, resolving interpersonal conflict, developing and maintaining personal and professional relationships	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB] in combination with: COM110A A and COM110A C	Acad	LEC 1.0 1.0 1.0	S
COM110AC	1995 Fall	Interpersonal Communication Part III		Theory and practice of communication skills which affect day-to-day interactions with other persons. Topics may include using	Prerequisites: None.	Course Attribute(s): General Education	Acad	LEC 1.0 1.0 1.0	S

				verbal and nonverbal symbols, interactive listening, resolving interpersonal conflict, developing and maintaining personal and professional relationships		Designation: Social and Behavioral Sciences - [SB] in combination with: COM110A A and COM110A B			
COM120	2003 Fall	Pronunciation of American Speech		Analysis of American speech production problems due to accents produced by another language, correction of misarticulated American speech sounds, critical listening to sound production, understanding American English speech patterns, practicing American idioms and expressions, and preparing and delivering group and individual speech presentations	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
COM125	1995 Fall	Presentational Speaking		Techniques for developing oral presentations which include visual media. Principles of verbal message development and related visual design stressed. Techniques of managing the presentational environment including question and answer periods and the operation of common equipment	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
COM145	2018 Fall	Digital Storybook	ART145 STO145	Enables students to find and develop a narrative representing an aspect of their personal histories. Use of digital technology to produce and archive a storybook	Prerequisites: None.		Acad	L+L 1.0 2.0 2.0	T
COM150	2024 Fall	Digital Storytelling		Enables students to find and develop their personal stories. Emphasis on the use of digital technology to create, edit, produce and archive a digital story.	Prerequisites: None.		Acad	L+L 3.0 6.0 6.0	T
COM163	2009 Fall	Intercultural Communication in Everyday Life		Provides knowledge to promote greater understanding and application of intercultural communication in social and organizational interactions.	Prerequisites: Appropriate English placement test score at the ENG101 or	Course Attribute(s): General Education	Acad	LEC 3.0 3.0 3.0	S

				For advanced non-native English speakers.	ENG107 level or a grade of C or better in ENG091 or ESL097 or permission of Instructor.	Designation: Cultural Diversity - [C] General Education Designation: Global Awareness - [G] General Education Designation: Social and Behavioral Sciences - [SB]			
COM177	2023 Fall	Experiential Group Activities Facilitation		Communication skills, tools, and strategies used to lead experiential learning activities. Designed to enhance the student's ability to facilitate experiential group learning activities.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
COM181	2021 Fall	Conflict Mediation		Develop communication skills necessary to conduct mediation in formal and informal settings. Applies principles and theories of message production and responding, listening, questioning, source and receiver factors, and emotion to conflict management communication. Emphasis on respecting diversity and empowering joint problem solving throughout	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
COM207	2009 Summer I	Introduction to Communication Inquiry		Overview of theory and methodological practice in communication with particular attention to scholarly writing skills. Emphasis on development of critical thinking skills through active participation in the research process.	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent and COM100 or equivalent or permission of Instructor.	COM207 is recommended for the communication major.	Acad	LEC 3.0 3.0 3.0	S
COM215	1995 Fall	Listening		Emphasis on diagnosis of individual listening, corrective procedures, and	Prerequisites: None.		Acad	LEC 3.0	S

				reinforcement of improved habits through normal and speeded listening drills. Includes everyday communication experiences				3.0 3.0	
COM221	2011 Fall	Oral Fluency in American Speech		Designed for English Language Learner (ELL) students to develop greater oral fluency in spontaneous speaking contexts and presentational speaking. Emphasis on development of speech, language, and vocal clarity; basic skills in presentational speaking; and use of English to interact spontaneously with others.	Prerequisites: A grade of C or better in COM120 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
COM222	1999 Fall	Argumentation		Discussion and practice of the use of evidence, applied reasoning, recognition of fallacies, selection of arguments, and methods of analyzing issues	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	Course Attribute(s): General Education Designation: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
COM225	2005 Summer I	Public Speaking		Designed to enhance the student's ability to present public speeches confidently and competently. Also designed to improve information literacy and critical thinking skills	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	Course Attribute(s): General Education Designation: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
COM230	2014 Summer	Small Group Communication		Principles and processes of small groups and development of skills for participation and leadership in small group settings. Practice in problem solving, decision making, and information sharing.	Prerequisites: None.	General Education Designation: Social and Behavioral Sciences - [SB] Arizona Shared Unique Number	Acad	LEC 3.0 3.0 3.0	S

						SUN#: COM2271			
COM241	2010 Fall	Oral Interpretation of Literature	THP241	The study, analysis, and preparation for performance of prose, poetry, and dramatic literature. Preparation of material for public audiences.	Prerequisites: A grade of C or better in ENG101 or ENG107.	Course Attribute(s): General Education Designatio n: Humanitie s, Arts and Design - [HU] General Education Designatio n: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
COM250	2010 Spring	Introduction to Organizational Communication		Introduction to the study of communication in organizations including identification of variables, roles and patterns influencing communication in organizations	Prerequisites: None.	Course Attribute(s): General Education Designatio n: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
COM251	1995 Fall	Interviewing		Principles and techniques of interviewing, including practice through real and simulated interviews in informational, persuasive, and employee-related situations	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
COM259	2019 Fall	Communication in Business and Professions		Interpersonal, organizational, intercultural, group, and public communication in business and professional organizations. Emphasis on oral communication and the effective use of technology and new media.	Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.		Acad	LEC 3.0 3.0 3.0	S
COM263	2018 Fall	Elements of Intercultural Communication		Diverse cultural contexts are explored through basic concepts, principles, and theories of intercultural	Prerequisites: None.	Course Attribute(s): General	Acad	LEC 3.0	S

				communication. Discovering effective interaction and appropriate communication in a global community is emphasized.		Education Designation: Cultural Diversity - [C] General Education Designation: Global Awareness - [G] General Education Designation: Social and Behavioral Sciences - [SB]		3.0 3.0	
COM270	2018 Summer	Health Communication		Theory and practice of interpersonal, intercultural, public, and team communication skills in a healthcare setting.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
COM271	1995 Fall	Voice and Diction	THP271	Exercises and techniques to free the voice and improve projection, resonance, and articulation. Covers international phonetic alphabet and standard stage speech	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
COM275	1995 Fall	Nonverbal Communication		Effects of space, time, body movements, environment, objects, and voice quality on human communication and interaction	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
COM277	2023 Fall	Group Facilitation Theory and Practice		Theory and practice of group facilitation skills. Emphasis on leading organizational groups in problem solving and decision-making.	Prerequisites: Associates degree or equivalent or 3 to 5 years work experience or permission of Instructor.		Acad	LEC 2.0 2.0 2.0	S
COM281	2018 Fall	Communication Activities		Designed to provide students with competence and confidence in a variety of speech situations beyond the classroom setting. May include presentations at speech competitions or at community organizations.	Prerequisites: None.	COM281 may be repeated for a total of six (6) credit hours.	Acad	L+L 1.0 3.0 3.0	T

COM281AA	2018 Fall	Communication Activities		Designed to provide students with competence and confidence in a variety of speech situations beyond the classroom setting. May include presentations at speech competitions or at community organizations.	Prerequisites: None.	COM281A A may be repeated for a total of six (6) credit hours.	Acad	L+L 2.0 4.0 4.0	T
COM281AB	2018 Fall	Communication Activities		Designed to provide students with competence and confidence in a variety of speech situations beyond the classroom setting. May include presentations at speech competitions or at community organizations.	Prerequisites: None.	COM281A B may be repeated for a total of six (6) credit hours.	Acad	L+L 3.0 5.0 5.0	T
COM282AA	2013 Fall	Service-Learning Experience in Communication		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	COM282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
COM282AB	2013 Fall	Service-Learning Experience in Communication		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	COM282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L

COM282AC	2013 Fall	Service-Learning Experience in Communication		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	COM282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
COM296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
COM296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job		Acad	LAB 2.0 10.0 0.0	Z

					may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
COM296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
COM296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be		Acad	LAB 4.0 20.0 0.0	Z

					concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
COM298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
COM298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
COM298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
CON100	2020 Summer	Introduction to Construction		Introduces students to all aspects of the construction industry such as how projects are delivered, reviewing the	Prerequisites: None.		Occ	LEC 2.0	S

				procurement process and how they are estimated, scheduled, and contracted. Introduces students to the individual roles that constructors fill in the delivery of a construction project.				2.0 2.0	
CON101	2018 Fall	Construction and Culture		The cultural context of construction, emphasizing the evolution and expansion of constructed environments as expressions of ethical and historical value systems.	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]	Occ	LEC 3.0 3.0 3.0	S
CON102	2024 Fall	Foundations of Construction Trades		Introduction to construction trades with an overview of standard practices in the construction profession, including safety, construction drawings, tools, and material handling. Includes workspace maintenance according to professional standards and basic calculation skills in the construction environment, including primary operations. Examines the United States standard and metric units of measurement, orthographic figures, and area and volume calculations for two and three-dimensional objects. Provides students with the information and skills to read and understand construction drawing. Includes basic rigging and material handling procedures.	Prerequisites: None.		Occ	LEC 6.0 6.0 6.0	S
CON102AA	2024 Fall	Foundations of Construction Trades: Tools,		Introduction to construction trades with an overview of common practices in the construction profession	Prerequisites: None.		Occ	LEC 2.0	S

		Equipment, and Workspace		including safety, reading blueprints, tools and equipment. Includes maintenance of workspace according to professional standards and basic calculation skills in the construction environment including the primary operations. Examines the United States standard and metric units of measurement, orthographic figures, and area and volume calculations for two and three-dimensional objects. Provides students with the information and skills needed to read and understand construction drawings.				2.0 2.0	
CON102AB	2024 Fall	Foundations of Construction Trades: Construction Calculations		Introduction to construction trades with an overview of common practices in the construction profession including maintenance of workspace according to professional standards and basic calculation skills in the construction environment including the primary operations. Examines the United States standard and metric units of measurement, orthographic figures, and area and volume calculations for two and three-dimensional objects.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CON102AC	2024 Fall	Foundations of Construction Trades: Construction Drawings and Materials		Introduction to construction trades with an overview of standard practices in the construction profession including safety, reading blueprints, tools and equipment. Provides students with the information and skills needed to read and understand construction drawings. Includes basic rigging and material handling procedures.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CON103	2020 Summer	Foundation of Construction Safety		Occupational Safety and Health Act (OSHA). Common causes for accidents and fatalities in construction. Abatement techniques for construction-specific hazards. Use of personal protection and lifesaving equipment. Specific types of health hazards related to the construction	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T

				industry. Proper methods for handling hazardous materials.					
CON104	2020 Summer	Hand and Power Tools, Equipment, and Workspace		Overview of the selection, use, maintenance and safety procedures for common hand tools, power tools and equipment used in the construction industry. Overview of the maintenance of workspace according to professional standards.	Prerequisites: None.		Occ	L+L 1.5 1.5 1.5	T
CON105	2022 Fall	Construction Calculations		Introduction to basic calculation skills in the construction environment including the four primary operations. United States standard and metric units of measure, geometric figures, and area and volume calculations for two and three-dimensional objects.	Prerequisites: None.		Occ	L+L 1.5 1.5 1.5	T
CON106	2018 Fall	Foundations of Concrete		Examines the effects of concrete-making materials (aggregates, cements, admixtures, etc.) on the properties of fresh and hardened concrete. Concrete mixture proportioning is discussed along with the calculations and statistical analysis of strength testing.	Prerequisites: None.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 4.0 4.0	T
CON107	2020 Summer	Construction Drawings Introduction		Provides students with the information and skills needed to read and understand construction drawings.	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
CON110	2024 Fall	Construction: Carpentry		Examines the layout and construction procedures for floor systems, including: interpretation of construction drawings and specifications, selection of appropriate types of floor and wall system components; and application of floor and wall system materials. Provides an overview of ceiling and roof construction methods, the different types of roofs used in residential construction and materials, and the use of trusses and conventional roof framing. Includes estimation of materials.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 9.0 12.0 12.0	T
CON110AA	2024 Fall	Construction: Carpentry/Floor Systems		Examines the layout and construction procedures for floor systems, including: interpretation of	A grade of C or better required in all Prerequisites.		Occ	L+L 3.0	T

				construction drawings and specifications, selection of appropriate types of floor system components and application of floor system materials. Includes estimation of materials.	Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor			4.0 4.0	
CON110AB	2024 Fall	Construction: Carpentry/Wall Systems		Examines the layout and construction procedures for wall systems, including: interpretation of construction drawings and specifications, selection of appropriate types of wall system components; and application of wall system materials. Includes estimation of materials.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor		Occ	L+L 3.0 4.0 4.0	T
CON110AC	2024 Fall	Construction: Carpentry/Ceiling and Roof Systems		Examines the layout and construction procedures for roof and ceiling systems, including: interpretation of construction drawings and specifications, selection of appropriate types of roof and ceiling system components; and application of roof and ceiling system materials. Provides an overview of ceiling and roof construction methods, the different types of roofs used in residential construction and materials, and the use of trusses and conventional roof framing. Includes estimation of materials.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor		Occ	L+L 3.0 4.0 4.0	T
CON111	2020 Summer	Carpentry: Wall Systems		Examines the layout and construction procedures for wall systems, including: interpretation of construction drawings and specifications; selection of appropriate types of wall system components; and application of wall system materials. Emphasis of the	Prerequisites: None.		Occ	L+L 3.5 4.0 4.0	T

				estimation of the amount of materials needed for a wall assembly and some common alternative wall systems.					
CON112	2021 Fall	Carpentry Ceiling Joist and Roof Framing		Covers the layout and construction procedures for roof systems, including interpretation of construction drawings and specifications. Provides an overview of ceiling and roof construction methods, the different types of roofs used in residential construction, materials, estimation of materials, and the use of trusses in basic roof framing.	Prerequisites: None.		Occ	L+L 4.0 5.0 5.0	T
CON117	2019 Spring	Interpersonal Skills, Issues and Resolutions in Construction		Information about communication and human relations skills, the expectations of today's diverse workforce, and relationships with stakeholders. Leadership style, interview techniques, and professional development plans. Management skills in problem solving and negotiating.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CON122	2024 Fall	Construction: Plumbing		Introduces students to materials, hardware, and systems related to the plumbing profession. Provides instruction in drain, waste, and vent (DWV) systems as well as installation, maintenance, and repair of plumbing systems, fixtures and appliances.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 9.0 12.0 12.0	T
CON122AA	2024 Fall	Construction: Plumbing/Pipes and Fittings		Introduces students to materials, hardware, and systems related to the plumbing profession. Provides instruction in installation, maintenance, and repair of plumbing systems, fixtures and appliances.	Corequisites: A Grade of C or better in (CON103 OR CON271) and CON102 OR (CON102AA AND CON102AB AND CON102AC) , or Permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

CON122AB	2024 Fall	Construction: Plumbing/Drain, Waste and Vent		Introduces students to materials, hardware, and systems related to the plumbing profession. Provides instruction in drain, waste, and vent (DWV) systems as well as installation, maintenance, and repair.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CON122AC	2024 Fall	Construction: Plumbing/Fixtures, Faucets and Water Distribution Systems		Introduces students to materials, hardware, and systems related to the plumbing profession. Provides instruction in water distribution systems as well as installation, maintenance, and repair of fixtures and appliances.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CON124	2020 Summer	Plumbing: Pipes and Fittings		Introduces the various types of plumbing materials, pipe schedules and material properties, and applications of piping. Trainees will learn how to determine the appropriate types of fittings, valves, hangers, and supports needed for piping jobs. Trainees will learn to properly measure, cut, prep, and join piping.	Prerequisites: None.		Occ	L+L 3.5 4.0 4.0	T
CON125	2020 Summer	Plumbing: Fixtures		Introduces commonly used fixtures in plumbing systems. Select and operate each type of fixture for a variety of installations. Provides an overview of plumbing system installation, maintenance and water heating systems.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
CON126	2020 Summer	Plumbing: Drain, Waste, and Vent		Examine the drainage, waste movement and ventilation for construction application. Provides	Prerequisites: None.		Occ	L+L 3.5	T

				instruction in locating, installing, connecting, and testing a complete drain, waste, and vent (DWV) system.				4.0 4.0	
CON127	2020 Summer	Plumbing: Water Distribution Systems		Discuss the processes through which potable water is distributed. Examine the identification of the components and functions of a water distribution system and explains the relationships among the components. Includes installation and testing of water distribution systems.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
CON130	2018 Fall	Computer Aided Design and Drafting		Fundamental drafting and documentation topics and techniques related to construction, using both board and computer as tools. Concentration on various methods of two-dimensional and three-dimensional drawing, sketching, scaling, and dimensioning with computer and board.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
CON131	2020 Summer	Electrical Systems	HVA131	Electricity related to residential and light commercial applications, to include common electrical components, AC and DC circuits, and electrical safety. Provides an introduction to reading, interpreting, and creating wiring diagrams and the application of electrical power. Operation and use of specific meters, tools, and an introduction to National Electrical Code (NEC).	Prerequisites: None.		Occ	L+L 3.5 4.0 4.0	T
CON132	2024 Fall	Construction: Electrical Systems		An overview of electricity related to residential, commercial, and aspects of industrial applications. Introduction to reading and interpreting construction drawings and wiring diagrams and tools specific to the electrical trade. Use of appropriate wire sizes and material to install electrical distribution systems, raceways, and terminations.	A grade of C or better required in all Prerequisites: Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 9.0 12.0 12.0	T
CON132AA	2024 Fall	Construction: Electrical		An overview of electricity related to residential, commercial, and aspects	A grade of C or better required in all		Occ	L+L 3.0	T

		Systems/Introduction to Electrical		of industrial applications. Introduction to reading and interpreting construction drawings specific to the electrical trade.	Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.			4.0 4.0	
CON132AB	2024 Fall	Construction: Electrical Systems/Electrical Power Generation		An overview of electricity related to residential, commercial, and aspects of industrial applications. Introduction to wiring diagrams and tools specific to the electrical trade.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CON132AC	2024 Fall	Construction: Electrical Systems/Raceways and Wireways		An overview of electricity related to residential, commercial, and aspects of industrial applications. Use of appropriate wire sizes and material to install electrical distribution systems, raceways, and terminations.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CON133	2020 Summer	Conduit, Raceways, and Termination in Electrical Systems		Termination and implementation of electricity in a facility. Considers topics related to box capacities, raceways, conduit sizes, termination practices, wire trays, and finish wiring.	Prerequisites: None.		Occ	L+L 4.0 5.0 5.0	T
CON138	2019 Spring	Introduction to Project Management and Resource Control	IND138	Technical and management skills such as preconstruction planning, cost and risk control and policy development. Criteria for project	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S

				layout purchasing, subcontractor management, project layout. Preparation process for project start up, close out and alternate project delivery methods. Major factors which affect production control and production control standards. Project manager's role.					
CON140	2024 Fall	Construction Trades: Introduction to Masonry		Fundamentals of masonry including materials, tools, and techniques. Topics include mortar hand tools, power tools, and masonry vertical and horizontal work.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 9.0 12.0 12.0	T
CON140AA	2024 Fall	Construction Trades: Masonry Fundamentals		Fundamentals of masonry including materials, tools, and techniques. Topics include mortar hand tools, power tools, and masonry calculations.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 4.5 6.0 6.0	T
CON140AB	2024 Fall	Construction Trades: Masonry Systems		Fundamentals of masonry including materials, tools, and techniques. Topics include mortar hand tools, power tools, and masonry vertical and horizontal work.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or		Occ	L+L 4.5 6.0 6.0	T

					permission of Instructor.				
CON150	2024 Fall	Construction Trades: Solar Energy Technology		Examination of solar energy technology including thermal energy, electrical energy, and energy storage.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 9.0 12.0 12.0	T
CON150AA	2024 Fall	Construction Trades: Introduction to Solar Energy Systems		Fundamentals of solar energy technology including thermal energy, electrical energy, and energy storage.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CON150AB	2024 Fall	Construction Trades: Solar System Design, Maintenance and Troubleshooting		Fundamentals of solar energy technology including thermal energy, electrical energy, and energy storage. Includes maintenance and troubleshooting of solar systems.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
CON150AC	2024 Fall	Construction Trades: Solar Energy System Installation and Inspection		Examination of solar energy technology including thermal energy, electrical energy, and energy storage. Includes inspection and installation of solar systems.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites:		Occ	L+L 3.0 4.0 4.0	T

					[(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.				
CON170	2024 Fall	Construction Trades: H.V.A.C.r	HVA170	Introduction to major components and functions of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems, including heat flow and basic electrical concepts. Introduction to installation of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems. Includes startup and verification of proper equipment operation. Includes installations, diagnostics, preventative and predictive maintenance, and customer service. Introduction to troubleshooting the components of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems to ensure proper equipment operation. Examines federal laws, standards, and procedures for the preparation to complete the certification for the Environmental Protection Agency (EPA) SECTION 608.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 9.0 12.0 12.0	T
CON170AA	2024 Fall	Construction Trades: Introduction to H.V.A.C.r for Residential Systems	HVA170AA	Introduction to major components and functions of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems, to include heat flow and basic electrical concepts. Examines federal laws, standards and procedures for the preparation to complete the certification for the Environmental Protection Agency (EPA) SECTION 608.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

CON170AB	2024 Fall	Construction Trades: H.V.A.C.r Installation	HVA170AB	Installation of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems. Includes startup and verification of proper equipment operation. Includes installations, diagnostics, preventative and predictive maintenance, and customer service.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 4.0 3.0 3.0	T
CON170AC	2024 Fall	Construction Trades: H.V.A.C.r Troubleshooting	HVA170AC	Introduction to troubleshooting the components of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems, to assure proper equipment operation.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 4.0 3.0 3.0	T
CON181	2018 Fall	Cost Estimating		Determining quantities of material, equipment, and labor for a construction project. Includes procedures used to apply unit costs to these items in a minimum of time. Occupational Safety and Health Administration Safety Standards and their impact on construction cost.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CON210	2024 Fall	Carpentry: Commercial and Residential		Safety, codes, layout, and construction procedures for carpentry commercial and residential aspects. Includes commercial drawings, steel framing, exterior and interior finishes, roofing applications, door hardware installation, drywall, drywall finishing, suspended ceilings, window, door, floor, and ceiling trim. Students construct, erect, install, and repair structures and fixtures made from wood and other materials.	Prerequisites: A grade of C or better in CON110, or (CON110AA, CON110AB, and CON110AC), or permission of Instructor.		Occ	L+L 9.0 12.0 12.0	T

CON213	2020 Summer	Carpentry: Steel Framing		The layout and construction procedures for steel framing, including: interpretation of construction drawings and specifications; selection of appropriate types of steel framing components; and application of materials. Includes estimation of the amount of materials needed for a steel assembly.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
CON214	2020 Summer	Carpentry: Roof Systems and Building Envelopes		Safety, codes, and construction procedures for roof systems and building envelopes, including interpretation of construction drawings and specifications. Students construct conventional roof structures and ceilings, and install exterior finish materials.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CON215	2020 Summer	Carpentry: Interior Finishes		The layout and construction procedures for interior finishes such as: drywall, trim, doors, cabinetry and stairs, including interpretation of construction drawings and specifications. Provides an overview of construction methods, the different types of materials, and estimation of materials.	Prerequisites: None.		Occ	L+L 4.0 5.0 5.0	T
CON216	2020 Summer	Carpentry: Concrete Forms		Safety, codes, and construction procedures for layout and construction of concrete footers and post-tensioned slabs, wall forms, and columns. Includes interpretation of construction drawings and estimation of materials.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CON220	2022 Spring	Statics Application for Construction		Emphasis on response of bodies to the action of forces. Elementary analytical and practical approach to the principles and physical concepts of statics. Focus on mastery of basic principles of trigonometry, application of vectors and forces, and moments, with analysis of basic structures and structural components, and statics application to construction.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CON221	2022 Fall	Applied Statics		Emphasis on response of bodies to the action of forces. Elementary	Prerequisites: A grade of C or better		Occ	LEC 3.0	S

				analytical and practical approach to the principles and physical concepts of statics, focuses on mastery of basic principles of trigonometry, application of vectors and forces, and moments, with analysis of basic structures and structural components, trusses, shear and moment diagrams, centroids, and moments of inertia.	in MAT15+, (MAT182 OR MAT187) and PHY111.			3.0 3.0	
CON222	2024 Fall	Construction: Advanced Plumbing		Examines the safety, codes, components, installation, and repair of fixtures, appliances, and gas piping. Introduces water supply and distribution, drain, waste, and vent (DWV), and energy efficient water devices.	Prerequisites: A grade of C or better in CON122, or (CON122AA, CON122AB, and CON122AC), or permission of Instructor.		Occ	L+L 9.0 12.0 12.0	T
CON223	2018 Fall	Strength of Materials		Strength and application of materials of construction, including mechanics of beams, shafts, and bolted and welded connections under various loading conditions. Construction behavior of various materials externally and internally.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CON224	2020 Summer	Plumbing: Pipe Systems and Controls		Examines applied calculations to determine size, types and service of pipe systems. Discusses the application of drawings, codes, and specifications for assembly and installation of gas, air, and water systems.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CON225	2020 Summer	Plumbing: Water Disposal Systems		Examines water disposal and drainage systems, to include the types, components, functions, codes, safety, design, installation and repair.	Prerequisites: None.		Occ	L+L 4.0 5.0 5.0	T
CON226	2020 Summer	Plumbing: Fixtures and Appliances		Examines the safety, codes, installation, maintenance, and repair of appliances, fixtures, and gas piping.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CON227	2020 Summer	Plumbing: Water Resource Solutions		Introduces water supply disinfection, filtration systems, and sustainable water practices.	Prerequisites: None.		Occ	L+L 2.0 2.0 2.0	T
CON232	2024 Fall	Construction: Advanced Electrical		Overview of residential, commercial, and industrial electrical advanced applications and components such as	Prerequisites: A grade of C or better in CON132, or		Occ	L+L 9.0	T

				power distribution and transmission, motors and motor controls, and wiring applications. Includes testing and troubleshooting methods for electrical systems.	(CON132AA, CON132AB, and CON132AC), or permission of Instructor.			12.0 12.0	
CON234	2020 Summer	Electric Power Distribution		Theory and applications of distribution of power from utilities to residential and commercial sites, including transformers and commercial electrical distribution equipment and services. Includes safety, codes, and interpretation of construction drawings and specifications.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CON235	2020 Summer	Motors: Theory and Application		Describes motor and motor controls in electricity. Explains how to select and install relays and troubleshoot control circuits. Distinctions between AC and DC motors, motor speed control, and design and operation characteristics, connections and terminal markings.	Prerequisites: None.		Occ	L+L 4.0 5.0 5.0	T
CON236	2020 Summer	Industrial Wiring Applications		A broad variety of electrical wiring applications, including healthcare facility, heating, ventilation and air conditioning (HVAC), standby, emergency, and fire alarm systems.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
CON241	2018 Fall	Surveying I		Fundamental surveying principles including theory and field work using the level and transit, horizontal measurement by tape or stadia, benchmark and profile leveling traverse surveys and computations, establishment of line and grade. Designed to develop semi-professional personnel working for private or government engineering agencies.	Prerequisites: None.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
CON243	2018 Fall	Heavy Construction Equipment, Methods, and Materials		Fundamentals of machine selection and production estimating, using computer-generated data to develop programs that speed the decision process or allow easy analysis of multiple options used in the heavy construction industry. Applications of engineering principles in analyzing economical approaches for heavy construction. Covers fleet operation,	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				methods, maintenance, and programs for construction of dams, tunnels, roads, and excavations of buildings.					
CON244	2018 Fall	Working Drawing Analysis: Blueprint Reading		Detailed analysis and interpretation of construction drawings (blueprint reading); interpretation of symbols, annotations, conventions, terms of trade; and understanding of drawing, dimensioning, plan organization, and specifications.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CON251	2018 Fall	Microcomputers for Constructors		Effective application of computers in support of construction management, administration, and technical aspects of the construction industry. Uses of the computer as a problem-solving tool, including multimedia software, information management, and spreadsheet applications in construction.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CON252	2018 Fall	Building Construction Methods, Materials, and Equipment		Comprehensive study of construction methods, materials, codes, and equipment used in building construction.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CON262	2018 Fall	Introduction International Residential Code (IRC)		Covers International Residential Code for various trades, including building, mechanical, plumbing and electric, for one and two family residential construction. Preparation for voluntary certification (IRC building inspection).	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CON263	2018 Fall	Building Codes		Designed specifically to acquaint students with safety principles of building construction under the Uniform Building Code, including structural requirements for wood, masonry and concrete, fire resistance of building construction, fire resistant materials, and ratings and occupancy requirements.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CON271	2018 Fall	Construction Safety		Overview of safety methods and procedures for accident prevention and equipment used by construction workers to maximize field safety during various phases of a construction project, including requirements and regulations for	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				construction safety set by Occupational Safety and Health Administration (OSHA) standards along with biological aspects of construction safety.					
CON273	2018 Fall	Electrical Construction Fundamentals		General knowledge of electrical work related to construction management, administration, and technical aspects of the construction industry. Covers circuits and machinery, power transmission, and electrical distribution with emphasis on secondary distribution systems as well as measurement and instrumentation, Ohm's Law, low voltage, high voltage, temporary power, generators, service, systems, circuits, motors, transformers, electrical installations, codes, cogeneration, energy conservation, estimating, safety and related blueprint readings.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CON290AA	2019 Spring	Construction Internship	CNS290AA	Construction internship office/field experience with private/public agencies or citizen volunteer groups. Eighty (80) hours of designated work experience.	Prerequisites: Permission of Department or Division.	CON/CNS 290AA may be repeated for a total of three (3) credits. Standard grading available according to procedure s outlined in college catalog.	Occ	LAB 1.0 6.0 0.0	C
CON290AB	2019 Spring	Construction Internship	CNS290AB	Construction internship office/field experience with private/public agencies or citizen volunteer groups. One hundred and sixty (160) hours of designated work experience.	Prerequisites: Permission of Department or Division.	Standard grading available according to procedure s outlined	Occ	LAB 2.0 12.0 0.0	C

						in college catalog.			
CON290AC	2019 Spring	Construction Internship	CNS290AC	Construction internship office/field experience with private/public agencies or citizen volunteer groups. Two hundred and forty (240) hours of designated work.	Prerequisites: Permission of Department or Division.	Standard grading available according to procedures outlined in college catalog.	Occ	LAB 3.0 18.0 0.0	C
CON298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
CON298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
CON298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z

				combined to maximize student development.					
COS104	2024 Fall	Hair Essentials I		Introduction to the basic theory and procedures in cosmetology hair essentials.	Prerequisite: Program admission.		CLK	200	
COS106	2024 Fall	Hair Essentials II		Hair-shaping techniques and chemical application procedures in cosmetology hair essentials.	Prerequisites: COS104 with a grade of 80% or better, or Program Manager's approval.		CLK	200	
COS114	2024 Fall	Student Salon I		Continuation of cosmetology theory and practical concepts at an intermediate level. Theory will be focusing on professional development, salon ecology, anatomy and hair decisions. Practical skills will be demonstrated daily on clients and manikins. Rubrics on procedures are done monthly. One day a month on Arizona state board licensure focus.	Prerequisites: COS112 or COS106 with a grade of 80% or better, or Program Manager's approval.		CLK	200	
COS116	2024 Fall	Student Salon II		Apply concepts learned in the classroom and the student salon to develop real life scenarios while servicing a client and/or becoming a future business owner in the beauty industry.	Prerequisites: COS114 with a grade of 80% or better, or Program Manager's permission.		CLK	200	
COS118	2024 Fall	Hair Stylist State Licensure Focus		This course is designed to prepare students for the written and practical examinations for the Arizona Barbering and Cosmetology Board (BCB) HAIRSTYLIST licensure only.	Prerequisites: COS116 with a grade of 80% or better, or Program Manager's approval.		CLK	200	
COS119	2024 Fall	Nail Essentials		Introduction to nail services in the beauty industry.	Prerequisites: COS116 with a grade of 80% or better, or Program Manager's permission.		CLK	200	
COS212	2024 Fall	Skin Essentials		Introduction to skin services in the beauty industry.	Prerequisites: COS119 with a grade of 80% or better, or Program Manager's approval.		CLK	200	
COS214	2024 Fall	Student Salon III		Prepares cosmetology students to be industry ready and prepared to perform services in their chosen field of expertise after licensure with the	Prerequisites: COS212 with a grade of 80% or better, or Program Manager's permission.		CLK	200	

				Arizona Barbering and Cosmetology Board.					
COS218	2024 Fall	Cosmetology State Licensure Focus		This course is designed to prepare cosmetology students for the written and practical examinations for Arizona Barbering and Cosmetology Board (BCB) Cosmetology licensure.	Prerequisites: COS214 with a grade of 80% or better, or Program Manager's permission.		CLK	100	
COS250	2021 Fall 1	Instructor in Training Orientation		Students will be introduced to the Arizona State Board of Cosmetology instructor safety and sanitation, rules and regulations. This class is to prepare a student to become an instructor in their licensed field.	Prerequisites: 1. Must hold current Arizona State Board of Cosmetology License in good standing, in the appropriate field. 2. Must have one year of industry work experience.		CLK	80	
COS251	2019 Fall 1	Instructor in Training I		Students will train to become an instructor in their certified field of cosmetology or aesthetics. Students will learn the fundamentals of becoming an instructor by completing assigned work, shadowing instructors, creating lesson plans, coaching students and working hands-on with students and clients.	Prerequisites: COS250.		CLK	135	
COS252	2019 Fall 1	Instructor in Training II		Students will continue to train to become an instructor in their certified field of cosmetology or aesthetics. Student will learn the fundamentals of becoming an instructor by completing assigned work, shadowing instructors, creating lesson plans, coaching students and working hands-on with students and clients. State board preparation for licensing.	Prerequisites: COS251.		CLK	135	
COV110	1997 Summer I	The Seven Habits of Highly Effective People		Development of interpersonal habits that are used by successful people in their personal and professional lives. Seven Habits of Highly Effective People. Video-based lecture course.	Prerequisites: None.	Under the terms and conditions specified in the licensing agreement with the Franklin Covey Company	Occ	LEC 2.0 2.0 2.0	S

						and the the Maricopa Community College District, only those persons licensed are qualified to teach Covey prefix courses. These facilitators must be identified within the terms of the licensing agreement.			
COV112	2016 Fall	Great Leaders, Great Teams, Great Results		Overview of foundational characteristics of great teams and organizations. Process oriented approach to creating strategies for inspiring trust and building credibility, defining a purpose, aligning systems of success, and unleashing talents of teams.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CPD101	1994 Fall	Personal Development		Designed to assist students in developing confidence in making personal, social, and educational decisions. Examination and assessment of individual needs, interests, abilities and values to develop and strengthen interpersonal communication, enhance transitional skills and identify realistic life planning goals	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD102AA	2002 Summer I	Assertiveness Training		Designed to help students, differentiate assertive, non-assertive and aggressive behavior, overcome	Prerequisites: None.		Acad	LEC 2.0	S

				blocks to acting assertively, establish boundaries, and develop effective verbal and nonverbal assertive behavior. Group discussion, role playing, and videotape feedback are used to enable students to express feelings, beliefs, and opinions in a direct appropriate manner				2.0 2.0	
CPD102AB	2019 Fall	Career Exploration		Designed to assist students make informed career decisions. Focuses on current occupational trends and outlook. Explores career-related interests, values, needs, preferences, skills, and strengths with the use of various assessments. Aids in the development of individualized educational/career goals and action plan.	Prerequisites: None.	CPD102A B may be repeated for a total of six (6) credit hours.	Acad	LEC 2.0 2.0 2.0	S
CPD102AC	2017 Fall	Creative Job Hunting		Assists students in gaining skills and confidence necessary to compete in the job market. Emphasis on job search techniques and strategies, resume and cover letter writing, interviewing skills and professional etiquette.	Prerequisites: None.	CPD102A C may be repeated for credit.	Acad	LEC 2.0 2.0 2.0	S
CPD102AD	2018 Fall	Growth and Transformation Strategies		Designed to help students adopt a growth mindset within a holistic framework in order to transform patterns that prevent them from achieving their goals.	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD102AF	2019 Fall	Human Sexuality		Enables students to view gender and sexuality as dimensions of personal identity, and explores intersectionality between multiple identities. Examination of differences between identify expression, behavior, and biological influences, tracing social evolution from masculine-feminine dichotomy to non-binary perspectives.	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD102AH	2020 Fall	Stress Management		Reviews the sources of stress, the physiological effects and the psychological impact of stress on the individual. Provides strategies to manage and reduce stress. Helps students develop and understand behaviors to create a healthy balance	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

				in their lives by studying the biological, psychological, physiological, and social aspects of stress and wellness.					
CPD102AJ	2000 Spring	Personal Spiritual Development		Designed to encourage exploration of human spirituality. Focus on personal values and individual belief systems. Emphasis on developing an integrated concept of spirituality and applying it to one's own life	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD102AN	2002 Fall	Anger Management		Provides an understanding of the emotion of anger, explores the types, origins and typical reactions to anger. Covers stress and the need for stress management in relation to anger. Examines personal anger patterns and feelings, and the use of effective interpersonal communications in effective anger management	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD102AR	1995 Summer I	Relaxation Training		Emphasis on specific relaxation techniques to alleviate dysfunctional tension. Use of progressive relaxation methods to reduce stress. Discussion of other modalities of relaxation	Prerequisites: Permission of Instructor.		Acad	LEC 1.0 1.0 1.0	S
CPD102AS	1998 Spring	Conflict Resolution		Developing new skills for dealing effectively with everyday conflict and improving quality of one's own life. Opportunity to discuss issues and seek cooperative resolutions	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD102AT	1998 Spring	Building Self-Esteem		Practice in specific methods for building and keeping self-esteem. Personal assessment of attitudes, values, support systems, and goals	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD102AU	2007 Fall	Introduction to Meditation: Vipassana Practice		Introduction to the practice of Vipassana (Insight) Meditation. Focus on the history, benefits and methodology of Vipassana meditation. Special emphasis on establishing a formal and informal meditation practice	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CPD103BA	2023 Fall	Women In Transition		Designed to assist and support women who are experiencing life transitions. Emphasis on assessing self-potential, increasing self-confidence, managing life change, and exploring education/career/life	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S

				options in terms of the realities of roles for women today.					
CPD103BB	1995 Spring	Men in Transition		Designed to assist men who are experiencing life transitions. Emphasis on assessing potential, increasing self-confidence, managing change, exploring educational/career options, and exploring mens' roles in a changing society	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD103BC	2003 Fall	African American Cultural Pride and Awareness		Develop an awareness of cultural roots, history, and traditions with emphasis on the shaping of personal identity, social, career, and educational decisions	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD103BD	2003 Fall	Latino/Hispanic American Pride and Awareness		Develop an awareness of cultural roots, history, and traditions with emphasis on the shaping of personal identity, social, career, and educational decisions	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD103BE	2003 Fall	Native American Cultural Pride and Awareness		Develop an awareness of cultural roots, history, and traditions with emphasis on the shaping of personal identity, social, career, and educational decisions	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD103BG	2003 Fall	Asian American Cultural Pride and Awareness		Develop an awareness of cultural roots, history, and traditions with emphasis on the shaping of personal identity, social, career, and educational decisions	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD103BH	1994 Fall	Male-Female Communication		Designed to provide students with a better understanding of male-female characteristics and how that along with a renewed emphasis on basic communication skills will improve communication between the sexes	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD103BJ	1996 Spring	Dynamic Parenting		Designed to provide students with an understanding of parenting dynamics and effective communication between parents and children. Emphasis on building self-esteem, developing coping skills, behavior modification, and other techniques for improving parenting and communication in a variety of circumstances	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S

CPD103BL	2012 Summer I	Dynamics of Leadership		Designed to provide strategies that may be used when assuming leadership roles. Focus on improving self-confidence through the development of appropriate behaviors, problem-solving skills, and techniques of leadership.	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD103BV	2007 Summer I	Personal Development for Military Veterans		Assist military veterans in examining role changes, values, strengths, resources, career, readjustment and lifestyle choices. Strategies for coping with life changes, stress, and other personal development needs in transitioning into civilian life	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
CPD104	2019 Fall	Career and Personal Development		An overview of the holistic process of career/life planning through self-awareness and understanding of the world of work. Exploration and application of behavioral, social, and cultural factors leading to college, career, and personal success with emphasis on assessment, applied behavior management, motivation, self-care, and career development.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CPD108	2006 Spring	Personal Money Management for College Students		Designed to assist students in examining values related to spending, borrowing and saving money. Identify financial priorities and responsibilities associated with debt. Develop and follow a personal budget plan and learn strategies for maintaining a financially balanced personal life	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CPD115	2007 Fall	Creating College Success	AAA115	Strategies to create success in college. Methods for selecting and developing effective academic strategies, increasing self-awareness and developing self-management strategies. Elements of college resources and relationships with others explored in support of students' educational experience	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CPD125	2023 Fall	Employee Development: Problem Solving/Decision Making		Development of decision-making skills as well as techniques for problem solving. Focus on values and value conflicts as related to decision-making. Also includes establishing	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S

				short and long-term goals for personal and career development.					
CPD150	2017 Spring	Strategies for College Success	AAA150	Focus on increasing student success through college orientation and personal growth, study skills development, and educational and career planning.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CPD150AA	2021 Fall	College Orientation and Personal Growth		Emphasis on increasing student success through college orientation, identification of learning style and the use of time management, goal-setting, and interpersonal communication strategies	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CPD150AB	2021 Fall	Study Skills Development		Emphasis on increasing student success through the use of study strategies including materials organization, note-taking, reading, test-taking, memory, and critical and creative thinking	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CPD150AC	2019 Fall	Educational and Career Planning	AAA150AC	Emphasis on increasing student success through educational and career planning.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CPD160	2013 Fall	Introduction to Multiculturalism		Examination of the multiple cultures and subcultures within the contemporary United States. Personal exploration of awareness and appreciation of multiculturalism. Activities for experiencing diverse cultural perspectives. Critical thinking skills for recognizing, analyzing, and mediating cultural and psychological factors impacting conflict and accord between diverse cultures through written and oral discourse.	Prerequisites: A grade of C or better in ENG101, or ENG107, or permission of Instructor.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
CPD180	2021 Fall	Human Resilience: Cognitive, Emotional, and Behavioral Applications		Exploration of human resilience and well-being within the context of personal, academic, and career life. Focus on enhancing quality of life, and improving academic performance and career success through awareness of behavior, cognition, and	Prerequisites: None.	Course Attribute(s): General Education Designation: Social-Behavioral	Acad	LEC 3.0 3.0 3.0	S

				emotion as well as the practice of self-regulation. Topics include mindfulness, positive psychology, motivation, effective thinking, applied neuroscience, mental and emotional health and self-care.		Sciences - [SB]			
CPD195AA	2001 Spring	Special Topics: Counseling and Personal Development		Introduction to current topics and contemporary issues related to promoting and enhancing personal development	Prerequisites: None.		Acad	LEC 0.5 0.5 0.5	S
CPD195AB	2001 Spring	Special Topics: Counseling and Personal Development		Introduction to current topics and contemporary issues related to promoting personal development. Focuses on a variety of techniques and strategies to improve personal and interpersonal effectiveness	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
CPD250	2018 Fall	Peer Mentor Training		Development and application of beginning skills and knowledge required to establish and maintain effective peer helping relationships in a college setting. Focus on the role, function, and responsibilities of the peer mentor; verbal and nonverbal communication skills; problem solving; and strategies and resources for first-year student success. Includes on-campus service-learning component.	Prerequisites: Completion of 24 credit hours (100-level or above) with a B grade point average or better and permission of Instructor.		Acad	L+L 3.0 4.0 4.0	T
CPD282AA	1993 Fall	Volunteerism for Counseling and Personal Development: A Service Learning Experience		Service-learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	CPD282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
CPD282AB	1993 Fall	Volunteerism for Counseling and Personal Development		Service-learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	CPD282A B may be repeated	Acad	LAB 2.0	L

		ment: A Service Learning Experience				for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.		2.0 0.0	
CPD282AC	1993 Fall	Volunteerism for Counseling and Personal Development: A Service Learning Experience		Service-learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	CPD282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
CPD298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
CPD298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z

				for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
CPD298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
CPT110	2020 Fall 1	Carpentry: Floor Systems		Course covers the layout and construction procedures for floor systems, including: interpretation of construction drawings and specifications; selection of appropriate types of floor system components; and application of floor system materials. Course also includes estimation of the amount of materials needed for a floor assembly and some common alternative floor systems.	Prerequisites: None.		CLK	81	
CPT111	2020 Fall 1	Carpentry: Wall Systems		Course covers the layout and construction procedures for wall systems, including: interpretation of construction drawings and specifications; selection of appropriate types of wall system components; and application of wall system materials. Course also includes estimation of the amount of materials needed for a wall assembly and some common alternative wall systems.	Prerequisites: None.		CLK	81	
CPT112	2020 Fall 1	Carpentry Ceiling Joist and Roof Framing		Covers the layout and construction procedures for roof systems, including interpretation of construction drawings and specifications. Provides an overview of ceiling and roof	Prerequisites: None.		CLK	102	

				construction methods, the different types of roofs used in residential construction, materials, estimation of materials, and the use of trusses in basic roof framing.					
CPT213	2020 Fall 1	Carpentry: Steel Framing		Course covers the layout and construction procedures for steel framing, including: interpretation of construction drawings and specifications; selection of appropriate types of steel framing components; and application of materials. Course also includes estimation of the amount of materials needed for a steel assembly.	Prerequisites: None.		CLK	41	
CPT214	2020 Fall 1	Roof Systems and Building Envelopes		Course covers the safety, codes, and construction procedures for roof systems and building envelopes, including interpretation of construction drawings and specifications. Students construct conventional roof structures and ceilings, and install exterior finish materials.	Prerequisites: None.		CLK	81	
CPT215	2020 Fall 1	Carpentry: Interior Finishes		Course covers the layout and construction procedures for interior finishes such as: drywall, trim, doors, cabinetry and stairs, including interpretation of construction drawings and specifications. Provides an overview of construction methods, the different types of materials, and estimation of materials.	Prerequisites: None.		CLK	102	
CPT216	2020 Fall 1	Carpentry: Concrete Forms		Course covers the safety, codes, and construction procedures for layout and construction of concrete footers and post-tensioned slabs, wall forms, and columns. Includes interpretation of construction drawings and estimation of materials.	Prerequisites: None.		CLK	81	
CRA290	2014 Fall	Introduction to Clinical Research Associate		Introduction to the Clinical Research Associate (CRA) profession as an advanced career path for clinical research coordinators. Topics include CRA role, career development, study development process, monitoring, training and oversight, and	Prerequisites: Bachelor or higher degree in life/health sciences and permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S

				regulations. Effective analysis, synthesis, and evaluation of topics through written discourse.					
CRA291	2010 Fall	Monitoring		Basic monitoring skills and responsibilities required of the Clinical Research Associate (CRA). site selection and Initiation, routine monitoring and close-out visits; audit techniques and preparations; expectations and professionalism; monitoring plans, Standard Operating Procedure (SOP) adherence, training of sites, travel expectations and conduct; sponsor interactions (acting as a liaison); source document verification; review of patient charts; use of electronic systems; monitoring reports and letters; adverse event monitoring and reporting; recruitment and retention.	Prerequisites: A grade of C or better in CRA290.		Occ	LEC 4.0 4.0 4.0	S
CRA293	2010 Fall	Clinical Study Development		Introduction to the Clinical Study Development Process and various roles of a Clinical Research Associate (CRA). Roles and responsibilities of in-house CRA versus Field CRA support, timelines of Clinical Study Development, overview of the ABC model, drug versus device study development and national and international considerations.	Prerequisites: A grade of C or better in CRA290.		Occ	LEC 3.0 3.0 3.0	S
CRA295	2010 Fall	Ethics and Regulations		Overview of the regulations, guidelines and resources associated with the Clinical Research Associate (CRA) role. Monitoring responsibilities, Code of Federal Regulations, International Conference of Harmonisation (ICH) guidelines, European Directives, Pharmaceutical Research and Manufacturers of America (PhRMA) principles, Food and Drug Administration (FDA) Guidelines for the Monitoring of Clinical Investigations and sponsor responsibilities for conduct of clinical trials and approval.	Prerequisites: A grade of C or better in CRA290.		Occ	LEC 3.0 3.0 3.0	S

CRA297	2010 Fall	Clinical Trial Material and Device Accountability		Overview of Clinical Trial Material (CTM) from development and manufacturing to accountability and destruction along with comparable device processes. Roles of a Clinical Research Associate (CRA) relative to Clinical Trial Materials/Devices. Investigational New Drug (IND) applications, good manufacturing practices, importing and exporting of CTMs/devices, packaging and stability, accountability records, destruction requirements and review of regulatory considerations.	Prerequisites: A grade of C or better in CRA290.		Occ	LEC 3.0 3.0 3.0	S
CRC101	2024 Spring	Introduction to Clinical Research		Introduction to the clinical research process. History, development and basic study designs in varied health, biomedical and biotechnical settings. Clinical trial development phases and regulatory protection for human subjects. Roles and responsibilities of the clinical research team and research organization. Good Clinical Practice (GCP) and International Committee on Harmonization (ICH) guidelines. Functions, research terminology, and general research funding of the Institutional Review Board (IRB) and Ethics Review Committee.	Prerequisites: None.		Occ	LEC 4.0 4.0 4.0	S
CRC102	2024 Spring	Clinical Research Regulations		Overview of legal and regulatory research compliance. Federal and international regulations, Good Clinical Practice (GCP) and International Council on Harmonization (ICH) guidelines. Roles, responsibilities and related regulations of Institutional Review Boards (IRB), Data Monitoring Boards and research organizations. Required forms, human subject protection, research integrity, ethical considerations, Health Insurance Portability and Accountability Act (HIPAA) and conflict of interest issues.	Prerequisites: None.		Occ	LEC 4.0 4.0 4.0	S

CRC103	2024 Spring	Research Design and Data Management		Major research design methodologies and data management. Interpretation of research design, organization of study charts and data, participant eligibility, and maintenance of screening/visit logs. Submission of adverse event forms. Overview of database structures, electronic data collection methods, and effective presentation of data in required reports. Tracking of investigational agents and preparation for audits and site visits by sponsors and/or regulators. Federal regulations governing clinical trials electronic data submissions and transmissions.	Prerequisites: None.		Occ	LEC 4.0 4.0 4.0	S
CRC104	2023 Fall	Clinical Data Coordination Practicum I		Application of clinical data coordinator skills and functions in various clinical and research settings. Observation of approved investigational or research site activities and personnel as assigned or deemed appropriate by Supervisory Staff, applicable standard operating procedures and/ or Program Director. Forty (40) hours of supervised clinical data coordinator experience in a clinical research setting.	Prerequisites: Admission into the Clinical Data Coordination program or the Clinical Research Coordinator program or permission of Program Director.	CRC104 may be repeated for a total of three (3) credit hours.	Occ	LAB 1.0 3.0 0.0	C
CRC151	2024 Spring	Introduction to Medical Devices in Clinical Evaluation		Introduction to the role of the Clinical Research Coordinator (CRC) in medical device research. Overview of medical device regulatory requirements, the role of the Institutional Review Board (IRB), and classification of medical devices including Humanitarian Device Exemptions. Special emphasis on conduct of an investigational study and roles of the investigator, CRC, and the IRB.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CRC152	2024 Spring	Research Ethics		History of human experimentation and bioethics. Fundamentals of ethical principles including autonomy, beneficence, nonmaleficence and justice. Practical application of moral sensitivity, moral reasoning, moral	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				commitment and perseverance, and moral implementation. Overview of ethical issues arising from biomedical research including informed consent, vulnerable populations, using children and animals for research, and placebos and sham surgery in research. Includes Institutional Review Board (IRB`s), conflict of interest, plagiarism and data fabrication.					
CRC153	2024 Spring	Institutional Review Board in Clinical Research		Examines the historical development, regulatory roles, responsibilities and functions of Institutional Review Board (IRB) membership and related stakeholder relationships. Comparisons of different IRB organizational and operational designs in relation to emerging technologies and implications for future research will be reviewed. Special emphasis on developing an understanding of the complexity of IRB roles, the implementation of state, national and international regulations and guidelines, and potential conflicts associated with the conduct of human research. Includes IRB functions, related regulations, ethical issues, current and future operational trends.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CRC160	2024 Spring	Clinical Research Site Management		Clinical research site organization, operation and management. Office setup, study initiation process, site maintenance, essential documentation requirements and binders, site evaluation and site closure. Understanding Institutional Review Boards (IRB) timeliness for submission, approval and study maintenance. Budget and contract negotiation, and sponsor and regulatory audit components and preparation. Coordination with sponsors and related research entities; investigative staff training.	Prerequisites: None.		Occ	LEC 4.0 4.0 4.0	S

				Organization of process flow and effective interactions with IRB, Contract Research Organizations, sponsors, regulators, investigators, and community.					
CRC204	2023 Fall	Clinical Research Coordination Practicum II		Application of clinical research coordinator skills and functions in various clinical research settings. Observation of approved investigational or research site activities and personnel as assigned or deemed appropriate by Supervisory Staff, applicable standard operating procedures and or Program Director. Eighty (80) hours of clinical research coordinator experience in a clinical research setting.	Prerequisites: Admission into the Clinical Research Coordination program or permission of Program Director.	CRC204 may be repeated for a total of six (6) credit hours.	Occ	LAB 2.0 6.0 0.0	C
CRE101	2021 Spring	College Critical Reading and Critical Thinking		Develop and apply critical thinking skills through critically reading varied and challenging materials. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG095 or RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRE101AT	2021 Spring	College Critical Reading and Critical Thinking in Applied Technology		Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in applied technology. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG095 or RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S

CRE101BM	2021 Spring	College Critical Reading and Critical Thinking in Business, Entrepreneurialism and Management		Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in business, entrepreneurialism and management. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG095 or RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRE101BS	2021 Spring	College Critical Reading and Critical Thinking in Behavioral Sciences and Human Services		Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in behavioral sciences and human services. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG095 or RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRE101CS	2021 Spring	College Critical Reading and Critical Thinking in Culture and Society		Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in culture and society. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG095 or RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRE101CT	2021 Spring	College Critical Reading and Critical Thinking in Computer		Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in computer	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and		Acad	LEC 3.0 3.0 3.0	S

		Information Technology		information technology. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	(RDG095 or RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.				
CRE101ED	2021 Spring	College Critical Reading and Critical Thinking in Education		Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in education. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG095 or RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRE101HS	2021 Spring	College Critical Reading and Critical Thinking in Health Sciences		Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in health sciences. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG095 or RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRE101SM	2021 Spring	College Critical Reading and Critical Thinking in STEM		Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in science, technology, engineering, and mathematics (STEM). Includes analysis, evaluation, interpretation, and synthesis through at least two	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG095 or RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a		Acad	LEC 3.0 3.0 3.0	S

				substantial writing and/or speaking tasks.	grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.				
CRE101VA	2021 Spring	College Critical Reading and Critical Thinking in Visual and Performing Arts		Develop and apply critical thinking skills through critically reading varied and challenging materials relevant to current issues in visual and performing arts. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in [(ENG101 or ENG107) and (RDG095 or RDG100 or RDG100LL or RDG111 or RDG112 or RDG113)] or a grade of B or better in ALT100 or an appropriate district placement or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRE201	2019 Spring	Critical Reading and Writing in a Global Society		Critical evaluation of writings of authors from a variety of countries and cultures in order to gain a more global perspective of both universal and contemporary issues. Analysis, synthesis, and evaluation of various contemporary cultural viewpoints through at least two substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in (ENG101 or ENG107) and (CRE101 or exemption by score on the reading placement test).	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
CRE298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z

				combined to maximize student development.					
CRE298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
CRE298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
CRP101	2021 Fall	Orientation - Carpenter Apprenticeship		Fundamental trade skills, employee-employer roles and responsibilities, and safe work practices needed for entry level performance in the construction industry. Emphasis on attaining standard industry safety credentials, practical experience using construction terminology, math and basic measuring techniques. Training for job site hazard recognition, accident prevention, safe tool and equipment operation.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP102	2022 Spring	Safety/Health Certifications for Carpentry - Carpenter Apprenticeship		Promotes hand/power tool and equipment skill development for various construction applications. Scaffold building and equipment operating procedures will also be covered. Financial and life skills will be presented to help survive in the construction industry. Upon	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T

				successful completion, students will be issued United Brotherhood of Carpenters (UBC) Scaffold Erector-Welded Frame Qualification Card.					
CRP102AI	1995 Spring	Concrete Formwork: Concrete Stair Forms		Building stair forms from shop drawings; basic terminology related to stair form construction	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.5 1.5	A
CRP102AJ	2021 Fall	Tilt-Up Construction I - Carpenter Apprenticeship		Building a form for a tilt-up slab for commercial structures complete with all necessary inserts and block-outs for openings.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.5 1.5	T
CRP102AN	2010 Spring	Concrete Formwork: Culverts, Headwall and Wingwalls		Box culvert design, form systems, areas, volumes and pressures. Culvert headwall, side walls and wingwall forms using a single and double whaler assembly. Concrete industry nomenclature.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	A
CRP102AP	1995 Spring	Concrete Formwork: Gang Forms		Building and plumbing a section of gang form using a standard whaler system complete with all the necessary components and hardware	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.5 1.5	A
CRP103	2022 Spring	Tool and Equipment Applications - Carpenter Apprenticeship		Safe and appropriate use of fall protection and emergency response procedures. Tool applications presented in this training will provide opportunities for tool skill mastery and equipment operation.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP103AI	1995 Spring	Framing: Wood Stairs		Building a set of stairs consisting of two flights and a landing from a given set of working drawings	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.5 1.5	A
CRP104	2021 Fall	Basic Wall Framing - Carpenter Apprenticeship		Theory, methods, and procedures required to frame basic walls. Hands-on practice using proper tool techniques and appropriate materials. Introduction to print reading, basic wall layout, plating procedures, framing assembly and bracing.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T

CRP105AC	1995 Spring	Interior Finish: Running Trim		Building a small frame trimmed out with a variety of moldings according to a set of shop drawings	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.5 1.5	A
CRP105AG	1995 Spring	Interior Finish: Door Hardware		Installation of door hardware including knob, latch, strike plate, hinge butts, and door closer.	Prerequisites: Registered Apprentice Status and a grade of C or better in CRP105AA or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.5 1.5	A
CRP105AI	1995 Spring	Interior Finish: Metal Partitions		Assembling metal partition unit complete with all panels and hardware	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.5 1.5	A
CRP105AJ	1995 Spring	Interior Finish: Soffit Panel		Building a soffit panel with trim and detailed projections as shown on a set of shop drawings	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.5 1.5	A
CRP106AA	1995 Spring	Interior Systems: Metal Frame Walls		Tools, materials, components and erection procedures of metal frame walls and soffits as shown per shop drawings	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.5 1.5	A
CRP106AB	1995 Spring	Interior Systems: Dry Wall Application		Tools, materials and installation procedures for dry wall application.	Prerequisites: Registered Apprentice Status and a grade of C or better in CRP106AA or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.5 1.5	A
CRP106AH	1995 Spring	Interior Systems: Dry Wall Estimation of Material		Reading and interpreting blueprints and shop drawings to estimate the amount of material needed for a dry wall project	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.5 1.5	A

CRP106AK	2022 Spring	Interior Systems: Suspended Lay-In Ceilings - Carpenter Apprenticeship		Tools, materials, components, and erection procedures for suspended lay-in ceilings	Prerequisites: Registered Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.0 1.5 1.5	A
CRP108	2021 Fall	Moldings and Trim - Carpenter Apprenticeship		Course covers how moldings and trims are utilized to finish exterior and interior construction design features.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP110AA	2002 Fall	Introduction to Carpentry I: History and Tools		History, significance and benefits of labor unions. Successful and efficient labor relations. Carpentry in relation to other construction trades. Building trades organizations. Components of lumber. Hand and power tools used in carpentry.	Prerequisites: Registered Apprentice status with the Central Arizona Carpenters Joint Apprenticeship Training Committee or permission of Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	S
CRP110AB	2002 Fall	Introduction to Carpentry II: OSHA Safety		Safe and proper use of hand and power tools. Safe work habits, first aid, and cardiopulmonary resuscitation (CPR) according to Occupational Safety and Health Administration (OSHA) regulations.	Prerequisites: Registered Apprentice status with the Central Arizona Carpenters Joint Apprenticeship Training Committee or permission of Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	S
CRP113	2021 Fall	Basic Roof Framing - Carpenter Apprenticeship		Introduction to basic gable roof framing, terminology, characteristics, and construction methods. Interpretation of print views and drawing elevations for job planning, rafter systems, and layout details. Review of basic rise, run, rafter angles, and length calculations. Framed wall construction to facilitate gable roof assembly techniques.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP114AA	2002 Fall	Blueprint Reading for Carpenters I		Types of blueprints and basic print reading. Symbols for materials. Construction details, standards, and specifications for brick veneer. Steel	Prerequisites: Registered Apprentice status with the Central Arizona Carpenters		Occ	LEC 2.0 2.0 2.0	S

				supports of plans for stores and apartments.	Joint Apprenticeship Training Committee or permission of Apprenticeship Coordinator.				
CRP116AA	2005 Fall	Concrete Formwork I		Construction and installation techniques. Building site and layout factors. Parts of forms and related hardware. Function of concrete form work in walls, columns, beams, decks and retaining walls. Wall forms and prefabricated walls. Residential foundations.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	S
CRP116AB	2005 Fall	Concrete Formwork II		Construction and installation techniques. Elements of flatwork construction	Prerequisites: A grade of C or better in CRP116AA.		Occ	LEC 2.0 2.0 2.0	S
CRP121	2021 Fall	Print Reading for Carpenters - Carpenter Apprenticeship		Introduction to print reading skills for carpenters. Developing ability to interpret two-dimensional views, standard drawing methods, pictorial elements, visual and verbal communication cues. Recognizing parts of drawings, locating building and insulation features, calculating dimensions, and using views to determine construction methods.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP123	2021 Fall	Wall Forming - Carpenter Apprenticeship		Skills and procedures for forming reinforced concrete walls using single and double waler systems. Characteristics and application of built-in-place, prefabricated and specialty forms, wall forming, calculating layout dimensions and estimating. Overview of wall panel forming reinforcement methods, material preparation and hardware installation.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP124	2021 Fall	Foundations and Flatwork - Carpenter Apprenticeship		Design and function of several types of foundations and concrete flatwork. Overview of methods, techniques and procedures for formwork layout, elevation, and construction including jobsite safety, print interpretation, material identification and basic use of builders' level.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T

CRP130	2021 Fall	Basic Commercial Framing - Carpenter Apprenticeship		Introduction to basic rake wall framing theory and commercial construction techniques and materials.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
CRP131	2021 Fall	Commercial Floor Framing - Carpenter Apprenticeship		Course covers floor joist construction and the various installation techniques used in the commercial industry.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP150	2022 Spring	Acoustical Ceilings - Carpenter Apprenticeship		Introduction to basic acoustical ceiling installation in accordance with industry standards and utilizing proper techniques and procedures. Acoustical engineering and applicable building and seismic code requirements.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP151	2022 Spring	Standard Acoustical Grids - Carpenter Apprenticeship		Grid patterns considered standard for acoustical ceilings in the interior system construction industry. Methods and procedures used to form patterns. Students install several standard acoustical grid patterns to print specifications using proper techniques and procedures.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP152	2022 Spring	Acoustical Soffits - Carpenter Apprenticeship		Construction of acoustical soffits in various configurations. Square and slant-faced, tapered, concealed, drywall suspension, and sloped soffits methods. Students complete selected acoustical soffit installation.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T

CRP153	2022 Spring	Concealed Glue-Up/Staple-Up System - Carpenter Apprenticeship		Concealed and semi-concealed ceilings and soffits, glue-up and staple-up systems, and their design flexibility. Students employ glue-up/staple-up techniques to install a concealed grid ceiling system.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP154	2022 Spring	Metal Pan and Security Systems - Carpenter Apprenticeship		Design, function, and installation of metal pan and security systems incorporated into construction of suspended ceilings. Students install components to create a monolithic appearance in a suspension ceiling grid system.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP160	2022 Spring	Basic Lathing - Carpenter Apprenticeship		Advanced methods and application techniques for lath and trim products. Basic framing and lathing methods used for exterior/interior installations. Exterior waterproofing, lath, and trim installation procedures. Students complete an exterior lathing project.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP163	2022 Spring	Framing Ceilings and Soffits - Carpenter Apprenticeship		Materials and their application for various types of fire-rated walls, ceilings, and soffits. Methods and procedures used for layout and template development. Drywall and trim applications. Types of tools and their associated safety, applied math, and print reading fundamentals. Students complete a ceiling and soffit project.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay		Occ	L+L 3.0 3.0 3.0	T

					Apprenticeship Office.				
CRP164	2022 Spring	Basic Hand Finishing - Carpenter Apprenticeship		Basic hand finishing skills using correct tools and materials. Terminology and description of finishing levels, hand tool manipulation techniques, material identification, and selection criteria. Manufacturer's guidelines for environmental conditions, proper mixture preparation, and use. Typical finish issues, causes, and solutions frequently employed. Tool techniques and application sequence explained and demonstrated. Importance of mixture consistency and proper coating sequence during level four hand finishing exercises.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP165	2022 Spring	Framing Curves and Arches - Carpenter Apprenticeship		Framing methods for curves and arches and their related structural limitations. Various wall and ceiling types, layout principles, and materials used for each. Lath applications and trim. Students complete a framing project including curves and arches.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP166	2022 Spring	Automatic Finishing Tools - Carpenter Apprenticeship		Basic automatic tool techniques and finish schedule interpretation. Hands-on instruction with machine tools and the importance of proper use, assembly, and breakdown. Basic maintenance and repair techniques and safe handling demonstration. Sanding selections will be reviewed.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP167	2022 Spring	Exterior Insulation Finish Systems - Carpenter Apprenticeship		Introduction to exterior insulation finish systems including terminology, definitions, specifications, and properties. Reinforcing mesh	Prerequisites: Admission into the Southwest Carpenters Training		Occ	L+L 3.0 3.0 3.0	T

				installation and application of insulation board. Application methods and techniques for primers and finishes. Students complete an exterior insulation finishing system (EIFS) installation project.	Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.				
CRP202	2021 Fall	Basic Stairs - Carpenter Apprenticeship		Introduction to stair framing theory, terminology, and construction techniques.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP207	2021 Fall	Solar Installer Level I - Carpenter Apprenticeship		Design and installation of several types of solar panel systems. Methods, sequences, and procedures for layout, assembly, mounting, and elevating/positioning for solar array construction will be presented. Upon successful completion, students will receive a United Brotherhood of Carpenters (UBC) Solar Installer Level 1 Qualification Card.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
CRP210AA	2005 Fall	Basic Framing I		Construction and installation techniques. Floor framing and layout plate for specific spacing.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	S
CRP210AB	2005 Fall	Basic Framing II		Construction and installation techniques. Factors of weight, stress, tension, and compression. Truss connectors, bracing, and anchors. Gable, gambrel, hip, and shed roofs. Dormers. Intersecting roof. Roof trusses. Exterior deck. Fasteners, and connectors, and foundations	Prerequisites: A grade of C or better in CRP210AA.		Occ	LEC 2.0 2.0 2.0	S
CRP211	2021 Fall	Storefront Installations - Carpenter Apprenticeship		Installation process from constructing storefront openings to putting glass components into commercial storefront metal framing. An emphasis will be placed on print interpretation, window and door schedules, symbols, and material recognition.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP212AA	2002 Fall	Scaffolding for Carpenters		Occupational Safety and Health Administration (OSHA) regulations for	Prerequisites: Registered		Occ	LEC 2.0	S

				system scaffolding. Terminology, assembly procedures, platform safety and access, and dismantling of scaffolding. Scaffolding framework to include braces, tie-ins, and guylines.	Apprentice status with the Central Arizona Carpenters Joint Apprenticeship Training Committee or permission of Apprenticeship Coordinator.			2.0 2.0	
CRP212AB	2005 Fall	Level, Transit and Layout		Terminology, types, parts, handling, set up, care, storage, transport, and use of leveling instruments. Leveling rods, leveling operations, vernier scales, linear and angular measurement. Conventional system of measurement. Builder's level and transit level. Simulated fieldwork exercises.	Prerequisites: Registered Apprentice status with the Central Arizona Carpenters Joint Apprenticeship Training Committee or permission of Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	S
CRP212AC	2021 Fall	Rigging - Carpenter Apprenticeship		Lifting theory and practical rigging methods and procedures. Rigging attachment procedures, lifting equipment, limits of operation, and communication practices will be covered.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	S
CRP214AA	2021 Fall	Drywall Applications - Carpenter Apprenticeship		History, advantages, and applications of drywall and wall framing. Drywall products and wall framing for interior partition work. Safe tool use and jobsite safety. Blueprints, specifications, and layout. Standard framing for partitions. Drywall installation on metal framework. Suspended ceiling systems. Commercial and residential installation for fire resistance, sound control, and safety.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	S
CRP214AC	2005 Fall	Interior Finish: Door Installation and Hardware		Terms, tools, types of doors and door hardware. Installation procedures for doors and door hardware. Fabrication and installation of jam and trip components.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	S
CRP214AD	2005 Fall	Cabinets and Tops		Fundamentals, terms, tools, safety. Types of wood and glue. Case construction: joints, layout, cutting, assembly. Hardware, plastic	Prerequisites: Registered apprentice status or permission of		Occ	LEC 2.0 2.0 2.0	S

				laminates, completed cabinets, completed tops. Installation procedures.	Apprenticeship Coordinator.				
CRP215	2022 Spring	Drywall/Acoustical Ceilings - Carpenter Apprenticeship		Materials and methods used for acoustical ceilings combined with drywall installation. Seismic codes, materials, and construction requirements reviewed. Green building rating systems applied to selected acoustical and drywall materials. Installation for various grid systems. Students complete a drywall acoustical ceiling project.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP216	2022 Spring	Designer and Specialty Trims - Carpenter Apprenticeship		Specialty skills to produce a professionally finished edge for designer ceiling installations. Techniques used to produce multiple ceiling variations using the Compasso trim system.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP217	2022 Spring	Drywall Installation/Finish Trims - Carpenter Apprenticeship		Introduction to drywall handling methods, applications, and recommended levels of drywall finish to achieve desired aesthetics. Emphasis placed on trim attachment and finishing techniques. Identification of various types of finish trim. Students demonstrate proficiency in the proper use of automatic taping tools.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP221	2021 Fall	Advanced Print Reading - Carpenter Apprenticeship		Analyze multi-view drawings to determine construction type. Locate benchmark and building elements. Review codes, references, and perform calculations for construction/insulation planning.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T

CRP222	2021 Fall	Bridge Construction - Carpenter Apprenticeship		Overview of basic bridge construction including exterior and interior girders, edge forms, bulkheads, and hinge forms. Job-built and precast formwork methods, panel construction, assembly, and hardware installation tasks. Review of related safety, math, and print reading.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP226	2022 Spring	Air, Moisture, and Thermal Barriers - Carpenter Apprenticeship		Increasing building envelope energy efficiency using correctly installed air, moisture, and thermal barrier systems. Hands-on installation exercises using building sealing products.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP227	2021 Fall	Green Building and Weatherization - Carpenter Apprenticeship		Explanation of building envelope science. Audit procedures, discuss testing and reporting mechanisms used to measure inefficiencies. Course provides novice workers with fundamental skills to properly install the beneficial "green" and cost-effective, energy-efficient retrofits for residential buildings.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
CRP228	2021 Fall	Water Treatment Facilities - Carpenter Apprenticeship		Instruction in the detailing, layout, and construction of concrete formwork and waterstop used in water treatment facilities.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP232	2021 Fall	Stair and Ramp Forming - Carpenter Apprenticeship		Methods, procedures and practices used to form stair and ramp structures including configuration and dimensions. Review of Stinger riser and stair thread calculations, state and federal building codes.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP233	2021 Fall	Basic Metal Framing - Carpenter Apprenticeship		Overview of residential metal framing theory and construction techniques. Interpretation of prints for job planning and estimation of materials. Layout and detail of wall plates, measuring techniques, calculating principles, wall	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T

				and roof assembly and installation techniques.					
CRP234	2021 Fall	Transit Level/Laser - Carpenter Apprenticeship		Detailing, layout and construction of abutments used in the heavy highway industry. Overview of assembly components, key terms and abutment anatomy; footings; piers and retaining walls. Techniques for laying out keyway centerline and footing formwork construction.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP235	2022 Spring	Advanced Metal Framing - Carpenter Apprenticeship		Review of basic metal framing. Detailed procedures for framing curved, serpentine, and elliptical non-load-bearing partitions. Use of standard light gage components and other materials. Project emphasizing advanced techniques to expedite work processes.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP241	2018 Fall	Gang Forms/Columns		Formwork types, applications and construction methods for gang and column forms using built and manufactured forming systems. Heavy timber gang forms and use of taper ties, bracing, and bulkhead tables.	Prerequisites: Registered Apprentice status with the Central Arizona Carpenters Joint Apprenticeship Training Committee or permission of Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP242	2021 Fall	Doors/Door Hardware - Carpenter Apprenticeship		Installation process for several types of security and exit door hardware. Print interpretation, codes, door schedules, symbols, and hardware recognition.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP243	2018 Fall	Scaffold Erector Qualification		Safety and terminology related to scaffold built applications, elevated platform use, span and loading criteria, access and egress, stability, and structural connections and inspections. Project drawing review for locating dimensions, determining layout and scaffold material requirements. Erection/dismantling	Prerequisites: Registered Apprentice status with the Central Arizona Carpenters Joint Apprenticeship Training Committee or permission of		Occ	L+L 3.0 3.0 3.0	T

				sequence for the development of job planning, preparation skills and applied math.	Apprenticeship Coordinator.				
CRP244	2021 Fall	Cabinet Installation - Carpenter Apprenticeship		Cabinet installation from establishing the design layout to attaching countertops. Print interpretation, job planning, scribing techniques, and proper installation sequence.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
CRP250	2022 Spring	Prefab/Sound Panels - Carpenter Apprenticeship		Basic description of acoustical effectiveness of prefabricated sound panels. Planning, location, and installation of ceiling and wall panels.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP251	2022 Spring	Advanced Acoustical Ceilings Layout - Carpenter Apprenticeship		Advanced layout methods used to complete accent acoustical ceiling installations. Seismic codes and hanger requirements. Layout techniques for establishing geometric designs. Students complete acoustical ceiling layout projects.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP252	2022 Spring	Advanced Acoustical Ceiling Installations - Carpenter Apprenticeship		Identifying materials and methods used for the advanced installation of acoustical ceilings. Installation for custom and intricate grid systems. Green building rating systems applied to selected acoustical materials. Students complete a complex acoustical ceiling project.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP253	2022 Spring	Framing Curves and Arches -		Framing methods for curves and arches and their related structural	Prerequisites: Admission into the		Occ	L+L 3.0	T

		Carpenter Apprenticeship		limitations. Identifying various wall and ceiling types and layout principles and materials used for each. Lath applications and trim. Students complete a framing project that includes curves and arches.	Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.			3.0 3.0	
CRP255	2022 Spring	Fire Stopping/Fire Proofing Procedures - Carpenter Apprenticeship		Methods, technical skills, and fire stopping/fire proofing materials used to meet industry code requirements. Students apply and test fire stopping/fire proofing materials in a controlled environment.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP260	2022 Spring	Advanced Lathing - Carpenter Apprenticeship		Advanced skills for the interior/exterior application of lathing materials. Wall anatomy terminology, applicable codes, lathing materials, and waterproofing methods. Includes key discussions to draw attention to typical installation issues, causes, and solutions frequently employed to correct flaws. Detailed project drawing review, providing practical experience for design analysis, material requirement, and code assessment. Emphasis on construction sequence will foster the development of job planning, preparation, and applied math skills. Importance of applicable building codes, tool use, safety, accuracy, construction sequence, and proper use of waterproofing techniques will be stressed during lathing exercises.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP261	2022 Spring	Free-Form Lathing - Carpenter Apprenticeship		Comprehensive study of the theory and techniques used for development of freeform lathing projects. Students	Prerequisites: Admission into the Southwest		Occ	L+L 3.0	T

				interpret gridline drawings, lay out and build lath cage work, and apply the appropriate lath(s) to achieve the desired or designed form or structure.	Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.			3.0 3.0	
CRP263	2022 Spring	Ceiling and Soffit Finishing - Carpenter Apprenticeship		Advanced level of finishing skills for applications with architecturally detailed ceilings and soffits. Determining type and quantity of materials for various designs and differentiating between levels of finish. Guided practice with a combination of hand and automatic tool techniques, promoting manipulative ability required for a successful result. Variety of finish trims integrated into each method of finish. Inspection criteria for evaluating finish levels.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP264	2022 Spring	Advanced Hand Finishing - Carpenter Apprenticeship		Advanced methods and applications using hand tool techniques. Proper sequence of operation, phases, and materials to be used in order to produce a higher-level finished product to industry standards. Curved and radius wall characteristics for finish levels. Wall frame components, materials used, surface preparation, and application methods. Students complete a project to a level five standard.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP267	2022 Spring	Wet Wall Finishes - Carpenter Apprenticeship		Industry methods, mediums, and typical applications of wet wall finishes. Includes terminology and description of industry standard finishing levels, application tool types and techniques, and material identification and selection. Manufacturer's guidelines highlighting the environmental conditions for proper mixture preparation and use. Key discussions drawing attention to typical finish issues, causes, and	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T

				solutions frequently employed. Emphasis on the selection and use of low volatile organic compounds (VOC) products. Importance of mixture consistency and proper coating sequence during wet wall finishing exercises.					
CRP268	2022 Spring	Decorative Trims - Carpenter Apprenticeship		Advanced hand and automatic tool finishing techniques used to apply decorative trims. Product information for metal, paper, plastics, and art beads. Special attention given to coating and sanding sequence of selected specialty trim installations and waste reduction.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP280	2022 Spring	Total Station (Robotics) - Carpenter Apprenticeship		Terminology, optical principles, and operating procedures for transit and laser levels. Students will set up levels, determine benchmarks, and take and record elevation readings.	Prerequisites: Admission into the Southwest Carpenters Training Fund (SWCTF) Registered Apprenticeship program and permission of the GateWay Apprenticeship Office.		Occ	L+L 3.0 3.0 3.0	T
CRP296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled		Occ	LAB 1.0 5.0 0.0	Z

					in at least one class which is related to students major or career interest or with permission of Instructor.				
CRP296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
CRP296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with		Occ	LAB 3.0 15.0 0.0	Z

					permission of Instructor.				
CRP296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
CRP298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
CRP298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				combined to maximize student development.					
CRP298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
CRW120	1997 Fall	Introduction to Writing Children's Literature		Overview of writing children's literature. Emphasis on genres and standards for quality. Development of techniques in reading, evaluating, writing, revising, and editing literature written for children ENH291 suggested but not required	Prerequisites: None, ENH291 suggested but not required.		Acad	LEC 3.0 3.0 3.0	S
CRW150	2018 Summer	Introduction to Creative Writing		Introduction to the basic aesthetics and techniques in contemporary creative writing within a variety of genres. Introduction to the analytical concepts and terminology necessary to understand, interpret, and enact contemporary creative writing. Facilitation of writing practices and evaluation. Introduction to literature's role in society.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CRW160	1996 Spring	Introduction to Writing Poetry		Prewriting (invention and discovery); writing; analyzing and evaluating (in workshop); and revising to practice manipulating various elements of poetry, critique one's own and the poetry of others, and produce a portfolio of finished, marketable poems .	Prerequisites: None. CRW150 recommended but not required.		Acad	LEC 3.0 3.0 3.0	S
CRW161	2006 Spring	Focused Topics in Writing: Poetry		Analysis, writing, and revision of genre or elements within poetry.	Prerequisites: None. CRW150 suggested but not required.	CRW161 may be repeated for a total of three (3) credit hours.	Acad	LEC 1.0 1.0 1.0	S

CRW170	2017 Summer	Introduction to Writing Fiction		Practice in writing fiction through a process of prewriting (invention and discovery), writing, analysis and evaluation (in workshop), and revision; practice in manipulating various elements and forms of fiction.	Prerequisites: None. CRW150 recommended but not required.		Acad	LEC 3.0 3.0 3.0	S
CRW172	2009 Fall	Introduction to Comic Book Writing		Introduction to elements and techniques of comic book writing in its specific form; teaches terminology and concepts needed for the successful participation in writing workshops; focuses on proposal outline, planning, structure facilitates writing practice (including character study) and evaluation; offers individual suggestions in the student's development in this genre.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CRW176	2020 Fall	Writing Narrative for Video Games		Provides an introduction to narrative theory as it relates to video game production. Delivers a variety of video game storylines, narrative theories, and processes for narrative development in video games. Terminology and video game industry standards are covered. Offers discussion of team building and the role of video games in society.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
CRW180	1996 Spring	Introduction to Writing Nonfiction		Practice in writing creative nonfiction, including autobiography and biography, the essay, reviews, and humor using a process of invention and discovery, writing, analysis, evaluation, and revision. Combines lecture, discussion, and workshop, leading to the production of marketable quality creative nonfiction.	Prerequisites: None. CRW150 recommended but not required.		Acad	LEC 3.0 3.0 3.0	S
CRW190	1996 Spring	Introduction to Screenwriting		Overview of screenwriting elements; introduction to screenwriting techniques CRW150 recommended but not required.	Prerequisites: None. CRW150 recommended but not required.		Acad	LEC 3.0 3.0 3.0	S
CRW191	2006 Spring	Focused Topics in Writing: Plays		Analysis, writing, and revision of genre or elements within plays and/or motion picture screenplays.	Prerequisites: None. CRW150 suggested but not required.	CRW191 may be repeated for a total of three	Acad	LEC 1.0 1.0 1.0	S

						(3) credit hours.			
CRW200	2011 Spring	Readings for Writers		Close analysis and interpretation of selected literary texts designed to strengthen the students' own writing by extending their familiarity with the genre in which they write and their knowledge of selected literary elements. One-on-one meetings between student and instructor.	Prerequisites: A grade of C or better in RW150 or permission of Instructor.	CRW200 may be repeated for a total of six (6) credits.	Acad	LAB 1.0 1.0 0.0	C
CRW201	2011 Summer I	Portfolio		Close analysis of the creative writing portfolio culminating in selection, revision, editing, and compiling of the student's own literary work in a portfolio. Students meet individually with instructor to choose, prepare, and compile their work.	Prerequisites: (Acceptance into Creative Writing Certificate Program and completion of at least nine (9) credit hours in creative writing (CRW)), or permission of Program Director.	CRW201 may be repeated for a total of two (2) credit hours.	Acad	LAB 1.0 1.0 0.0	C
CRW202	2004 Spring	The Writer as Witness		Studio course focusing on writing with the writer as witness of the world: pre-writing, writing, analysis, evaluation, and writing of monologue and dialogue in various formats	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRW203	2004 Spring	Dialogue		Studio course focusing on writing dialogue in a variety of genres; prewriting, writing, analysis, evaluation, and writing of monologue and dialogue in various formats	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRW204	2004 Spring	Journaling		Studio course focusing on journal writing	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRW220	1997 Fall	Intermediate Writing Children's Literature		Application of techniques in writing literature for children. Emphasis on independent writing, self-evaluation, and revision. Includes completion of a major writing project of marketable quality	Prerequisites: A grade of C or better in CRW120 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRW251	2012 Fall	Topics in Creative Writing		Analysis, writing, and revision focused on a selected element applicable to all genres of creative writing.	Prerequisites: None. CRW150 recommended.	CRW251 may be repeated, topic must be	Acad	LEC 3.0 3.0 3.0	S

						different, for a total of nine (9) credit hours.			
CRW260	2010 Spring	Intermediate Poetry Writing		Emphasis on writing a series of original poems; analysis and evaluation of the functions and effects of established works of poetry; concentration on evaluation and revising students' poetry through intensive workshopping.	Prerequisites: A grade of C or better in CRW160 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRW261	2004 Spring	Topics in Writing: Poetry		Analysis, writing, and revision of genre or element within poetry	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRW270	2012 Spring	Intermediate Fiction Writing		Writing original short stories; analysis of works of fiction; concentration on revising students' fiction through intensive workshopping.	Prerequisites: A grade of C or better in CRW170.		Acad	LEC 3.0 3.0 3.0	S
CRW271	2004 Spring	Topics in Writing: Fiction		Analysis, writing, and revision of genre or element within fiction	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRW272	2004 Spring	Planning and Structuring the Novel		Focus on planning, structuring, and beginning a novel; prewriting, writing, analysis, evaluation, and revision of novel plans and excerpts	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRW273	2004 Spring	Writing the Novel		Provides the beginning novelist with structure, support, and guidance vital to sustained writing; focus on establishing goals and using critique sessions with instructor and peers to draft a novel; open- and topic-focused in-class forums, novel writing, peer and instructor critiques	Prerequisites: A grade of C or better in CRW272 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRW274	2004 Spring	Revising the Novel		Studio course workshop format. Requires a complete novel finished, in manuscript, ready for revision and polishing	Prerequisites: A grade of C or better in CRW273 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRW281	2004 Spring	Topics in Writing: Non-Fiction		Analysis, writing, and revision of genre or element within non-fiction	Prerequisites: A grade of C or better		Acad	LEC 3.0	S

					in CRW150 or permission of Instructor.			3.0 3.0	
CRW290	2004 Spring	Intermediate Screenwriting		Drafting and revision of original screenplay; overview of marketing a screenplay	Prerequisites: A grade of C or better in CRW190 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRW291	2004 Spring	Topics in Writing: Plays		Analysis, writing, and revision of genre or element within plays and/or motion picture screenplays	Prerequisites: A grade of C or better in CRW150 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CRW298AA	1995 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
CRW298AB	1995 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
CRW298AC	1995 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

				individualized learning to be combined to maximize student development.					
CSC100	2022 Fall	Introduction to Computer Science (C++)		Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science.	Prerequisites: A grade of C or better in MAT095 or MAT096 or MAT114 or MAT115 or MAT12+ or an appropriate District placement for MAT15+ or higher or permission of Instructor or Department/Division Chair.		Acad	L+L 3.0 3.0 3.0	T
CSC100AA	2022 Fall	Introduction to Computer Science (C++)		Concepts of problem solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science.	Prerequisites: A grade of C or better in MAT095 or MAT096 or MAT114 or MAT115 or MAT12+ or an appropriate District placement for MAT15+ or higher or permission of Instructor or Department/Division Chair.		Acad	L+L 3.0 4.0 4.0	T
CSC100AB	2022 Fall	Introduction to Computer Science (C++)		Concepts of problem-solving, structured programming in C++, fundamental algorithms and techniques, and computer system concepts. Social and ethical responsibilities. Intended for majors other than Computer Science.	Prerequisites: A grade of C or better in MAT095 or MAT096 or MAT114 or MAT115 or MAT12+ or an appropriate District placement for MAT15+ or higher or permission of Instructor or Department/Division Chair.		Acad	L+L 4.0 4.0 4.0	T
CSC101	2025 Fall	Introduction to Computing with Python		Introduction to computing using the Python programming language. Focus on basic concepts of computer science, algorithms, and the	Prerequisites: None.		Acad	L+L 3.0 4.0 4.0	T

				fundamentals of the Python programming language.					
CSC110	2024 Fall	Introduction to Computer Science (Java)		Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors.	Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.	CSC110 students may receive credit for only one of the following: CSC110 OR CSC110A A OR CSC110A B.	Acad	L+L 3.0 3.0 3.0	T
CSC110AA	2024 Fall	Introduction to Computer Science (Java)		Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors.	Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.	CSC110A A students may receive credit for only one of the following: CSC110 OR CSC110A A OR CSC110A B.	Acad	L+L 3.0 4.0 4.0	T
CSC110AB	2024 Fall	Introduction to Computer Science (Java)		Concepts of problem-solving, structured and object-oriented programming in Java, fundamental algorithms and techniques and computer system concepts. Social and ethical responsibilities. Intended for Computer Science and Computer Systems Engineering majors.	Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, or an appropriate District placement for MAT15+ or higher, or permission of Instructor or Department/Division Chair.	CSC110A B students may receive credit for only one of the following: CSC110 OR CSC110A A OR CSC110A B.	Acad	L+L 4.0 4.0 4.0	T
CSC120	2024 Fall	Digital Design Fundamentals	EEE120	Number systems, conversion methods, binary and complement	Prerequisites: None. Corequisites:		Acad	L+L 4.0	T

				arithmetic, Boolean switching algebra and circuit minimization techniques. Analysis and design of combinational logic, flip-flops, simple counters, registers, Read Only Memory (ROMs), Programmable Logic Device (PLDs), synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits.	CSC100 or (CSC110 or CSC110AB) or permission of Instructor or Division or Department Chair.			6.0 6.0	
CSC150	2018 Fall	Programming in C/C++		Introduction to C and C++ programming. Flow control, functions, pointers, data structures, file handling, and introduction to object-oriented programming	Prerequisites: Permission of Instructor.	Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]	Acad	L+L 3.0 4.0 4.0	T
CSC150AA	1999 Fall	Programming in C/C++		Introduction to C and C++ programming. Flow control, functions, pointers, data structures, file handling, and introduction to object-oriented programming	Prerequisites: Permission of Instructor.	Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]	Acad	LEC 4.0 4.0 4.0	S
CSC180	2011 Spring	Computer Literacy		Introduction to computers and technology and their impact on society. Explores technology, current topics in computing, applications and related issues. Students gain fluency in integrating technology to solve problems using computational thinking. Use of application software to create documents, spreadsheets, databases, e-mail and text files, and use of Internet browsers.	Prerequisites: None.	Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]	Acad	LEC 3.0 3.0 3.0	S

CSC180AA	2018 Fall	Computer Literacy		Introduction to computers and technology and their impact on society. Explores technology, current topics in computing, applications and related issues. Students gain fluency in integrating technology to solve problems using computational thinking. Use of application software to create documents, spreadsheets, databases, e- mail and text files, and use of Internet browsers.	Prerequisites: None.	Course Attribute(s): General Education Designation: Computer/ Statistics/ Quantitative Applications - [CS]	Acad	L+L 3.0 4.0 4.0	T
CSC180AB	2011 Spring	Computer Literacy		Introduction to computers and technology and their impact on society. Explores technology, current topics in computing, applications and related issues. Students gain fluency in integrating technology to solve problems using computational thinking. Use of application software to create documents, spreadsheets, databases, e- mail and text files, and use of Internet browsers.	Prerequisites: None.	Course Attribute(s): General Education Designation: Computer/ Statistics/ Quantitative Applications - [CS]	Acad	LEC 4.0 4.0 4.0	S
CSC181	2023 Fall	Applied Problem Solving with Visual BASIC		Introduction to systematic definition of problems, solution formulation, and testing. Visual BASIC programming language applied to problems in mathematics, science, and business.	Prerequisites: None.	Course Attribute(s): General Education Designation: Computer/ Statistics/ Quantitative Applications - [CS]	Acad	LEC 3.0 3.0 3.0	S
CSC181AA	2023 Fall	Applied Problem Solving with Visual BASIC		Introduction to systematic definition of problems, solution formulation, and testing. Visual BASIC programming language applied to problems in mathematics, science, and business.	Prerequisites: None.	Course Attribute(s): General Education Designation: Computer/ Statistics/ Quantitative Applications - [CS]	Acad	L+L 3.0 4.0 4.0	T

						Applications - [CS]			
CSC181AB	1999 Fall	Applied Problem Solving with Visual BASIC		Introduction to systematic definition of problems, solution formulation, and testing. Visual BASIC programming language applied to problems in mathematics, science, and business	Prerequisites: None.	Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]	Acad	LEC 4.0 4.0 4.0	S
CSC182	2007 Fall	Principles of Programming with C#.NET		Introduction to object-oriented program analysis, design, and development using Visual C#.NET. Includes general concepts, data types, expressions, flow control, methods, classes, arrays, event-driven models, Windows applications, and Web applications	Prerequisites: None.	Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]	Acad	LEC 3.0 3.0 3.0	S
CSC182AA	2018 Fall	Principles of Programming with C#.NET		Introduction to object-oriented program analysis, design, and development using Visual C#.NET. Includes general concepts, data types, expressions, flow control, methods, classes, arrays, event-driven models, Windows applications, and Web applications	Prerequisites: None.	Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]	Acad	L+L 3.0 4.0 4.0	T
CSC185	2002 Spring	World Wide Web and Introductory Internet Programming		Organization of and access to information on the Internet. Design, creation and publication of interactive web pages with HTML, multimedia, animated custom graphics, applets and JavaScript programming. Ethical issues, including security and privacy on the World Wide Web	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

CSC185AA	2018 Fall	World Wide Web and Introductory Internet Programming		Organization of and access to information on the Internet. Design, creation and publication of interactive web pages with HTML, multimedia, animated custom graphics, applets and JavaScript programming. Ethical issues, including security and privacy on the World Wide Web	Prerequisites: None.		Acad	L+L 3.0 4.0 4.0	T
CSC200	2024 Fall	Principles of Computer Science (Java)		Introduction to computer science. Issues and concepts throughout the field, including software development, data organization, machine architecture, algorithmic machines, and ethics in computing. Programming in Java.	Prerequisites: A grade of C or better in (CSC110 or CSC110AB) or (CSC100 or equivalent) and permission of Instructor.	CSC100 students may receive credit for only one of the following: CSC200 OR CSC200A A OR CSC200A B. Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]	Acad	L+L 3.0 3.0 3.0	T
CSC200AA	2024 Fall	Principles of Computer Science (Java)		Introduction to computer science. Issues and concepts throughout the field, including software development, data organization, machine architecture, algorithmic machines, and ethics in computing. Programming in Java.	Prerequisites: A grade of C or better in (CSC110 or CSC110AB) or (CSC100 or equivalent) and permission of Instructor.	CSC200A A students may receive credit for only one of the following: CSC200 OR CSC200A A OR CSC200A	Acad	L+L 3.0 4.0 4.0	T

						B. Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]			
CSC200AB	2024 Fall	Principles of Computer Science (Java)		Introduction to computer science. Issues and concepts throughout the field, including software development, data organization, machine architecture, algorithmic machines, and ethics in computing. Programming in Java.	Prerequisites: A grade of C or better in (CSC110 or CSC110AB) or (CSC100 or equivalent) and permission of Instructor.	CSC200A B students may receive credit for only one of the following: CSC200 OR CSC200A A OR CSC200A B. Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]	Acad	L+L 4.0 4.0 4.0	T
CSC205	2024 Fall	Object Oriented Programming and Data Structures		Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms.	Prerequisites: A grade of C or better in CSC110, or CSC110AB, or permission of Instructor.	CSC205 students may receive credit for only one of the following: CSC205	Acad	L+L 3.0 3.0 3.0	T

						OR CSC205A A OR CSC205A B OR CSC205A C OR CSC205A D. Course Attribute(s)): General Education Designatio n: Computer/ Statistics/ Quantitati ve Applicatio ns - [CS] Arizona Shared Unique Number SUN#: CSC 2205			
CSC205AA	2024 Fall	Object Oriented Programming and Data Structures		Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms.	Prerequisites: A grade of C or better in CSC110, or CSC110AB, or permission of Instructor.	CSC205A A students may receive credit for only one of the following: CSC205 OR CSC205A A OR CSC205A B OR CSC205A C OR CSC205A D. Course Attribute(s)): General	Acad	L+L 3.0 4.0 4.0	T

						Education Designation: Computer/Statistics/Quantitative Applications - [CS] Arizona Shared Unique Number SUN# CSC 2205 (Primary SUN: CSC205)			
CSC205AB	2024 Fall	Object Oriented Programming and Data Structures		Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms.	Prerequisites: A grade of C or better in CSC110, or CSC110AB, or permission of Instructor.	CSC2015 AB students may receive credit for only one of the following: CSC205 OR CSC205A A OR CSC205A B OR CSC205A C OR CSC205A D. Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative	Acad	L+L 4.0 4.0 4.0	T

						Applications - [CS] Arizona Shared Unique Number SUN# CSC 2205 (Primary SUN: CSC205)			
CSC205AC	2024 Fall	Object Oriented Programming and Data Structures		Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms.	Prerequisites: A grade of C or better in CSC110, or CSC110AB, or permission of Instructor.	CSC205A C students may receive credit for only one of the following: CSC205 OR CSC205A A OR CSC205A B OR CSC205A C OR CSC205A D. Course Attribute(s)) : General Education Designatio n: Computer/ Statistics/ Quantitati ve Applicatio ns - [CS] Arizona Shared Unique Number SUN#	Acad	L+L 4.0 5.0 5.0	T

						CSC 2205 (Primary SUN: CSC205)			
CSC205AD	2024 Fall	Object Oriented Programming and Data Structures		Covers Object-Oriented design and programming; elementary data structures; arrays; lists; stacks; queues; binary trees; recursion; searching and sorting algorithms.	Prerequisites: A grade of C or better in CSC110, or CSC110AB, or permission of Instructor.	CSC205A D students may receive credit for only one of the following: CSC205 OR CSC205A A OR CSC205A B OR CSC205A C OR CSC205A D. Course Attribute(s)) : General Education Designatio n: Computer/ Statistics/ Quantitati ve Applicatio ns - [CS] Arizona Shared Unique Number SUN# CSC 2205 (Primary SUN: CSC205)	Acad	L+L 4.0 6.0 6.0	T
CSC210	2018 Fall	Data Structures and Algorithms (Java)		Static and dynamic data structures and associated applications; recursive and iterative sorting and searching	Prerequisites: A grade of C or better in CSC200.		Acad	L+L 3.0	T

				algorithms; introduction to object oriented design and programming techniques; software engineering methods including design models and implementation/testing strategies; professional responsibilities; Java language.				3.0 3.0	
CSC210AA	2018 Fall	Data Structures and Algorithms (Java)		Static and dynamic data structures and associated applications; recursive and iterative sorting and searching algorithms; introduction to object oriented design and programming techniques; software engineering methods including design models and implementation/testing strategies; professional responsibilities; Java language	Prerequisites: A grade of C or better in CSC200.		Acad	L+L 3.0 4.0 4.0	T
CSC210AB	2023 Fall	Data Structures and Algorithms (Java)		Static and dynamic data structures and associated applications; recursive and iterative sorting and searching algorithms; introduction to object oriented design and programming techniques; software engineering methods including design models and implementation/testing strategies; professional responsibilities; Java language.	Prerequisites: A grade of C or better in CSC200.		Acad	L+L 4.0 4.0 4.0	T
CSC220	2018 Fall	Programming for Computer Engineering	EEE220	Introduction to procedural programming (C/C++) and hardware description language (VHDL).	Prerequisites: A grade of C or better in ((EEE120 or CSC120) and CSC205) or permission of Instructor.		Acad	L+L 3.0 5.0 5.0	T
CSC225	2024 Fall	Assembly Language Programming on Motorola Microprocessors		Assembly language programming including input/output programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Macintosh-based assignments.	Prerequisites: A grade of C or better in (CSC100 or CSC110 or CSC110AB or CSC200) and CSC/EEE120, or permission of Instructor.		Acad	L+L 4.0 5.0 5.0	T
CSC230	2024 Fall	Computer Organization and	EEE230	Assembly language programming including input/output programming and exception/interrupt	Prerequisites: A grade of C or better in [(CSC100 or		Acad	L+L 4.0	T

		Assembly Language		handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Processor organization and design, data path, control, pipelining, and input/output. Memory organization with cache and virtual memory.	CSC110 or CSC110AB) and CSC/EEE120], or permission of Instructor or Division or Department Chair.			5.0 5.0	
CSC240	2018 Fall	Introduction to Different Programming Languages		Introduction to procedural (C/C++), applicative (LISP), and declarative (Prolog) languages.	Prerequisites: A grade of C or better in CSC205 or permission of Instructor.		Acad	L+L 3.0 5.0 5.0	T
CSC240AA	2012 Spring	Introduction to Different Programming Languages		Introduction to procedural (C/C++), applicative (LISP), and declarative (Prolog) languages.	Prerequisites: A grade of C or better in CSC205 or permission of Instructor.		Acad	LEC 4.0 4.0 4.0	S
CSC250	2018 Fall	Advanced Programming Using C++		Developing Applications in C++; moving from C to C++ including objects and classes, inheritance, polymorphism and data abstraction	Prerequisites: A grade of C or better in CSC150 or permission of Instructor.		Acad	L+L 3.0 5.0 5.0	T
CSC250AA	1998 Fall	Advanced Programming Using C++		Developing Applications in C++; moving from C to C++ including objects and classes, inheritance, polymorphism and data abstraction	Prerequisites: A grade of C or better in CSC150 or permission of Instructor.		Acad	LEC 4.0 4.0 4.0	S
CSC260	2018 Fall	Object-Oriented Programming in Java		Software development in Java including both applets and applications, in both standard and graphical programming. Includes objects and classes, inheritance, polymorphism, graphical programming with the Abstract Windows Toolkit and the Swing extension, graphical user interface design and layout, event handling, and exception handling	Prerequisites: A grade of C or better in CSC150 or CSC200 or permission of Instructor.		Acad	L+L 3.0 4.0 4.0	T
CSC260AA	2003 Spring	Object-Oriented Programming in Java		Software development in Java including both applets and applications, in both standard and graphical programming. Includes objects and classes, inheritance, polymorphism, graphical programming with the Abstract Windows Toolkit and the Swing	Prerequisites: A grade of C or better in CSC150 or CSC200 or permission of Instructor.		Acad	LEC 4.0 4.0 4.0	S

				extension, graphical user interface design and layout, event handling, and exception handling					
CSC261	2003 Spring	Advanced Programming in Java		Advanced topics in Java including the JavaBean component model, multithreading, client/server development using Java sockets, the Java Database Connectivity interface (JDBC), and remote method invocation (RMI)	Prerequisites: A grade of C or better in CSC260 or permission of Instructor.		Acad	LEC 3.0 4.0 3.7	S
CSC261AA	2023 Fall	Advanced Programming in Java		Advanced topics in Java including the JavaBean component model, multithreading, client/server development using Java sockets, the Java Database Connectivity interface (JDBC), and remote method invocation (RMI).	Prerequisites: A grade of C or better in CSC260 or permission of Instructor.		Acad	LEC 4.0 4.0 4.0	S
CSC270	2003 Fall	C# Programming		Developing C# applications for the Microsoft .NET platform. Use of object-oriented principles in developing modularized C# programs	Prerequisites: A grade of C or better in CSC200 or CSC250 or CSC260 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CSC270AA	2018 Fall	C# Programming		Developing C# applications for the Microsoft .NET platform. Use of object-oriented principles in developing modularized C# programs	Prerequisites: A grade of C or better in CSC200 or CSC250 or CSC260 or permission of Instructor.		Acad	L+L 3.0 4.0 4.0	T
CSC270AB	2018 Fall	C# Programming		Developing C# applications for the Microsoft .NET platform. Use of object-oriented principles in developing modularized C# programs	Prerequisites: A grade of C or better in CSC200 or CSC250 or CSC260 or permission of Instructor.		Acad	L+L 4.0 4.0 4.0	T
CSC281	2018 Fall	Advanced Programming in Visual Basic		Graphical user interfaces are generated for advanced programming applications using Visual Basic. Event-driven programs, programming mouse interactions, interactive computer graphics, file processing, and how to distribute application programs	Prerequisites: A grade of C or better in CSC100 or CSC181 or equivalent programming knowledge or permission of Instructor.		Acad	L+L 3.0 4.0 4.0	T

CSC281AA	1999 Fall	Advanced Programming in Visual Basic		Graphical user interfaces are generated for advanced programming applications using Visual Basic. Event-driven programs, programming mouse interactions, interactive computer graphics, file processing, and how to distribute application programs	Prerequisites: A grade of C or better in CSC100 or CSC181 or equivalent programming knowledge or permission of Instructor.		Acad	LEC 4.0 4.0 4.0	S
CSC282AA	2011 Spring	Volunteerism for Computer Science: A Service Learning Experience		Service learning field experience within private/public agencies, educational institutions, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	CSC282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Acad	LAB 1.0 1.0 0.0	Z
CSC282AB	2011 Spring	Volunteerism for Computer Science: A Service Learning Experience		Service learning field experience within private/public agencies, educational institutions, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	CSC282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Acad	LAB 2.0 2.0 0.0	Z
CSC282AC	2011 Spring	Volunteerism for Computer Science: A Service Learning Experience		Service learning field experience within private/public agencies, educational institutions, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	CSC282A C may be repeated for a total of six (6) credit hours.	Acad	LAB 3.0 3.0 0.0	Z

						Standard grading available according to procedures outlined in catalog.			
CSC283AA	2022 Fall	Bioinformatics and Scientific Computing		Introduction to Bioinformatics, including history, concepts, major genetic databases and access tools. Computer software and techniques for analyzing one nucleotide or protein sequence, searching for similar sequences, and aligning and comparing two or multiple sequences. Microarray analysis and phylogenetic trees. Application of standard software to bioinformatic computing tasks, including word processing of reports, and use of spreadsheets for statistical analysis and graphing. Text editors, Unix, Internet web site searching and construction, and ethics.	Prerequisites: A grade of C or better in [BIO220 and (MAT095 or MAT096 or MAT114 or MAT115 or MAT12+ or an appropriate District placement for MAT15+ or higher)] or permission of Instructor or Department/Division Chair.		Acad	LEC 4.0 4.0 4.0	S
CSC284	2003 Spring	Web Programming and Design with FLASH		Design and publication of interactive web pages using Macromedia FLASH and Action Script. Animation, graphics design, timeline, layers, sound, movie clips, libraries, publishing with HTML, event driven programming, interactive programming of FLASH objects, form processing in FLASH, and programming constructs	Prerequisites: A grade of C or better in CSC185 or CIS233 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CSC284AA	2003 Spring	Web Programming and Design with FLASH		Design and publication of interactive web pages using Macromedia FLASH and Action Script. Animation, graphics design, timeline, layers, sound, movie clips, libraries, publishing with HTML, event driven programming, interactive programming of FLASH objects, form processing in FLASH, and programming constructs	Prerequisites: A grade of C or better in CSC185 or CIS233 or permission of Instructor.		Acad	LEC 3.0 4.0 3.7	S
CSC285	1998 Fall	Computer Programming in		Software development paradigms and environments including Advanced HTML, JavaScript, Common Gateway	Prerequisites: A grade of C or better in CSC185 and prior		Acad	LEC 4.0	S

		the WWW Environment		Interface (CGI) and CGI scripting languages. Security and large scale data management	programming experience/coursework.			4.0 4.0	
CSC285AA	2023 Fall	Computer Programming in the WWW Environment		Software development paradigms and environments including Advanced HTML, JavaScript, Common Gateway Interface (CGI) and CGI scripting languages. Security and large scale data management.	Prerequisites: A grade of C or better in CSC185 and prior programming experience/coursework.		Acad	LEC 3.0 4.0 3.7	S
CSC294	1999 Spring	Special Topics in Computing		Investigation of special topics in computing technology and applications. Examination of industry trends to solve problems and/or investigate issues	Prerequisites: Permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
CSC294AA	2018 Fall	Special Topics in Computing		Investigation of special topics in computing technology and applications. Examination of industry trends to solve problems and/or investigate issues	Prerequisites: Permission of Instructor.		Acad	L+L 3.0 4.0 4.0	T
CSC294AB	2003 Fall	Special Topics in Computing		Investigation of special topics in computing technology and applications. Examination of industry trends to solve problems and/or investigate issues	Prerequisites: Permission of Instructor.		Acad	LEC 2.0 2.0 2.0	S
CSC294AC	2018 Fall	Special Topics in Computing		Investigation of special topics in computing technology and applications. Examination of industry trends to solve problems and/or investigate issues	Prerequisites: Permission of Instructor.		Acad	L+L 2.0 3.0 3.0	T
CSC294AD	2003 Fall	Special Topics in Computing		Investigation of special topics in computing technology and applications. Examination of industry trends to solve problems and/or investigate issues	Prerequisites: Permission of Instructor.		Acad	LEC 1.0 1.0 1.0	S
CSC294AE	2018 Fall	Special Topics in Computing		Investigation of special topics in computing technology and applications. Examination of industry trends to solve problems and/or investigate issues	Prerequisites: Permission of Instructor.		Acad	L+L 1.0 2.0 2.0	T
CSC296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to		Acad	LAB 1.0 5.0 0.0	Z

					students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
CSC296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z
CSC296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or		Acad	LAB 3.0 15.0 0.0	Z

					permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
CSC296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z
CSC298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
CSC298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an	Prerequisites: Permission of		Acad	LAB 2.0	Z

				atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			2.0 0.0	
CSC298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
CSC310	2025 Fall	Data Structures and Algorithms		Advanced algorithmic concepts and data structures, including algorithm analysis and design, trees, graphs, hashing, and advanced sorting techniques. Implementation of advanced algorithms and data structures in an object-oriented language.	Prerequisites: A grade of C or better in [CSC240, and (MAT230 or MAT231), and MAT227], or permission of Program Director.		Acad	L+L 3.0 4.0 4.0	T
CSC350	2025 Fall	Logic Programming for Artificial Intelligence		Introduction to the fundamentals of logic and logic programming, a paradigm that uses formal logic to express computational algorithms. Focus on propositional and predicate logic, basics of proof techniques, principles of computational logic, and logic programming concepts using Prolog-based logic programming languages. Emphasis on application to artificial intelligence.	Prerequisites: A grade of C or better in (CSC240++ and MAT227) or permission of Program Director.		Acad	L+L 3.0 4.0 4.0	T
CSI105	2021 Spring	Debt Resolution Enrollment		Overview of debt resolution enrollment procedures. Covers characteristics of debt settlement, including regulatory entities, information security, and client hardships. Also includes procedures	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T

				for completing quality enrollment calls, as well as a review of resources available to clients.					
CSI154	2019 Summer	Introduction to Debt Settlement		Introduction to the debt settlement industry. Covers customer service representative role in debt settlement including types of hardships, debt solutions, account resources, and legal services available to clients. Also includes Fair Debt Collection Practices Act regulations.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CSI155	2020 Summer	Customer Service for Debt Settlement		Basic customer service principles for debt settlement. Evaluation of various program services as well as types of client debt. Emphasis on elements of customer service debt settlement transactions and effective communication.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CSI161	2023 Spring	Financial Services Retirement Plans		Introduction to financial service retirement accounts. Includes applicable vocabulary, Internal Revenue Service (IRS) codes, qualified and supplemental plans as well as loan options. Also covers deferred compensation and money sources.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CSI163	2023 Spring	Employer Sponsored Retirement Plans		Characteristics, restrictions, and guidelines for various employer sponsored retirement plans. Includes lifecycles and processes.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
CSI164	2019 Summer	Debt Resolution Account Procedures		Procedures for maintaining debt settlement customer accounts. Emphasis on screens and processes used to maintain accounts, provide education resources to customers, and respond to customer inquiries.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CSI165	2023 Spring	Introduction to Financial Customer Service		Introduction to customer service procedures for managing member accounts. Covers computerized systems including online documentation and database usage. Procedures for account maintenance included as well as procedures for handling initial member requests. Emphasis on professional	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T

				communication and customer service skills.					
CSI166	2019 Summer	Debt Settlement Services		Practical application of customer service representative debt settlement skills. Includes various types of customers, calls, and interactions in addition to procedures for navigating client accounts. Also covers account modifications, legal services, and negotiations procedures.	Prerequisites: None.		Occ	LAB 2.0 6.0 6.0	T
CSI167	2023 Spring	Financial Systems Customer Service		Practical application of financial account procedures for customer services representatives. Includes procedures for initiating and completing distributions, loan, service credits purchase, and Qualified Domestic Relationship Orders (QDRO) in addition to processing death claims.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CSI168	2020 Summer	Introduction to Debt Resolution Sales		Introduction to debt resolution sales and the debt settlement industry. Covers characteristics, solutions, components, and regulators of debt settlement including the Fair Debt Collection Practices Act. Also includes types of hardships and financial distress, credit reports, and resources available to clients, in addition to an introduction to the sales process.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CSI174	2020 Summer	Debt Resolution Sales Procedures		Practical application of debt resolution sales procedures. Covers consultative sales tools and services used in the provision of direct debt management sales. Includes approval calls, enrollment agreements, underwriting and file submission procedures as well as tax consequences and managing client objections.	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
CSI180	2020 Summer	Debt Resolution Sales Practices		Further application of debt resolution sales procedures. Covers consultative sales tools and services used in the provision of direct debt management sales. Includes approval and welcome calls, enrollment agreements, underwriting and file submission	Prerequisites: A grade of C or better in CSI174.		Occ	L+L 2.0 4.0 4.0	T

				procedures as well as disclosures and tax consequences.					
CSI182	2020 Summer	Introduction to Loan Consolidation		Introduction to loan consolidation in the debt settlement industry. Covers consolidation loan terminology, details, cycles, and benefits as well as disclosures and effective business communication for the loan consultant.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CSI184	2020 Summer	Loan Consolidation Procedures		Practical application of loan consolidation procedures. Covers benefits of and processes for loan consolidation as well as consultative sales tools and services used in the provision of direct debt management sales. Includes initial calls, enrollment agreements, and customer education procedures as well as effective communication strategies.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CSI202	2020 Summer	Debt Settlement Loan Servicing		Consolidation loan servicing procedures. Covers types of loans, features, and guidelines as well as enrollment structure and loan calculations. Also covers payments, customer protections, and procedures for account collections.	Prerequisites: None.		Occ	L+L 4.0 6.0 6.0	T
CSI206	2022 Summer	Banking Member Service Representative		Introduction to banking member service representative roles and responsibilities. Includes communication and problem solving skills when dealing with members. Also covers various types of banking products and services available to members as well as an introduction to computerized banking and online documentation systems.	Prerequisites: None. Corequisites: CSI207, CSI208 and CSI209.		Occ	LEC 3.0 3.0 3.0	S
CSI207	2024 Fall	Banking Accounts and Products		Knowledge of bank accounts, products, and procedures for banking member service representatives. Covers new accounts, debit cards, certificates of deposit, and individual retirement accounts. Self-service banking benefits and procedures as well as cash advances and funds transfers included.	Prerequisites: None. Corequisites: CSI206, CSI208, and CSI209.		Occ	LEC 3.0 3.0 3.0	S

CSI208	2024 Fall	Banking Account Management		Account management procedures for banking member service representatives. Banking terminology and maintenance procedures including member verification and privacy policies. Includes fraud handling and common banking inquiries by members such as updating account information, stopping payments, reordering checks, and requesting refunds. Retention of banking members also covered.	Prerequisites: None. Corequisites: CSI206, CSI207, and CSI209.		Occ	LEC 3.0 3.0 3.0	S
CSI209	2024 Fall	Banking Account Management Lab		Practical application of banking member services and procedures. Covers computerized banking systems including online documentation and database usage. Procedures for new accounts and account maintenance included as well as procedures for handling various member requests. Communication and customer service skills emphasized.	Prerequisites: None. Corequisites: CSI206, CSI207, and CSI208.		Occ	LAB 1.0 2.0 2.0	T
CSI250	2018 Fall	Customer Service for Credit Counselors		Basic customer service principles for the credit counselor. Examination of credit-counseling programs covered. Emphasis on elements of customer service transactions	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CSI251	2018 Summer	Legal Issues In Credit Counseling		Overview of laws and practices in granting credit. Types of credit and calculating finance charges included. Emphasis on implications of inadequate payment history on credit ratings.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CSI252	2019 Fall	Credit Counseling New Accounts		Overview of establishing new client accounts in a credit- counseling program. Emphasis on screens used to setup an account.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CSI255	2018 Fall	Account Maintenance Procedures		Account maintenance procedures for customer service representatives. Emphasis on managing ongoing client accounts. Covers contact with creditors and clients	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T

CSI257	2018 Fall	Credit Counseling Account Processes		Overview of maintaining a client account in a credit counseling program. Emphasis on screens used to maintain an account.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CSI258	2018 Summer	Credit Counseling and Financial Management		Overview of financial topics relevant to clients and their accounts. Covers creditor information and policies as well as procedures for account review. Also includes identification of and education regarding client financial issues in addition to client resource identification and use.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CSM101	2006 Fall	Quality Customer Service	TQM101	Examines the nature of quality customer service and the attitudes, knowledge, and skill needed to work effectively in a quality customer service environment. Foundation skills for quality customer services are taught, applied, and practiced	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CSN102DA	2020 Fall 1	Customer User Support		Examines skills, tools and strategies necessary for becoming a computer help-desk or end-user support professional.	Prerequisites: None.		CLK	110	
CSN110	2020 Fall 1	Information Security Fundamentals		Fundamental concepts of information technology security. Topics include authentication methods, access control, cryptography, public key infrastructure (PKI), network attack and defense methods, hardening of operating systems and network devices, securing remote access and wireless technologies and securing infrastructures and topologies. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of transmission control protocol/internet protocol (TCP/IP) and security concepts and Microsoft (MS) Windows and Linux administration.	Prerequisites: A grade of C or better in CSN126DL or CSN126RH or permission of Program Director. Corequisites: CSN150++ or CSN270.		CLK	122	
CSN126DL	2020 Fall 1	Linux Operating System		Introduction to the Linux operating system. Develop knowledge and skills required to install, configure and troubleshoot a Linux-based workstation including basic network functions. Learn basic command line	Prerequisites: None.		CLK	110	

				and graphical user interface (GUI) desktop environment utilities and applications. Fundamental abilities to achieve the entry-level industry certification covered.					
CSN140AB	2020 Fall 1	Introduction to Networks		Focus on the architecture, structure, functions, components, and models of the internet and other computer networks. Principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced. Students will build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Preparation for Cisco certification examination.	Prerequisites: None.		CLK	122	
CSN150AB	2020 Fall 1	Switching, Routing, and Wireless Essentials		Focus is on configuring switches and routers for use in small and medium-sized networks. Includes virtual local area networks (VLANs), VLAN trunking, inter-VLAN routing, spanning tree protocol (STP), EtherChannel, dynamic host configuration protocol (DHCP), first hop redundancy, local area network (LAN) and switch security, and static routing. Knowledge and skills needed to implement a wireless local area network (WLAN) is also covered. Preparation for Cisco certification examination.	Prerequisites: None.		CLK	122	
CSN160AB	2020 Fall 1	Enterprise Networking, Security, and Automation		Focus is on the configuration of routers and switches within small and medium size networks for advanced functionality including: open shortest path first (OSPF), network security, access control lists (ACLs), network address translation (NAT), wide area network (WAN) concepts, virtual private networks (VPNs), quality of service (QOS), network management, design, troubleshooting, virtualization, and automation. Preparation for Cisco certification examination.	Prerequisites: None.		CLK	122	

CSN170	2020 Fall 1	A+ Exam Prep: Computer Hardware Configuration and Support		Explore technical aspects of personal computers, including system components, installation, system configuration, peripheral devices, and notebooks. Emphasis placed on hardware installation, maintenance, mobile devices, and hardware troubleshooting. Helps prepare students for the CompTIA A+ examinations.	Prerequisites: None.		CLK	122	
CSN270	2020 Fall 1	A+ Exam Prep: Operating System Configuration and Support		Explore advanced technical aspects of maintaining and servicing computers. Emphasis placed on operating system (OS) installation, maintenance, mobile devices, security, software troubleshooting, and on proper usage of tools, safety procedures, and professionalism. Helps prepare students for the CompTIA A+ examinations.	Prerequisites: None.		CLK	122	
CSR108	2018 Fall	Motor Vehicle Documentation Concerns		Vehicle titling considerations with emphasis on documentation procedures. Includes Department of Revenue policy and procedures and examination of title documents. Also covers trailer and damaged vehicle documentation as well as procedures for completing special vehicle titling	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
CSR109	2018 Fall	Motor Vehicle Documentation Procedures		State motor vehicle documentation procedure. Use of computer based government workstation emphasized. Includes procedures for location and modification of customer and vehicle records	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
CSR118	2020 Spring	Property Insurance Financial Security Customer Service		Financial security needs determinations procedures for the customer service representative. Referrals, value factors, and solutions applicable to providing opportunities for member financial security. Also includes company lines of business.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
CSR119	2020 Spring	Introduction to Homeowner Insurance Customer Service		Introduction to homeowner insurance components and coverage types for the customer service representative. Covers the home buying process as	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S

				well as industry specific vocabulary and contracts.					
CSR120	2020 Spring	Homeowner Policy Issuance Customer Service		Examination of homeowner insurance components and policies for customer representative issuance procedures. Covers dwelling types and characteristics as well as various systems and procedures for policy issuance. Also includes an introduction to old age homes procedures.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
CSR121	2020 Spring	Homeowner Policy Servicing Customer Service		Homeowner policy servicing components for the customer service representative. Covers systems and procedures for completing policy modifications, cancellations, and declines. Also includes Earned Premium Location (EPL) and Probable Maximum Loss (PML) guidelines.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
CSR122	2020 Spring	Introduction to Unit Owner Policy Customer Service		Unit owner policy components and procedures for the customer service representative. Covers various systems and procedures for issuance, modification, cancellation, and rewrite of policies. Also includes strategies for needs, determinations, and procedures for responding to member coverage inquiries.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
CSR123	2020 Spring	Introduction to Rental Property Insurance Customer Service		Introduction to rental property insurance components and policies for the customer service representative. Covers various systems and procedures for issuance, modification, and cancellation of policies as well as declined accounts.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
CSR124	2020 Spring	Renters Valuable Personal Property Customer Service I		Introduction to renters valuable personal property insurance procedures for the customer service representative. Covers types of policies, coverages, and limits as well as issuance and billing procedures. Also includes member policy update procedures.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T

CSR125	2020 Spring	Renters Valuable Personal Property Customer Service II		Additional renters valuable personal property insurance procedures. Includes characteristics of valuable personal property coverage and limits as well as guidelines and procedures for dealing with collections. Also covers policy modifications, declines, and cancellations.	Prerequisites: A grade of C or better in CSR124.		Occ	L+L 2.0 3.0 3.0	T
CSR130	2022 Spring	Advocate-Driven Healthcare		Procedures for advocate-driven healthcare customer service representatives. Covers eligibility requirements, enrollment procedures, and Health Insurance Portability and Accountability Act of 1996 (HIPAA) compliance standards. Also includes healthcare services, products, and plans.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CSR136	2018 Fall	Health Care Insurance: Claims I		Overview of health insurance, medical terminology, and various operating systems and applications. Also includes research of medical, outpatient, and inpatient claims.	Prerequisites: None.		Occ	L+L 4.0 6.0 6.0	T
CSR139	2024 Fall	Introduction to Pharmacy Prescription Benefits Customer Care		Introduction to the Pharmacy Prescription Benefits program. Includes customer care responsibilities, confidentiality, and eligibility status in addition to various types of member inquiries. Also covers quality assurance and Federal and State laws governing controlled substances.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CSR144	2021 Spring	Prior Authorization Programs and Systems		Prior authorization programs and systems for federal employees. Covers Med-Ex, 'Buy and Bill' and Medical Formulary Exception (MFE) programs as well as identification and processes for compounds. Also covers the Clinical Authorization System (CAS) program organization and use, including clinical rationales, outcomes, inquiries, and non-covered Qsets.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CSR145	2021 Spring	Prescription Prior Authorization I		Prescription prior authorization procedures for federal employees. Covers account access, documentation, and eligibility as well	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T

				as claims process and claims adjudication. Computerized databases and automated phone systems emphasized.					
CSR146	2021 Spring	Prescription Prior Authorization II		Advanced prescription prior authorization procedures for federal employees. Usage of various computerized databases emphasized. Includes drug benefit management, drug limitation guidelines, standard allowance fill quantity, and prior authorization fill quantity. Approved and denied authorizations also covered in addition to grandfathered records and change in therapy procedures.	Prerequisites: A grade of C or better in CSR145.		Occ	L+L 3.0 4.0 4.0	T
CSR148	2018 Fall	Health Care Insurance: Customer Service		Overview of customer service standards and objectives for health care insurance phone inquiries. Covers customer service solution processes, including first call resolution, account inquiries, member eligibility and benefits. Health care regulations also covered.	Prerequisites: None.		Occ	L+L 4.0 6.0 6.0	T
CSR155	2024 Fall	Pharmacy Prescription Benefit Plans		Overview of pharmacy prescription benefit plans. Includes types of plans, limitations, and drug coverage in addition to fulfillment requests. Also covers procedures for accessing accounts, responding to caller inquiries, completing test claims, and steps for locating formulary alternatives.	Prerequisites: A grade of C or better in CSR139.		Occ	LEC 3.0 3.0 3.0	S
CSR156	2018 Fall	Retail Pharmacy Procedures		Practical application of retail pharmacy customer care procedures. Includes procedures for accessing accounts, responding to eligibility issues, and completing customer requests. Also covers billing and payment procedures as well as the provision of non-technical web support.	Prerequisites: A grade of C or better in CSR139.		Occ	L+L 2.0 4.0 4.0	T
CSR157	2024 Fall	Pharmacy Prescription Procedures		Practical application of pharmacy customer care procedures. Includes procedures for managing billing and payment inquiries as well as order	Prerequisites: A grade of C or better in CSR155.		Occ	L+L 2.0 3.0 3.0	T

				status processes and prior authorizations.					
CSR160	1999 Spring	Pharmacy Practice for the Customer Service Representative		Orientation to customer service responsibilities in pharmacy practice. Includes educational and licensure requirements as well as basic functions of the pharmacy and the customer service representative	Prerequisites: Permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
CSR162	1999 Spring	Pharmacy Operations for the Customer Service Representative		Customer service responsibilities in pharmacy operations. Includes procedures for prescription dispensing and drug distribution in the retail setting. Inventory control, packaging and storage, in addition to computer usage and third party operations	Prerequisites: A grade of C or better in CSR160.		Occ	LEC 3.0 3.0 3.0	S
CSR171	2022 Spring	Customer Representative Web Design Products and Services		Introduction to web design products and services. Includes customer services for web design, branding, and hosting as well as various products available to business owners. Also covers domain ownership and security.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CSR172	2022 Spring	Customer Representative Web Service Sales		Customer service account procedures for web service sales. Covers business specific services and products, and application to meeting customer needs. Also covers hosting and website design sales procedures as well as customer consultation techniques.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CSR173	2022 Spring	Customer Service for Web Hosting		Introduction to web hosting products and customer services. Includes features and benefits of branding, productivity, presence, and marketing.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CSR174	2022 Spring	Hosting Product Support Customer Service		Hosting product support customer service procedures. Covers databases, email solutions, and Content Management Systems (CMS) as well as business hosting. Also covers troubleshooting procedures including site latency.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CSR175	2022 Spring	Web Hosting Account Customer Service		Account customer service for web hosting and domains. Includes new accounts, branding, and presence strategies and products, and their	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S

				application to meeting customer needs. Also covers hosting and website design procedures as well as completion of a marketing consultation.					
CSR176	2021 Summer	Customer Product Service Management for Web Hosting/Domain Registrar		Introduction to web hosting and domain registrar products and customer services. Includes features and benefits of branding, productivity, presence, and marketing.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CSR177	2018 Fall	Customer Representative for Web Hosting/Domain Registrar Services		Customer service account procedures for web hosting and domain registrar product application. Includes new accounts, branding, and presence strategies and products, and their application to meeting customer needs. Also covers hosting and website design procedures as well as completion of a marketing consultation.	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
CSR178	2018 Fall	Customer Service Consultations and Troubleshooting Lab		Practical application of strategies and procedures for conducting customer consultations and troubleshooting.	Prerequisites: None.		Occ	LAB 1.0 2.0 2.0	T
CSR184	2022 Fall	Business Technology in Customer Service		Foundational business technology for enhancing customer service. Includes the integration of technology into an effective workforce management solution. Covers Enterprise Resource Planning (ERP) in addition to Customer Relationship Management (CRM) and Business Intelligence (BI).	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CSR195	2018 Fall	Customer Service Representative Sales and Marketing		Introduction to sales and marketing strategies for the customer service representative. Includes the sales and negotiation processes as well as behavioral styles and demographics of customers. Also covers types of markets, organizational structure, and elements of a marketing plan.	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
CSR196	2020 Summer	Call Center Customer Service		Introduction to practical application for call center representatives. Covers the role of call center representatives and skills and behaviors necessary for successful and effective call flow	Prerequisites: Permission of Department or Division.		Occ	L+L 3.0 5.0 5.0	T

				and completion of inbound calls. Also includes procedures for customer authentication, billing, payments, and claims loss reports as well as de-escalation.					
CSR197	2018 Fall	Customer Service Representative Business Practices		Introduction to business practices for the customer service representative. Includes organization types and structures as well as essential business communication techniques and foundational skills. Also covers professional telephone techniques.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
CSR200	2009 Summer I	Automobile Representative Customer Services		Automobile representative customer service responsibilities. Includes overview of insurance industry terminology and contracts as well as need determination. Also covers privacy and security issues in addition to relationship management strategies.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CSR201	2022 Spring	Web-Based Hosting Customer Service		Web-based hosting customer service. Includes resources, tools, and services for setup, maintenance, and troubleshooting.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
CSR203	2022 Spring	Productivity Customer Service		Web-based productivity customer service. Includes tools and resources for managing productivity as well as troubleshooting procedures.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
CSR207	2018 Fall	Automobile Policy Adjustment		Emphasis upon policy explanation and adjustment. Covers membership flow-thru criteria, quality customer service information, and in-depth on-line resource instrument review. Also includes consultative selling practice and the observation of acting member service representatives.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
CSR211	2020 Summer	Auto Insurance Quotes		Procedures for providing auto insurance quotes and completing various payments. Covers tools for investigating rate changes as well as procedures for modifying account vehicles and driver information. Also includes account research techniques and reinstatement procedures.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T

CSR212	2009 Summer I	Automobile Insurance Operations I		Automobile insurance member services representative operating procedures. Emphasis upon explanation of payment and rate information, the provision of written correspondence, and file information completion. Covers representative underwriting observation, fundamental need based sales principles, and phone system usage.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CSR213	2009 Summer I	Automobile Insurance Operations II		Auto insurance account operations. Includes the format and use of vehicle identification numbers (VIN) and the impact of regulation in the insurance industry. Also covers policy procedures including liability, exclusions, and credits. Review of the billing process and statements also covered.	Prerequisites: A grade of C or better in CSR212.		Occ	LEC 2.0 2.0 2.0	S
CSR214	2018 Fall	Automobile Insurance Operations Lab		Practical application of auto insurance member services operational procedures. Includes use of the direct sales system to complete account navigation in addition to modification and billing procedures. Emphasis on effective communication skills, information gathering, and sales techniques.	Prerequisites: A grade of C or better in CSR213.		Occ	LAB 1.0 2.0 2.0	T
CSR220	2018 Fall	Sales and Retention		Practical application for call center representatives. Covers skills and behaviors necessary for successful and effective completion of inbound sales and retention calls.	Prerequisites: Permission of Department or Division.		Occ	LAB 2.0 6.0 6.0	T
CSR280AB	2018 Fall	Customer Service Internship		Customer service experience in business or industry. Eighty hours of designated work per credit. Maximum of eight credits allowed	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 2.0 2.0	T
CTE200	2016 Summer	Career and Technical Education: Principles, Philosophy and Student Organizations		Examination of the role of career and technical educational (CTE) pathways as they relate to workforce development. Overview of career and technical student organizations (CTSO), occupational clusters, development and role of career and technical education, philosophy, history and impact of federal funding	Prerequisites: None.	CTE200 coursewor k intended for Arizona Departme nt of Education Provisiona	Occ	LEC 3.0 3.0 3.0	S

				revenue streams, and career and technical delivery system.		lly certified Career and Technical Education instructors .			
CTE210	2016 Summer	Career and Technical Education: Teaching Methods and Curriculum Development		Overview and practical application of teaching methodology and curriculum development for secondary education career and technical education teachers. Teaching strategies and learning styles covered. Curriculum design/mapping, lesson objectives, time management skills, teaching resources, and Arizona Department of Education Career and Technical Curriculum Framework Standards also included.	Prerequisites: None.	CTE210 coursework is intended for Arizona Department of Education Provisionally certified Career and Technical Education instructors .	Occ	LEC 3.0 3.0 3.0	S
CTE220	2016 Summer	Career and Technical Education: Classroom Management and Lab Safety		Classroom management techniques. Classroom discipline models, student behavior and misbehavior, group dynamics, student self-motivation, and learning styles covered. Essentials of lab safety issues, including regulatory agencies and policies. State Board of Education Professional Teaching Standards emphasized.	Prerequisites: None.	CTE220 coursework intended for Arizona Department of Education Provisionally certified Career and Technical Education instructors .	Occ	LEC 4.0 4.0 4.0	S
CTR101	2018 Fall	Court Reporting: Machine Shorthand Theory Block I		Basic court reporting machine shorthand theory.	Prerequisites: (45 wpm keyboarding or permission of Department or Division) and placement into	Transcript (s) of high school graduation OR equivalent	Occ	L+L 6.0 10.0 10.0	T

					ENG101 or ENG107 district placement exam OR permission of Department or Division.	must be on file in the Admissions and Records Office.			
CTR102	2018 Fall	Court Reporting: Machine Shorthand Theory Block II		Introduction of court briefs and phrases.	Prerequisites: A grade of C or better in CTR101 or permission of Department or Division or Program Director.		Occ	L+L 6.0 10.0 10.0	T
CTR105	2018 Fall	Court Reporting: Punctuation and Grammar		Application of the rules of punctuation, grammar, spelling, and capitalization to sentences, paragraphs, and transcripts through systematic testing and/or projects.	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
CTR106	2018 Fall	Court Reporting: Legal Terminology		Civil/criminal law, the judicial system, legal terminologies, and researching legal citations.	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
CTR107	2018 Fall	Court Reporting: Medical Terminology		Body systems and functions. Psychological and physical diseases and drugs. Methods of researching medical information.	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
CTR197	2013 Spring	Court Reporting Lab		Court reporting practice/transcription as assigned under supervision.	Prerequisites: None. Corequisites: CTR101.		Occ	LAB 1.0 5.0 0.0	Z
CTR209	2018 Fall	Judicial Procedures for Court Reporting		Professional procedures, techniques, ethics, and introduction to video applications for judicial court reporters. Proper transcription methods and correct formatting styles for transcript production.	Prerequisites: A grade of C or better in CTR102 or permission of Program Director.		Occ	L+L 3.0 5.0 5.0	T
CTR211	2018 Fall	Judicial Internship		A minimum of 50 hours of participation in an actual courtroom deposition setting. Transcript production required.	Prerequisites: A grade of C or better in CTR209 and student must pass one (1) 200 words per minute Q/A test with speed and accuracy to meet court reporting		Occ	LAB 1.0 4.0 0.0	C

					industry standards or permission of Program Director.				
CTR215	2018 Fall	Computer-Aided Transcription		Computer terminology, troubleshooting and basic maintenance of a computer-aided transcription (CAT) system. Court reporting system set-up, maintenance and operation. Realtime system applications in specific environments. Production of transcripts from dictation and with a computer-aided transcription system.	Prerequisites: A grade of C or better in (CTR101 and BPC101AA) or permission of Department or Division.		Occ	L+L 3.0 3.0 3.0	T
CTR251	2018 Fall	Court Reporting Speed Building Block III		Instruction, dictation, and readback in speeds of 80-100 wpm in Literary Material; 100-120 wpm in Jury Charge Material; 120-140 wpm in Question/Answer Testimony Material with a minimum of 95% accuracy.	Prerequisites: A grade of C or better in CTR102 or permission of Department or Division.		Occ	L+L 14.0 20.0 20.0	T
CTR251AA	2018 Fall	Court Reporting Skill Building: Block III Literary Material		Development of speed and accuracy skills with dictation, readback, and transcription in literary material. Speed requirements of 80 and 100 words per minute (wpm) with a speed and accuracy to meet court reporting industry standards.	Prerequisites: A grade of C or better in CTR102 or permission of Program Director. Corequisites: (CTR251AB or CTR252AB or CTR253AB) and (CTR251AC or CTR252AC or CTR253AC).	Student must demonstrate completion of required speed in each module with a grade of C or better before enrolling in the next level.	Occ	L+L 4.0 4.0 4.0	T
CTR251AB	2018 Fall	Court Reporting Skill Building: Block III Jury Charge Material		Development of speed and accuracy skills with dictation, readback, and transcription in jury charge material. Speed requirements of 100 and 120 words per minute (wpm) with speed and accuracy to meet court reporting industry standards.	Prerequisites: A grade of C or better in CTR102 or permission of Program Director. Corequisites: (CTR251AA or CTR252AA or CTR253AA) and (CTR251AC or	Student must demonstrate completion of required speed in each module with a	Occ	L+L 4.0 4.0 4.0	T

					CTR252AC or CTR253AC).	grade of C or better before enrolling in the next level.			
CTR251AC	2018 Fall	Court Reporting Skill Building: Block III Question/Answer Testimony Material		Development of speed and accuracy skills with dictation, readback, and transcription in question/answer material. Speed requirements of 120 and 140 words per minute (wpm) with speed and accuracy to meet court reporting industry standards.	Prerequisites: A grade of C or better in CTR102 or permission of Program Director. Corequisites: (CTR251AA or CTR252AA or CTR253AA) and (CTR251AB or CTR252AB or CTR253AB).	Student must demonstrate completion of required speed in each module with a grade of C or better before enrolling in the next level.	Occ	L+L 6.0 12.0 12.0	T
CTR252	2018 Fall	Court Reporting Speed Building Block IV		Instruction, dictation, and readback in speeds of 120-140 wpm in Literary Material; 140-160 wpm in Jury Charge Material; 160-180 wpm in Question/Answer Testimony Material with a minimum of 95% accuracy.	Prerequisites: A grade of C or better in CTR251 or permission of Department or Division.		Occ	L+L 14.0 20.0 20.0	T
CTR252AA	2018 Fall	Court Reporting Skill Building: Block IV Literary Material		Development of speed and accuracy skills with dictation, readback, and transcription in literary material. Speed requirements of 120 and 140 words per minute (wpm) with speed and accuracy to meet court reporting industry standards.	Prerequisites: A grade of C or better in CTR251AA or permission of Program Director. Corequisites: (CTR251AB or CTR252AB or CTR253AB) and (CTR251AC or CTR252AC or CTR253AC).	Student must demonstrate completion of required speed in each module with a grade of C or better before enrolling in the next level.	Occ	L+L 4.0 4.0 4.0	T

CTR252AB	2018 Fall	Court Reporting Skill Building: Block IV Jury Charge Material		Development of speed and accuracy skills with dictation, readback, and transcription in jury charge material. Speed requirements of 140 and 160 words per minute (wpm) with speed and accuracy to meet court reporting industry standards.	Prerequisites: A grade of C or better in CTR251AB or permission of Program Director. Corequisites: (CTR251AA or CTR252AA or CTR253AA) and (CTR251AC or CTR252AC or CTR253AC).	Student must demonstrate completion of required speed in each module with a grade of C or better before enrolling in the next level.	Occ	L+L 4.0 4.0 4.0	T
CTR252AC	2018 Fall	Court Reporting Skill Building: Block IV Question/Answer Testimony Material		Development of speed and accuracy skills with dictation, readback, and transcription in question/answer material. Speed requirements of 160 and 180 words per minute (wpm) with speed and accuracy to meet court reporting industry standards.	Prerequisites: A grade of C or better in CTR251AC or permission of Program Director. Corequisites: (CTR251AA or CTR252AA or CTR253AA) and (CTR251AB or CTR252AB or CTR253AB).	Student must demonstrate completion of required speed in each module with a grade of C or better before enrolling in the next level.	Occ	L+L 6.0 12.0 12.0	T
CTR253	2018 Fall	Court Reporting Speed Building Block V		Instruction, dictation, and readback in speeds of 160-180 wpm in Literary Material; 180-200 wpm in Jury Charge Material; 200-225 wpm in Question/Answer Testimony Material with a minimum of 95% accuracy.	Prerequisites: A grade of C or better in CTR252 or permission of Department or Division.		Occ	L+L 14.0 20.0 20.0	T
CTR253AA	2018 Fall	Court Reporting Skill Building: Block V Literary Material		Development of speed and accuracy skills with dictation, readback and transcription in literary materials. Speed requirements 160 and 180 words per minute (wpm) with speed	Prerequisites: A grade of C or better in CTR252AA or permission of Program Director. Corequisites:		Occ	L+L 4.0 4.0 4.0	T

				and accuracy to meet court reporting industry standards.	(CTR251AB or CTR252AB or CTR253AB) and (CTR251AC or CTR252AC or CTR253AC).				
CTR253AB	2018 Fall	Court Reporting Skill Building: Block V Jury Charge Material		Development of speed and accuracy skills with dictation, readback and transcription in jury charge materials. Speed requirements 180 and 200 words per minute (wpm) with speed and accuracy to meet court reporting industry standards.	Prerequisites: A grade of C or better in CTR252AB or permission of Program Director. Corequisites: (CTR251AA or CTR252AA or CTR253AA) and (CTR251AC or CTR252AC or CTR253AC).		Occ	L+L 4.0 4.0 4.0	T
CTR253AC	2018 Fall	Court Reporting Skill Building: Block V Question/Answer Testimony Material		Development of speed and accuracy skills with dictation, readback, and transcription in question/answer material. Speed requirements of 200 and 225 words per minute (wpm) with speed and accuracy to meet court reporting industry standards.	Prerequisites: A grade of C or better in CTR252AC or permission of Program Director. Corequisites: (CTR251AA or CTR252AA or CTR253AA) and (CTR251AB or CTR252AB or CTR253AB).		Occ	L+L 6.0 12.0 12.0	T
CTR253AD	2019 Fall	Court Reporting Skill Building Review		Progression and retention of speed and accuracy skills with dictation, readback, and transcription in literary, jury charge, and question/answer material.	Prerequisites: A grade of C or better in CTR253AA, or CTR253AB, or CTR253AC, or permission of Program Director.	CTR253A D may be repeated five (5) times for a total of fifteen (15) credits.	Occ	LAB 3.0 20.0 0.0	Z
CTR271	2018 Fall	Scoping		Ability to read machine shorthand steno notes and employ Computer-Aided Transcript (CAT) software to edit/correct court reporters' files with an emphasis on correct transcript formatting structure. Concentration on grammar, punctuation, proofreading	Prerequisites: A grade of C or better in (BPC101AA, CTR101, and CTR215) or permission of		Occ	L+L 2.0 2.0 2.0	T

				skills, and accuracy to produce transcripts, including but not limited to trials, depositions, conferences, arbitrations, and other administrative hearings.	Department or Division.				
CTR272	2018 Fall	Transcription		Machine shorthand transcription, realtime writing from audio and/or video files, with an emphasis on correct transcript formatting structure. Concentration on dictation, transcription, proofreading skills and accuracy. Computerized machine shorthand in conjunction with specialized Computer-Aided Transcription (CAT) software to generate transcripts that would include medical, interviews, judicial hearings, dissertations, and meetings.	Prerequisites: A grade of C or better in (BPC101AA, CTR101, CTR215, and CTR271) or permission of Department or Division.		Occ	L+L 2.0 2.0 2.0	T
CTR290	2013 Spring	Registered Professional Reporter Preparation		Live dictation practice to increase speed in any machine shorthand system in preparation for the national Court Reporters Association Registered Professional Reporter (RPR) Exam.	Prerequisites: One year of machine shorthand.		Occ	LEC 2.0 2.0 2.0	S
CTR291	2018 Fall	Extended Machine Shorthand Practice		Dictation and testing in Literary, Jury Charge, and Question/Answer testimony material at incremental speeds for the purpose of the student to increase machine shorthand speed and accuracy. Readback of paper or computerized notes.	Prerequisites: Permission of Program Director or Instructor.	CTR291 may be repeated for credit.	Occ	LAB 2.0 2.0 2.0	T
CTT110	2018 Fall	Introduction to Caterpillar Service Industry		Introduction to the Caterpillar organization and product line, basic shop safety, and shop operation. Includes computer operations and service information systems.	Prerequisites: Permission of Department or Division.		Occ	L+L 3.0 5.0 5.0	T
CTT111	2018 Fall	Caterpillar Engine Fundamentals		Introduction to diesel engine theory and service procedures. Focuses on Caterpillar engine systems and applications.	Prerequisites: A grade of C or better in CTT110.		Occ	L+L 4.0 8.0 8.0	T
CTT112	2018 Fall	Hydraulic Fundamentals		Hydraulic fundamentals, including functions of valves used in Caterpillar hydraulic systems, functions of vane pumps, gear pumps, and piston pumps, and assembly and	Prerequisites: A grade of C or better in CTT110.		Occ	L+L 3.0 5.0 5.0	T

				disassembly of hydraulic components. Includes ISO hydraulic symbols.					
CTT113	2018 Fall	Fuel Systems		Introduction to fuel systems used in Caterpillar engines. Covers fuel selection, calibrations, and nozzle testing procedures, governor operation, and hydraulic fuel ratio controls. Includes 1.1 and 1.2 MUI and HEUI, EUI, Nippondenso, and Zexel fuel systems.	Prerequisites: A grade of C or better in CTT110.		Occ	L+L 3.0 5.0 5.0	T
CTT114	2018 Fall	Basic Electrical Fundamentals		Basic electrical and electronic principles used by the technician to diagnose and repair electrical systems in Caterpillar machines.	Prerequisites: A grade of C or better in CTT110.		Occ	L+L 3.0 5.0 5.0	T
CTT115	2018 Fall	Air Conditioning Fundamentals		Introduction to principles, systems, components, and servicing of air conditioning systems used in Caterpillar products.	Prerequisites: A grade of C or better in CTT110.		Occ	L+L 3.0 5.0 5.0	T
CTT116	2018 Fall	Power Train I		Basic components and operations of power train systems used in Caterpillar machines. Covers basic components, clutches, manual shift transmissions, and power shift transmissions.	Prerequisites: A grade of C or better in CTT110.		Occ	L+L 3.0 5.0 5.0	T
CTT117	2018 Fall	Machine Hydraulic Systems		Operation, testing, and adjustment procedures for pilot operated hydraulic systems, load sensing pressure compensated (LSPC) hydraulic systems, electro-hydraulic systems, and hydrostatic systems. Components of hydraulic systems and oil flow through the system.	Prerequisites: A grade of C or better in CTT110.		Occ	L+L 3.0 5.0 5.0	T
CTT118	2015 Spring	Caterpillar Dealer Internship I		Application of skills and knowledge gained in CTT coursework in an internship in a dealership environment. Develops professional skills required of Caterpillar service technician. Provides experience in tool usage, shop safety, connective devices, computers and service information systems, air intake and exhaust systems, lubrication systems, cooling systems, fuel systems, engines, and electrical systems. Requires intern to complete a list of learning objectives, keep a logbook,	Prerequisites: A grade of C or better in CTT110.		Occ	LAB 3.0 3.0 0.0	P

				and be evaluated by dealership supervisor and internship coordinator.					
CTT119	2018 Fall	Caterpillar Dealer Internship II		Application of skills and knowledge gained in CTT coursework in an internship in a dealership environment. Develops professional skills required of Caterpillar service technician. Provides experience in hydraulics, pumps, valves, cylinders, and pilot-operated implement system. Requires intern to complete a list of learning objectives, keep a logbook, and be evaluated by dealership supervisor and internship coordinator.	Prerequisites: A grade of C or better in CTT110.		Occ	LAB 3.0 3.0 0.0	P
CTT200	2018 Fall	Power Train II		Methods of transferring power. Hydraulic-driven machines and mechanical power train components, including differentials, brakes, final drives, and undercarriage.	Prerequisites: A grade of C or better in CTT110.		Occ	L+L 3.0 5.0 5.0	T
CTT201	2018 Fall	Machine Electronics		Introduction to machine electronic systems and diagnostic tooling used to diagnose and repair the complex electrical/electronic systems installed in Caterpillar machines.	Prerequisites: A grade of C or better in CTT110.		Occ	L+L 3.0 5.0 5.0	T
CTT202	2018 Fall	Engine Diagnostics and Repair		In-depth study of engine diagnostics and repair techniques used to troubleshoot and repair engine problems in Caterpillar machines. Selection and use of Caterpillar diagnostic tools. Covers oil, air, cooling, and fuel systems.	Prerequisites: A grade of C or better in CTT110.		Occ	L+L 3.0 5.0 5.0	T
CTT203	2018 Fall	Machine Diagnostics		Failure analysis, troubleshooting logic, and diagnostic tooling and processes used to diagnose and repair the complex systems installed in Caterpillar machines. Use of Caterpillar's Applied Failure Analysis. Introduction to Service Technician Workbench (STW) applications.	Prerequisites: A grade of C or better in CTT110.		Occ	L+L 3.0 5.0 5.0	T
CTT204	2018 Fall	Machine Specific Systems		Introduction to machine-specific systems. Machines covered include compact construction equipment, agricultural combines and challengers, 325B Excavator, off-highway trucks, wheel tractor scrapers, and motor graders.	Prerequisites: A grade of C or better in CTT110.		Occ	L+L 3.0 5.0 5.0	T

CTT205	2018 Fall	Caterpillar Dealer Internship III		Application of skills and knowledge gained in CTT coursework in an internship in a dealership environment. Develops professional skills required of Caterpillar service technician. Provides experience in air conditioning systems, power trains, couplings, transmissions, and hydraulic systems. Requires intern to complete a list of learning objectives, keep a logbook, and be evaluated by dealership supervisor and internship coordinator.	Prerequisites: A grade of C or better in CTT110.		Occ	LAB 3.0 3.0 0.0	P
CTT206	2018 Fall	Caterpillar Dealer Internship IV		Application of skills and knowledge gained in CTT coursework in an internship in a dealership environment. Develops professional skills required of Caterpillar service technician. Provides experience in lubrication systems, engine air induction systems, cooling systems, fuel systems, timing systems, failure analysis, diagnosis, and troubleshooting of specific types of Caterpillar equipment. Requires intern to complete a list of learning objectives, keep a logbook, and be evaluated by dealership supervisor and internship coordinator.	Prerequisites: A grade of C or better in CTT110.		Occ	LAB 3.0 3.0 0.0	P
CUL101	2019 Fall	Culinary Basics		Theory and practice of basic elements of culinary arts fundamentals. Emphasis on safety, sanitation and uniform requirements, culinary terminology, basic nutritional guidelines, equipment needs and usage, standard measurements, knife selection and care, basic knife cuts, and fruit and vegetable identification and preparation.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CUL102	2019 Fall	Hot Foods		Cooking techniques and preparation of varied meat, fish and poultry items. Theory and practice of production of stocks, sauces, and soups. Study of butchering, yields, purchasing and grade classification.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

CUL103	2019 Fall	Breakfast and Cold Foods		Cooking techniques and preparation of breakfast items, salads, sandwiches, and dressings. Theory and practice of production of egg, pasta, cheeses, and fruit dishes, canapes and hors d'oeuvre creations. Study of lettuces, fruits, grains, cheeses and dressings as components of salads and sandwiches.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CUL104	2019 Fall	Bakery and Pastry		Provides a study of cooking techniques and preparation methods for cakes, pies, cookies and simple desserts as well as production of doughs and breads. Includes preparation of various bakery sauces and toppings, uses of chocolate, and appropriate presentation methods for various types of desserts.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CUL105	2019 Fall	Principles of Professional Cooking		Introductory principles and skills for professional cooking. Introduces organizational structure of kitchen staff in different types of kitchens. Includes basic principles of safety and sanitation, equipment and utensil use, French cooking terms, recipe use, measuring techniques, identification and use of seasoning agents, and basic cooking methods applied to stocks, sauces and soups, vegetables, starches, entrees, and eggs. Emphasis on practical experiences in a commercial kitchen.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
CUL107	2024 Fall	Cold Food and Breakfast Production		Cooking techniques and preparation of cold food items to include salads, sandwiches, hors d'oeuvres, and appetizers. Preparation of common breakfast foods found in restaurant operations.	Prerequisites: None.	CUL107 students must have or obtain a current Maricopa County Arizona Food Handlers Certificate prior to food	Occ	L+L 3.0 5.0 5.0	T

						handling activities to successfully participate in the course. Recommend students complete this prior to the start of the course.			
CUL109	2024 Fall	Menu Design and Development		Essential skills of menu planning and cost controls to follow a market plan. Emphasis on purchasing, receiving, storage, forecasting, production control, food and beverage control, budgeting, and evaluation systems. Provides a working model for food operation and appropriate menu to fit market plan.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CUL111	2012 Spring	Purchasing for Food Service Systems		Food purchasing for institutions: cost factors, quality standards, purchasing practices and controls.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CUL113	2020 Fall	Commercial Baking Techniques		Principles and techniques for preparation, storage, and serving of bakery products. Includes breads, cakes, pies, pastry, cookies, fillings, and icings. Emphasis on practical experiences in a commercial bakery.	Prerequisites: None.	Students must have or obtain a current Maricopa County Arizona Food Handler's Certificate prior to food handling activities to successfully	Occ	L+L 3.0 5.0 5.0	T

						participate in the course. Recommend students complete this prior to the start of the course.			
CUL115	2024 Fall	Food Service Sanitation		Focuses on the theory and practice of food service safety and sanitation. Emphasis on understanding and applying the Hazard Analysis Critical Control Points (HACCP) concept. Reviews legal elements of food service sanitation based on requirements and recommendations of regulatory authorities. Focuses on stewarding as an important kitchen support service with emphasis on appropriate practices and principles of receiving food and product rotation.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CUL117	2018 Fall	Catering - Planning and Production		Focuses on the basic steps of the catering process in a commercial food setting. Includes a review of safety and sanitation principles. Emphasizes practical experiences in booking and record keeping, planning, ordering, production, and service set-up and break-down for both in-house and off-premise catered events.	Prerequisites: A grade of C or better in CUL105.		Occ	LAB 1.0 3.0 3.0	T
CUL119	2024 Fall	Bakery Operations		Basic business operations for a bakery including examination of product lines, menu development, pricing, and marketing strategies.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CUL120	2019 Fall	Food Costing, Purchasing and Inventory Control		Basic skills necessary to understand and utilize cost controls. Focus on measurements, recipe costing and yield analysis. Application of systems and practices for efficient food purchasing, storage, production, budgeting and inventory.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T

CUL123	2018 Fall	Customer Service Practicum		Professional food and beverage experience in a commercial food service operation. Focuses on food server, host/hostess, cashier, and busperson. Includes beverage preparation, application of sanitation, and safety concepts. Stresses professionalism in service, demeanor, and appearance.	Prerequisites: A grade of C or better in FON104.		Occ	L+L 4.0 11.0 11.0	T
CUL127	2019 Fall	Classical Desserts		Advanced principles and techniques in commercial baking and dessert preparation. Focus on fine pastries with European flair and on desserts served in better hotels, restaurants, and resorts. Preparation of macaroons, tarts, puff pastries, specialty cakes, and desserts such as Bavarian creams, mousses, custards, souffles, crepe desserts, and flammeries. Preparation and use of sauces, techniques for using nuts and chocolate, and exploration of new recipes.	Prerequisites: A grade of C or better in CUL113, or permission of Program Director.		Occ	L+L 3.0 5.0 5.0	T
CUL130	2019 Fall	Savory Foods I		Studies all facets of hot foods with an emphasis on French and regional cooking techniques; including vegetable preparation, stocks, sauces, and soups. Reviews ingredients, production and plating techniques that are unique to contemporary, international and regional cuisines.	Prerequisites: None.		Occ	L+L 6.0 7.5 7.5	T
CUL137	2024 Fall	Specialty Breads and Breakfast Pastry		The preparation of classical and artisan breads using advanced production techniques and skills. Classic breakfast pastry, with the production of laminated doughs, sweet doughs, and rich yeast doughs to include Danish, croissant, puff pastry, brioche, and other international classics. Completion of edible centerpieces made out of various styles of bread.	Prerequisites: A grade of C or better in CUL113 or permission of Program Director.	CUL137 students must have or obtain a current Maricopa County Arizona Food Handler's Certificate prior to food handling	Occ	L+L 3.0 5.0 5.0	T

						activities to successfully participate in the course. Recommend students complete this prior to the start of the course.			
CUL145	2024 Fall	Banquet Food and Beverage Service Externship		Waiter/waitress serving experiences in a banquet setting; includes instructor-assisted placement, orientation, job seeking skills, and working a minimum of four banquets or twenty-four hours in banquet service. Professional appearance and attire required.	Prerequisites: A grade of C or better in CUL123 and FON104.		Occ	LAB 1.0 5.0 0.0	C
CUL150	2024 Fall	Garde Manger and Cold Foods		Studies all facets of garde manger and cold foods with an emphasis on safety and sanitation, standard commercial kitchen equipment, salads, dressings, sandwiches, cold sauces, salad condiments, basic knife skills, and a foundation in herbs, spices, vinegars and oils. Introduces basic cooking techniques and production organization when creating salads, cold soups, appetizers and sandwiches.	Prerequisites: None.	CUL150 students must have or obtain a current Maricopa County Arizona Food Handlers Certificate prior to food handling activities to successfully participate in the course. Recommend	Occ	L+L 6.0 8.0 8.0	T

						students complete this prior to the start of the course.			
CUL160	2022 Fall	Bakery I		Theory and practice of operating a bakery or pastry shop in a hotel or restaurant kitchen. Provides experience in planning, ordering, scheduling and producing fine French and American pastries and baked goods. Emphasis on rapid, high-quality hand production of doughs, creams, fillings, cookies and breads.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
CUL170	2023 Fall	Dining Room Operations I		Focuses on theory and practice of operating a casual dining room; includes set-up and clean-up, food and beverage service, proper etiquette, point-of-sale operation and presenting guest checks. Emphasis on service techniques, including buffet and banquet set-ups, and customer accommodations.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
CUL175	2024 Fall	Restaurant Operations Management		Studies all facets of front of the house operations with an emphasis on operating a casual dining room including food and beverage service, proper etiquette, service techniques, point-of-sales operations and presenting guest checks. Introduces sustainability, dining room set-up, types of service and guest relations.	Prerequisites: None.	CUL175 students must have or obtain a current Maricopa County Arizona Food Handlers Certificate prior to food handling activities to successfully participate in the course. Recomme	Occ	L+L 6.0 8.0 8.0	T

						nd students complete this prior to the start of the course.			
CUL180	1998 Fall	Food In History		Focuses on the history of foodstuffs, the story of cuisine and the social history of eating. Includes the relationship between people and what they eat, between particular foods and social behavior, and between dietary habits, customs and methods of cooking	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CUL190	2000 Summer I	Catering Operations I		Studies theory and practice of planning and executing catering functions; includes initial customer contact and follow-up, room set-up and scheduling, menu and incidental planning event execution and breakdown, billing and post-event follow up	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CUL201	2018 Fall	International Cuisine		Gourmet international food preparation applied to restaurants. Review principles of sanitation and safety. Explores history and customs, serving styles, and preparation techniques of foods unique to selected international cultures. Emphasis on practical cooking experiences in a restaurant kitchen. Cultures to include, but not limited to: Italian, German, Oriental, Middle Eastern, and Spanish.	Prerequisites: A grade of C or better in CUL105 or permission of Program Director.		Occ	L+L 3.0 5.0 5.0	T
CUL203	2018 Fall	American Regional Cuisine		American regional food preparation applied to restaurants. Review principles of sanitation and safety. Explores history and customs, serving styles, and preparation techniques of foods unique to selected American regions. Emphasis on practical cooking experiences in a restaurant setting. American regions to include, but not limited to: Southern,	Prerequisites: A grade of C or better in CUL105 or permission of Program Director.		Occ	L+L 3.0 5.0 5.0	T

				Cajun/Creole, New England, Mid-West, and Pacific Coast.					
CUL205	2018 Fall	French Cuisine		Principles of French cooking applied to restaurant kitchens. Includes review of safety and sanitation principles, orientation to French culture, use of French terms and recipes, and reading French menus. Emphasis on practical experiences in preparing French meals in a restaurant kitchen. Introduces preparation of appetizers, hors-d'oeuvres, charcuterie items, pastries, and desserts.	Prerequisites: A grade of C or better in CUL105 or permission of Program Director.		Occ	L+L 3.0 5.0 5.0	T
CUL207	2018 Fall	Pacific Rim Cuisine		Local and gourmet Pacific Rim food preparation applied to restaurants. Overview of principles of sanitation and safety. Explores history and customs, serving styles, and preparation techniques of foods unique to Pacific Rim cultures. Emphasis on practical cooking experiences in a restaurant kitchen. Cultures to include, but not limited to Chinese, Japanese, Thai, Korean, and South Pacific islands.	Prerequisites: A grade of "C" or better in CUL105.		Occ	L+L 3.0 5.0 5.0	T
CUL209	2018 Fall	Italian Cuisine		Principles of Italian cooking applied to restaurant kitchens. Includes review of safety and sanitation principles, orientation to Italian culture, use of Italian terms and recipes, and reading Italian menus. Emphasis on practical experiences in preparing Italian meals in a restaurant kitchen. Introduces preparation of appetizers, entrees, salads, fresh pasta items, pastries, and desserts.	Prerequisites: A grade of "C" or better in CUL105.		Occ	L+L 3.0 5.0 5.0	T
CUL211	2018 Fall	Professional Cooking Practicum		Preparation of hot and cold foods in a commercial food service operation; experience in volume food production preparing salads, soups, stocks, sauces, entrees, starches, and vegetables; designed to develop knowledge and skills necessary to cook in a variety of commercial kitchens.	Prerequisites: A grade of C or better in (CUL105 and FON104) or permission of Department or Division.		Occ	L+L 7.0 19.0 19.0	T

CUL213	2018 Fall	Buffet Catering		Focuses on the basic steps of the catering process in a commercial food setting. Includes an overview of safety and sanitation principles. Emphasizes practical experiences in booking and record keeping, function planning, ordering, production, and service set-up and breakdown for both in-house and off-premise catered events.	Prerequisites: A grade of C or better in CUL105 or permission of Program Director.		Occ	L+L 3.0 5.0 5.0	T
CUL215	2020 Fall	Advanced Pastry Arts		Advanced pastry arts and decorative work as applied to showpieces and special occasion cakes. Includes sugar work such as pulled, blown, and poured as well as the use of tempered and modeling chocolate. Design and execution of a three-tier wedding cake as well as work on a special occasion and team wedding cake using gum paste, pastillage, chocolate, or marzipan. Includes desserts for special diets and spa desserts.	Prerequisites: A grade of C or better in CUL113 or permission of Program Director.	CUL215 may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 5.0 5.0	T
CUL217	2024 Fall	Specialty Cakes		Advanced techniques for the production of special occasion cakes, including initial design work, baking, icing, and finishing components.	Prerequisites: A grade of C or better in CUL113 or permission of Program Director.		Occ	L+L 3.0 5.0 5.0	T
CUL219	2024 Fall	Professional Pastry Techniques		Production techniques for frozen desserts, cakes with multiple components, individual pastries, and chocolates.	Prerequisites: A grade of C or better in CUL113 or permission of Program Director.	CUL219 students must have or obtain a current Maricopa County Arizona Food Handlers Certificate prior to food handling activities to successfully participate	Occ	L+L 3.0 5.0 5.0	T

						in the course. Recommend students complete this prior to the start of the course.			
CUL220	2024 Fall	Culinary Nutrition		Study of basic nutrition concepts with an emphasis on the nutritional concerns of restaurants and other types of food service operations. Focuses on nutrients in foods, the relationships to other nutrients and the planning of well-balanced menus throughout the life cycle.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
CUL223	2013 Fall	Food Service Management		Administrative procedures and personnel relationships: Management of materials costs, record keeping and legal aspects of food and beverage service operations.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CUL225	2012 Spring	Supervisory Functions in Food Service		Principles and techniques of supervision applied to food service workers. Includes roles and responsibilities of a food service supervisor, basic theories of management, line staffing functions, basic concepts of communication, motivation techniques, problem-solving, labor relations and laws, performance evaluation and basic record keeping functions in food service settings.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
CUL230	2024 Fall	Savory and Hot Foods		Studies all facets of hot foods with an emphasis on French, regional, international and contemporary cooking techniques. Focus on vegetable preparation, stocks, sauces and soups. Students also practice organization, communication, teamwork and plating skills.	Prerequisites: A grade of C or better in CUL150.		Occ	L+L 6.0 11.0 11.0	T
CUL231AC	2012 Spring	Culinary Studies Internship		Work experience preparing hot and cold foods in a commercial food service operation, experience in	Prerequisites: A grade of C or better in CUL105, FON104,	CUL231A C may be repeated	Occ	LAB 3.0	C

				volume food production preparing salads, soups, stocks, sauces, entrees, starches, and vegetables. Fifteen (15) hours of work weekly. Supervision and evaluation by an internship coordinator.	and permission of Department or Division.	for a total of six (6) credits.		15.0 0.0	
CUL235	2018 Fall	Advanced Culinary Techniques I - Meats		Theory and practice of the varied uses and preparation of protein products. Emphasis on butchering, creating stocks, soups and sauces, cooking methodologies, cost effective applications, plating and selection of appropriate accompaniments and garnishes.	Prerequisites: A grade of C or better in CUL230 or industry equivalent.		Occ	L+L 2.0 2.0 2.0	T
CUL236	2018 Fall	Advanced Culinary Techniques II - Seafood		Theory and practice of the varied uses and preparation of seafood products. Emphasis on butchering, creating stocks, soups and sauces, cooking methodologies, cost-effective applications, plating and selection of appropriate accompaniments and garnishes.	Prerequisites: A grade of C or better in CUL230 or industry equivalent.		Occ	L+L 2.0 2.0 2.0	T
CUL237	2018 Fall	Advanced Culinary Techniques III - Game and Poultry		Theory and practice of the varied uses and preparation of game and poultry products. Emphasis on butchering, creating stocks, soups and sauces, cooking methodologies, cost effective applications, plating and selection of appropriate accompaniments and garnishes.	Prerequisites: A grade of C or better in CUL230 or industry equivalent.		Occ	L+L 2.0 2.0 2.0	T
CUL255	2024 Fall	Advanced Garde Manger I - Salads and Sandwiches		Theory and practice of creating simple and complex salads and sandwiches. Emphasis on use of multiple ingredients for hot and cold products, dressings, emulsified oils and vinegars, condiments, production methodologies, cost effective applications, plating and appropriate accompaniments and garnishes.	Prerequisites: None.		Occ	L+L 2.0 2.0 2.0	T
CUL256	2024 Fall	Advanced Garde Manger II - Appetizers and Hors d'oeuvres		Theory and practice of the key elements in production of appetizers and hors d'oeuvres. Emphasis on ingredient selection, flavor combinations, preparation methodologies, cost effective	Prerequisites: None.		Occ	L+L 2.0 2.0 2.0	T

				applications, displaying, garnishing and plating.					
CUL260	2024 Fall	Baking and Pastry		Studies all facets of bakery operations with an emphasis on French, regional, international and contemporary baking techniques. Focus on rapid, high-quality hand production of doughs, breads, creams, desserts, cookies and pastries. Students also practice planning, ordering, scheduling and producing a variety of baked goods.	Prerequisites: A grade of C or better in CUL150.	CUL260 students must have or obtain a current Maricopa County Arizona Food Handlers Certificate prior to food handling activities to successfully participate in the course. Recommend students complete this prior to the start of the course.	Occ	L+L 6.0 11.0 11.0	T
CUL265	2018 Fall	Professional Baking I - Base Products and Sauces		Theory and practice of the preparation of base products and sauces. Emphasis on creating finished products using basic components, creating sauces, and study of cooking methodologies, cost effective applications and plating techniques.	Prerequisites: A grade of C or better in CUL260 or industry equivalent.		Occ	L+L 2.0 2.0 2.0	T
CUL266	2018 Fall	Professional Baking II - Breads and Rolls		Theory and practice of cooking techniques and procedures in the preparation of breads and rolls. Emphasis on hands-on production of scratch recipes, understanding formulas, ratios and ingredient interaction for producing high quality	Prerequisites: A grade of C or better in CUL260 or industry equivalent.		Occ	L+L 2.0 2.0 2.0	T

				breads and rolls, cooking methodologies, and cost-effective applications. Focus on production of yeast-leavened breads, quick breads, laminated dough, unleavened dough and artisan style breads.					
CUL267	2018 Fall	Professional Baking III - Pastries, Pies and Cakes		Theory and practice of the preparation of complex pastries, pies and cakes. Emphasis on cooking methodologies, high quality cost effective applications, and visually dramatic plating and garnishing techniques.	Prerequisites: A grade of C or better in CUL260 or industry equivalent.		Occ	L+L 2.0 2.0 2.0	T
CUL268	2018 Fall	Professional Baking IV - Decorative and Design Work		Theory and practice of the varied uses and preparation of chocolate and sugar as decorative items. Emphasis on applications for advanced show work, cooking methodologies, cost effective applications for plated desserts and use as appropriate display pieces.	Prerequisites: A grade of C or better in CUL260 or industry equivalent.		Occ	L+L 2.0 2.0 2.0	T
CUL270	2018 Fall	Dining Room Operations II		Theory and practice of operating a formal dining room, including set-up and clean-up, food and beverage service, proper etiquette and tableside food preparation. Emphasis on formal etiquette and service practices for a dining room including buffet and banquet set-up and managerial duties	Prerequisites: A grade of C or better in CUL170.		Occ	L+L 3.0 6.0 6.0	T
CUL296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class		Occ	LAB 1.0 5.0 0.0	Z

					which is related to students major or career interest or with permission of Instructor.				
CUL296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
CUL296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with		Occ	LAB 3.0 15.0 0.0	Z

					permission of Instructor.				
CUL296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
CUL298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
CUL298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				combined to maximize student development.					
CUL298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
CWE198AA	2018 Fall	Career/Work Experience		Participation in a work experience, gaining on-the-job training, and/or exploring a career or field of choice. Helps students relate their education to the real work world. Resume writing and interviewing skills. Development of employability skills	Prerequisites: None.		Acad	L+L 1.0 1.0 1.0	T
CWE198AB	2018 Fall	Career/Work Experience		Participation in a work experience, gaining on-the-job training, and/or exploring a career or field of choice. Helps students relate their education to the real work world. Resume writing and interviewing skills. Development of employability skills	Prerequisites: None.		Acad	L+L 2.0 2.0 2.0	T
CWE198AC	2018 Fall	Career/Work Experience		Participation in a work experience, gaining on-the-job training, and/or exploring a career or field of choice. Helps students relate their education to the real work world. Resume writing and interviewing skills. Development of employability skills	Prerequisites: None.		Acad	L+L 3.0 3.0 3.0	T
CWE298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z

				combined to maximize student development.					
CWE298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
CWE298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
DAE112	2020 Fall	Dental Assisting I		Introduction to general dentistry, dental sciences, and basic preclinical dental assisting theory and skills. Topics include dental anatomy, recording oral conditions, infection control, patient preparation, communication, patient safety and comfort, emergency management, four-handed dentistry concepts and the use and maintenance of dental equipment, and development of professional behaviors.	Prerequisites: Acceptance into the Dental Assisting Program or permission of Program Director.		Occ	LEC 7.0 7.0 7.0 LAB 0.0 10.0 10.0	T
DAE124	2012 Fall	Dental Radiography		Physics of radiography, theory of radiation production, exposure techniques, radiation protection, digital image production, film processing, mounting, and interpretation of radiographs.	Prerequisites: A grade of C or better in DAE156 or permission of Program Director. Corequisites: DAE131 or		Occ	LEC 2.0 2.0 2.0	S

					permission of Program Director.				
DAE131	2018 Fall	Dental Radiography Laboratory		Radiation safety and infection control procedures for operator and patient. Image receptor placement, exposure, processing, mounting, and evaluation of dental radiographs. Operation and maintenance of x-ray and processing equipment. Interpretation of radiographic findings.	Prerequisites: A grade of C or better in DAE156 or permission of Program Director. Corequisites: DAE124 or permission of Program Director.		Occ	LAB 2.0 6.0 6.0	T
DAE140	2012 Fall	Dental Issues Seminar		Examination of legal and ethical responsibilities of dental team members. Review and analysis of clinical procedures in general and specialty practices. Includes professional and career development strategies and certification information and processes.	Prerequisites: A grade of C or better in DAE156 or permission of Program Director. Corequisites: (DAE224, DAE225, DAE226, DAE227, and DAE228) or permission of Program Director.		Occ	LEC 1.0 1.0 1.0	S
DAE156	2020 Fall	Dental Assisting II		Intermediate dental assisting skills, with an emphasis in treatment provided in general dentistry, including an introduction to dental diseases and their prevention, and preparing for and assisting in general dental restorative procedures, including the use of local anesthetics, dental materials, and pharmacological agents for procedures. Introduction to ethics and the legal aspects of dental practices.	Prerequisites: A grade of C or better in DAE112 or permission of Program Director.		Occ	LEC 7.0 7.0 7.0 LAB 0.0 10.0 10.0	T
DAE212	2020 Fall	Dental Assisting III		Advanced dental assisting skills, with an emphasis in assisting for dental specialty procedures, including pediatrics, endodontics, periodontics, orthodontics, prosthodontics, and oral and maxillofacial surgery. Additional emphasis will be on expanded functions procedures performed by the dental assistant, as well as patient records management and pharmacology related to dental treatment procedures.	Prerequisites: A grade of C or better in DAE156 or permission of Program Director.		Occ	LEC 2.0 2.0 2.0 LAB 0.0 2.0 2.0	T

DAE224	2012 Fall	General Clinical Practice		Placement of students in general practice dental facilities for supervised practical experience.	Prerequisites: A grade of C or better in DAE112 and DAE156, or Permission of Program Director. Corequisites: DAE140 or permission of Program Director.		Occ	LAB 1.0 5.0 0.0	C
DAE225	2012 Fall	Pediatric Clinical Practice		Placement of students in pediatric dental facilities for supervised practical experience.	Prerequisites: A grade of C or better in DAE112 and DAE156, or Permission of Program Director. Corequisites: DAE140 or permission of Program Director.		Occ	LAB 1.0 5.0 0.0	C
DAE226	2012 Fall	Periodontal Clinical Practice		Placement of students in periodontal facilities for supervised practical experience.	Prerequisites: A grade of C or better in DAE112 and DAE156, or Permission of Program Director. Corequisites: DAE140 or permission of Program Director.		Occ	LAB 1.0 5.0 0.0	C
DAE227	2012 Fall	Orthodontic Clinical Practice		Placement of students in orthodontic facilities for supervised practical experience.	Prerequisites: A grade of C or better in DAE112 and DAE156, or Permission of Program Director. Corequisites: DAE140 or permission of Program Director.		Occ	LAB 1.0 5.0 0.0	C
DAE228	2012 Fall	Oral and Maxillofacial Surgery Clinical Practice		Placement of students in oral and maxillofacial surgical facilities for supervised practical experience.	Prerequisites: A grade of C or better in DAE112 and DAE156, or Permission of Program Director.		Occ	LAB 1.0 5.0 0.0	C

					Corequisites: DAE140 or permission of Program Director.				
DAE240	2018 Fall	Dental Radiographic Imaging		Dental radiographic imaging. Diagnostic value of radiographs, image geometry, exposure techniques, processing of intra-oral and extra-oral radiographs covered. X-ray production, exposure factors, and image characteristics emphasized. Identification of image defects and corrective measures. Biological effects of x-radiation, radiation safety, digitized radiography, infection control procedures, and legal implications also covered.	Prerequisites: Admission to the Clinical Dental Assisting Program or permission of Department or Division.		Occ	L+L 3.0 4.0 4.0	T
DAE256	2020 Fall	Dental Assisting IV		Advanced dental assisting sciences, with an emphasis in the recognition of oral pathologies, use of technology in dentistry, intermediate dental office management skills, and legal considerations for the practice of dentistry. Additional emphasis will be placed on coronal polishing and community oral health.	Prerequisites: A grade of C or better in DAE212 or permission of Program Director.		Occ	LEC 2.0 2.0 2.0 LAB 0.0 2.0 2.0	T
DAE285	2014 Summer	Clinical Dental Assisting Seminar		Overview of special topics in clinical dental assisting. Clinical internship evaluation included. Covers expanded functions, legal responsibilities and liabilities. One hundred (100) hours of designated work required.	Prerequisites: None. Corequisites: DAE290.		Occ	L+L 2.0 2.0 0.0	Z
DAE290	2018 Fall	Internship for Clinical Dental Assistants		Perform clinical dental assisting skills within a dental practice setting. Practice safety and infection control, clinical and expanded dental assisting, patient management, laboratory skills, business assisting, equipment operation, and maintenance. Operate within practice standards, and record and evaluate internship experience. Two hundred (200) hours of designated work required.	Prerequisites: Permission of Program Director. Corequisites: DAE285.		Occ	L+L 4.0 4.0 4.0	T

DAE298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
DAE298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
DAE298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
DAH100	2024 Fall	Introduction to Dance in the United States		Overview of the field of dance focusing on origins, historical development, cultural characteristics of the various styles of dance and their contemporary practice in the United States, and dance as a vital part of the human experience.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and	Acad	LEC 3.0 3.0 3.0	S

						Design - [HU]			
DAH201	2023 Fall	Dance, Culture, and Global Contexts		Introduction to the study of dance as culture in diverse global contexts.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
DAH250	2015 Fall	Dance in Popular Culture		Interdisciplinary approach investigating diverse cultural dance practices that have shaped American popular culture from the late 19th century to the present. Highlights issues of power, class, race, ethnicity, gender, age and sexuality. Emphasis is on revealing diverse cultural influences in U.S. popular culture.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Cultural Diversity - [C]	Acad	LEC 3.0 3.0 3.0	S
DAH255	2015 Fall	Hip Hop: Arts, Aesthetic and Culture		Selective survey and historico-cultural analysis of hip hop arts, aesthetics and culture organized around the founding elements of DJing, MCing, B-boy and B-girling, graffiti arts and knowledge.	Prerequisites: A grade of C or better in ENG101 or ENG107.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Literacy and Critical	Acad	LEC 3.0 3.0 3.0	S

						Inquiry - [L]			
DAN101AA	2018 Fall	Social Dance: Ballroom		Theory and practice of Ballroom dance. Development of movement quality and performance skills individually, with a partner or in a group setting.	Prerequisites: None.	DAN101A A may be repeated for a total of four (4) credits.	Occ	L+L 1.0 2.0 2.0	T
DAN101AB	2018 Fall	Social Dance: Swing		Theory and practice of Swing dance. Development of movement quality and performance skills individually, with a partner or in a group setting.	Prerequisites: None.	DAN101A B may be repeated for a total of four (4) credits.	Occ	L+L 1.0 2.0 2.0	T
DAN101AC	2018 Fall	Social Dance: Latin		Theory and practice of Latin dance. Development of movement quality and performance skills individually, with a partner or in a group setting.	Prerequisites: None.	DAN101A C may be repeated for a total of four (4) credits.	Occ	L+L 1.0 2.0 2.0	T
DAN101AE	2018 Fall	Social Dance: Tango		Theory and practice of Tango dance. Development of movement quality and performance skills individually, with a partner or in a group setting.	Prerequisites: None.	DAN101A E may be repeated for a total of four (4) credits.	Occ	L+L 1.0 2.0 2.0	T
DAN102	2023 Fall	Hip Hop I		Theory and practice of Hip Hop dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: None.	DAN102 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN102PA	2023 Fall	Hip Hop Basic Level		Theory and practice of Hip Hop dance at the basic level. Development of movement quality and improvisation skills. Dance training for personal skill development and interest.	Prerequisites: None.	DAN102P A may be repeated for credit. Course is not intended for dance majors.	Occ	L+L 0.5 1.5 1.5	T
DAN103	2023 Fall	Hip Hop II		Theory and practice of Hip Hop dance at the advanced beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN102 or permission of Instructor.	DAN103 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN103PA	2023 Fall	Hip Hop Beginning Level		Theory and practice of Hip Hop dance at the beginning level. Development	Prerequisites: A grade of C or better	DAN103P A may be	Occ	L+L 0.5	T

				of movement quality and improvisation skills. Dance training for personal skill development and interest.	in DAN102 or DAN102PA or permission of Instructor.	repeated for credit. Course is not intended for dance majors.		1.5 1.5	
DAN104AA	2018 Fall	Ballroom I		Theory and practice of Ballroom dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: None.	DAN104A A may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN104AB	2018 Fall	Ballroom II		Theory and practice of Ballroom dance at the advanced beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN104AA or permission of Instructor.	DAN104A B may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN106AA	2018 Fall	Latin I		Theory and practice of Latin dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: None.	DAN106A A may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN106AB	2018 Fall	Latin II		Theory and practice of Latin dance at the advanced beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN106AA or permission of Instructor.	DAN106A B can be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN108AA	2018 Fall	Tango I		Theory and practice of Tango dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: None.	DAN108A A may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN108AB	2018 Fall	Tango II		Theory and practice of Tango dance at the advanced beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN108AA or permission of Instructor.	DAN108A B may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN115	2018 Fall	Dance Trends		Theory and practice of current social dance trends. Development of movement quality and performance skills.	Prerequisites: None.	DAN115 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN120AB	2018 Fall	World Dance: Flamenco		Theory and practice of Flamenco. Development of movement quality and performance skills, individually, with a partner or in a group setting.	Prerequisites: None.	DAN120A B may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN120AE	2018 Fall	World Dance: Middle Eastern Dance		Theory and practice of Middle Eastern dance. Development of movement quality and performance skills.	Prerequisites: None.	DAN120A E may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T

DAN120AK	2018 Fall	World Dance: Capoeira		Theory and practice of Capoeira. Development of movement quality and performance skills.	Prerequisites: None.	DAN120A K may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN129	2018 Fall	Musical Theatre Dance I		Introduction to the theory and practice of musical theatre dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: None.	DAN129 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN130	2018 Fall	Musical Theatre Dance II		Theory and practice of musical theatre dance at the advanced beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN129 or permission of Instructor.	DAN130 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN131	2025 Fall	Ballet I		Level one ballet theory and practice. Development of movement quality and performance skills.	Prerequisites: None.	DAN131 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN131PA	2025 Fall	Ballet I: Community		Dance training for personal skill development and interest. Level one ballet theory and practice.	Prerequisites: None. Prior dance experience suggested but not required.	DAN131P A may be repeated for credit. Course is not intended for dance majors.	Occ	L+L 0.5 1.5 1.5	T
DAN132	2018 Fall	Modern Dance I		Introduction to the theory and practice of modern dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: None.	DAN132 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN132PA	2018 Fall	Modern Dance Basic Level		Dance training for personal skill development and interest. Introduction to the theory and practice of modern dance at the basic level.	Prerequisites: None. Prior dance experience suggested but not required.	DAN132P A may be repeated for credit. Course is not intended for dance majors.	Occ	L+L 0.5 1.5 1.5	T
DAN133	2018 Fall	Jazz Dance I		Introduction to the theory and practice of jazz dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: None. Corequisites: DAN138 for dance majors.	DAN133 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN133PA	2018 Fall	Jazz Basic Level		Dance training for personal skill development and interest.	Prerequisites: None. Prior dance	DAN133P A may be	Occ	L+L 0.5	T

				Introduction to the theory and practice of jazz dance at the basic level.	experience suggested but not required.	repeated for credit. Course is not intended for dance majors.		1.5 1.5	
DAN134	2025 Fall	Ballet II		Level two ballet theory and practice. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN131 or permission of Instructor.	DAN134 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN134PA	2025 Fall	Ballet II: Community		Dance training for personal skill development and interest. Level two ballet theory and practice.	Prerequisites: A grade of C or better in DAN131PA or permission of Department or Division.	DAN134P A may be repeated for credit. Course is not intended for dance majors.	Occ	L+L 0.5 1.5 1.5	T
DAN135	2018 Fall	Modern Dance II		Theory and practice of modern dance at the advanced beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN132 or permission of Instructor.	DAN135 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN135PA	2018 Fall	Modern Dance Beginning Level		Dance training for personal skill development and interest. Theory and practice of modern dance at the beginning level.	Prerequisites: A grade of C or better in DAN132PA or permission of Department or Division.	DAN135P A may be repeated for credit. Course is not intended for dance majors.	Occ	L+L 0.5 1.5 1.5	T
DAN136	2018 Fall	Jazz Dance II		Theory and practice of jazz dance at the advanced beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN133 or permission of Instructor.	DAN136 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN136PA	2018 Fall	Jazz Beginning Level		Dance training for personal skill development and interest. Introduction to the theory and practice of jazz dance at the beginning level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN133PA or permission of Department or Division.	DAN136P A may be repeated for credit. Course is not	Occ	L+L 0.5 1.5 1.5	T

						intended for dance majors.			
DAN140	2018 Fall	Tap Dance I		An introduction to the theory and practice of tap dance.	Prerequisites: None.	DAN140 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN141	2018 Fall	Dance Workshop		An intensive experience in the process of choreography, performance, and production elements.	Prerequisites: None.	DAN141 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN145	2018 Fall	Tap Dance II		Theory and practice of tap dance at an advanced beginning level.	Prerequisites: A grade of C or better in DAN140 or permission of Instructor.	DAN145 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN146	2018 Fall	Tap Dance Ensemble		Introduction to the process and practice of dance performance, specific to the genre of tap dance.	Prerequisites: A grade of C or better in DAN140 or permission of Instructor.	DAN146 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN150	2018 Fall	Dance Performance I		An introduction to the process and practice of dance performance.	Prerequisites: None. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance.	DAN150 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN155	2018 Fall	Dance Performance II		Continued study of the process and practice of dance performance at advanced beginning level.	Prerequisites: A grade of C or better in DAN150 or permission of Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance.	DAN155 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN164	2018 Fall	Improvisation		An introduction to and an exploration of basic improvisational dance skills.	Prerequisites: None.	DAN164 may be	Occ	L+L 1.0	T

						repeated for credit.		3.0 3.0	
DAN170	2024 Fall	Dance Kinesiology		In-depth study of how the human body functions during dance movement both theoretically and practically. Attention given to correct body alignment and use while dancing, exploring each part of the body individually and analyzing the body as a whole.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
DAN190	2024 Fall	Discovering Dance Careers		An overview of the professional opportunities available in dance and dance related fields.	Prerequisites: None.	DAN190 may be repeated for credit.	Occ	LEC 1.0 1.0 1.0	S
DAN191	2021 Spring	Viewing Dance		This course emphasizes developing critical analysis skills in order to find effective and intelligent ways of viewing and discussing choreography, dance for film, and lighting design for dance. Students will view masterpiece examples of choreography, dance for film, and lighting design from notable artists during the 20th and 21st centuries spanning various genres of dance.	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
DAN192	2021 Spring	Digital Music for Dancers		Learn to use Digital Audio Workstation (DAW) software to edit and create music for dance performance and film as well as fix audio issues in music and sound.	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
DAN193	2021 Spring	Professional Promotion for Dancers		An introduction to professional promotion for dancers. Design software and online applications will be used to manipulate photos and graphics in the creation of design projects for promotion.	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
DAN202	2023 Fall	Hip Hop III		Theory and practice of Hip Hop dance at the beginning intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN103 or permission of Instructor.	DAN202 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN202PA	2023 Fall	Hip Hop Intermediate Level		Theory and practice of Hip Hop dance at the intermediate level. Development of movement quality and improvisation skills. Dance	Prerequisites: A grade of C or better in DAN103, or DAN103PA, or	DAN202P A may be repeated for credit. Course is	Occ	L+L 0.5 1.5 1.5	T

				training for personal skill development and interest.	permission of Instructor.	not intended for dance majors.			
DAN203	2023 Fall	Hip Hop IV		Theory and practice of Hip Hop dance at the intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN202 or permission of Instructor.	DAN203 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN203PA	2023 Fall	Hip Hop Intermediate Advanced Level		Theory and practice of Hip Hop dance at the intermediate advanced level. Development of movement quality and improvisation skills. Dance training for personal skill development and interest.	Prerequisites: A grade of C or better in DAN202, or DAN202PA, or permission of Instructor.	DAN203P A may be repeated for credit. Course is not intended for dance majors.	Occ	L+L 0.5 1.5 1.5	T
DAN210	2018 Fall	Dance Production I		Introduction to the elements of pre-production and production, including but not limited to production organization, production management, lighting design, and sound design as they relate to the art of dance.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
DAN220	2018 Fall	Dance Career Preparation		This course provides foundational skills for employment in the field of dance including career research; development of promotional materials; interview and audition preparation; and entrepreneurial strategies for achieving educational and career goals.	Prerequisites: A grade of C or better in ENG101 or permission of Instructor.		Occ	L+L 3.0 3.0 3.0	T
DAN221	2025 Fall	Rhythmic Awareness I		Exploration of rhythm in dance performance, choreography and pedagogy. Emphasis on the basic understanding of rhythm and cultivating awareness of rhythm in everyday life.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
DAN229	2018 Fall	Musical Theatre Dance III		Theory and practice of musical theatre dance at the beginning intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN130 or permission of Instructor.	DAN229 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN230	2018 Fall	Musical Theatre Dance IV		Theory and practice of musical theatre dance at the intermediate	Prerequisites: A grade of C or better	DAN230 may be	Occ	L+L 1.0	T

				level. Development of movement quality and performance skills.	in DAN229 or permission of Instructor.	repeated for credit.		3.0 3.0	
DAN231	2025 Fall	Ballet III		Level three ballet theory and practice. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN134 or permission of Instructor.	DAN231 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN231AA	2025 Fall	Ballet III: Intensive		Level three ballet theory and intensive practice. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN134 or permission of Instructor.	DAN231A A may be repeated for credit.	Occ	L+L 2.0 5.0 5.0	T
DAN231PA	2025 Fall	Ballet III: Community		Dance training for personal skill development and interest. Level three ballet theory and practice.	Prerequisites: A grade of C or better in DAN134PA or permission of Department or Division.	DAN231P A may be repeated for credit. Course is not intended for dance majors.	Occ	L+L 0.5 1.5 1.5	T
DAN232	2018 Fall	Modern Dance III		Theory and practice of modern dance at the beginning intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN135 or permission of Instructor.	DAN232 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN232AA	2018 Fall	Modern Dance III: Intensive		Theory and intensive practice of modern dance at the beginning intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN135 or permission of Instructor.	DAN232A A may be repeated for credit.	Occ	L+L 2.0 5.0 5.0	T
DAN232PA	2018 Fall	Modern Dance Intermediate Level		Dance training for personal skill development and interest. Theory and practice of modern dance at the intermediate level.	Prerequisites: A grade of C or better in DAN135PA or permission of Department or Division.	DAN232P A may be repeated for credit. Course is not intended for dance majors.	Occ	L+L 0.5 1.5 1.5	T
DAN233	2018 Fall	Jazz Dance III		Theory and practice of jazz dance at the beginning intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN136 or permission of Instructor.	DAN233 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T

DAN233AA	2018 Fall	Jazz Dance III: Intensive		Theory and intensive practice of jazz dance at the beginning intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN136 or permission of Instructor.	DAN233A A may be repeated for credit.	Occ	L+L 2.0 5.0 5.0	T
DAN233PA	2018 Fall	Jazz Intermediate Level		Dance training for personal skill development and interest. Introduction to the theory and practice of jazz dance at the intermediate level.	Prerequisites: A grade of C or better in DAN136PA or permission of Department or Division.	DAN233P A may be repeated for credit. Course is not intended for dance majors.	Occ	L+L 0.5 1.5 1.5	T
DAN234	2025 Fall	Ballet IV		Level four ballet theory and practice. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN231 or permission of Instructor.	DAN234 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN234AA	2025 Fall	Ballet IV: Intensive		Level four ballet theory and intensive practice. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN231AA or permission of Instructor.	DAN234A A may be repeated for credit.	Occ	L+L 2.0 5.0 5.0	T
DAN234PA	2025 Fall	Ballet IV: Community		Dance training for personal skill development and interest. Level four ballet theory and practice.	Prerequisites: A grade of C or better in DAN231PA or permission of Department or Division.	DAN234P A may be repeated for credit. Course is not intended for dance majors.	Occ	L+L 0.5 1.5 1.5	T
DAN235	2018 Fall	Modern Dance IV		Theory and practice of modern dance at the intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN232 or permission of Instructor.	DAN235 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN235AA	2018 Fall	Modern Dance IV: Intensive		Theory and intensive practice of modern dance at the advanced intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN232AA or permission of Instructor.	DAN235A A may be repeated for credit.	Occ	L+L 2.0 5.0 5.0	T
DAN235PA	2018 Fall	Modern Dance Advanced Level		Dance training for personal development and interest. Theory and practice of modern dance at the	Prerequisites: A grade of C or better in DAN232PA or	DAN235P A may be repeated	Occ	L+L 0.5	T

				advanced level. Development of movement quality and performance skills.	permission of Department or Division.	for credit. Course is not intended for dance majors.		1.5 1.5	
DAN236	2018 Fall	Jazz Dance IV		Theory and practice of jazz dance at the intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN233 or permission of Instructor.	DAN236 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN236AA	2018 Fall	Jazz Dance IV: Intensive		Theory and intensive practice of jazz dance at the advanced intermediate level. Development of movement quality and performance skills.	Prerequisites: A grade of C or better in DAN233AA or permission of Instructor.	DAN236A A may be repeated for credit.	Occ	L+L 2.0 5.0 5.0	T
DAN236PA	2018 Fall	Jazz Advanced Level		Dance training for personal skill development and interest. Introduction to the theory and practice of jazz dance at the advanced level.	Prerequisites: A grade of C or better in DAN233PA or permission of Department or Division.	DAN236P A may be repeated for credit. Course is not intended for dance majors.	Occ	L+L 0.5 1.5 1.5	T
DAN237	2025 Fall	Ballet Pointe I		An introduction to the theory and practice of level one pointe work. Development of strength and movement quality.	Prerequisites: A grade of C or better in DAN134 or permission of Instructor. Corequisites: DAN231 or DAN234.	DAN237 may be repeated for credit.	Occ	L+L 1.0 1.0 1.0	T
DAN240	2018 Fall	Tap Dance III		Theory and practice of tap dance at a beginning intermediate level.	Prerequisites: A grade of C or better in DAN145 or permission of Instructor.	DAN240 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN245	2018 Fall	Tap Dance IV		Theory and practice of tap dance at an intermediate level.	Prerequisites: A grade of C or better in DAN240 or permission of Instructor.	DAN245 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN250	2018 Fall	Dance Performance III		Continued study of the process and practice of dance performance at beginning intermediate level.	Prerequisites: A grade of C or better in DAN155 or permission of	DAN250 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T

					Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance.				
DAN255	2018 Fall	Dance Performance IV		Continued study of the process and practice of dance performance at the intermediate level.	Prerequisites: A grade of C or better in DAN250 or permission of Instructor. Corequisites: Any level of any of the following dance technique courses with a DAN prefix: ballet, modern, jazz, hip hop, tap, social, or world dance.	DAN255 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
DAN264	2018 Fall	Choreography I		Study of basic dance choreography to include construction of a phrase, structure and form in a composition, and the basic elements of time, space and energy	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
DAN265	2018 Fall	Choreography II		Exploration of choreography at the intermediate level. Experimentation with the various approaches to creative practice as established by 20th and 21st century artists.	Prerequisites: A grade of C or better in DAN264 or permission of Instructor.		Occ	L+L 3.0 3.0 3.0	T
DAN272	2020 Fall	Dance Technology		Survey of the expanding field of technology as it pertains to the study and performance of dance.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
DAN275	2023 Fall	Choreography for Film and Video		Introduction to creating choreography uniquely for screen medium, emphasizing relationship between choreography, work of the camera, and the editing in maintaining the three dimensional qualities of movement when transferred to the two dimensional space of the screen.	Prerequisites: None. DAN264 recommended but not required.		Occ	LEC 3.0 3.0 3.0	S

DAN280	2023 Fall	Dance Practicum		A culmination of coursework for the dance major requiring completion of an extended choreographic work from conception to performance. Also requires a final evaluative paper on the successes and challenges encountered throughout the project.	Prerequisites: Permission of Instructor.	DAN280 may be repeated for credit.	Occ	L+L 2.0 3.0 3.0	T
DAN282AA	2016 Summer	Service-Learning Experience in Dance		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	DAN282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 1.0 1.0 0.0	L
DAN282AB	2016 Summer	Service-Learning Experience in Dance		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	DAN282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 2.0 2.0 0.0	L
DAN282AC	2016 Summer	Service-Learning Experience in Dance		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	DAN282A C may be repeated for a total of six (6) credit hours. Standard grading	Occ	LAB 3.0 3.0 0.0	L

						available according to procedures outlined in catalog.			
DAN290AA	2018 Fall	Dance Conservatory I		An intensive course focusing on the theory and practice of dance technique including, but not limited to, ballet, modern dance, modern jazz, pilates, yoga and dance performance at the beginning level. Study of repertory and development of movement quality and performance skills. Includes an informal public showing of dance technique and performance skills.	Prerequisites: None.	DAN290A A may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 3.0 3.0	T
DAN290AB	2018 Fall	Dance Conservatory I		An intensive course focusing on the theory and practice of dance technique including, but not limited to, ballet, modern dance, modern jazz, pilates, yoga and dance performance at the beginning level. Study of repertory and development of movement quality and performance skills. Includes an informal public showing of dance technique and performance skills.	Prerequisites: None.	DAN290A B may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 6.0 6.0	T
DAN290AC	2018 Fall	Dance Conservatory I		An intensive course focusing on the theory and practice of dance technique including, but not limited to, ballet, modern dance, modern jazz, pilates, yoga and dance performance at the beginning level. Study of repertory and development of movement quality and performance skills. Includes an informal public showing of dance technique and performance skills.	Prerequisites: None.	DAN290A C may be repeated for a total of nine (9) credit hours.	Occ	L+L 3.0 9.0 9.0	T
DAN293	2016 Summer	Teaching Dance in Elementary Education		Introduction to theories and methods of teaching dance and movement in the elementary school setting. Includes planning, facilitating, and assessing dance and movement experiences for grades K-6.	Prerequisites: A grade of C or better in (BIO160, DAN231, DAN232, DAN233 and DAN264) or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S

DAN294	2016 Summer	Teaching Dance In Secondary Education		Introduction to the theories and methods of teaching dance and movement in the secondary school setting. Includes planning, facilitating, and assessing dance and movement experiences for grades 7-12.	Prerequisites: A grade of C or better in (BIO160, DAN231, DAN232, DAN233 and DAN264) or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
DAN298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.	DAN298A A may be repeated for credit.	Occ	LAB 1.0 1.0 0.0	Z
DAN298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
DAN298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
DFT105AA	2018 Fall	Computer Aided Drafting I: AutoCAD		Industrial use of AUTOCAD equipment (hardware and software) in	Prerequisites: None.	Course Attribute(s)): General	Occ	L+L 3.0	T

				the areas of mechanical, electronic and construction drawings		Education Designation: Computer/Stats/Quantitative Apps - [CS] in combination with: CSC100 or CSC100A A or CSC100A B.		6.0 6.0	
DFT106	1996 Fall	Algebra and Graphs for Design Technology		Algebraic principles and applications used in the design trades. Additional topics in the use of rectangular coordinates.	Prerequisites: A grade of C or better in MAT092 or equivalent or 1 year of high school algebra or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
DFT107	1992 Fall	Trigonometry and Analytic Geometry for Design Technology		An introduction to plane trigonometry and plane and solid geometry with practical applications to the field of design drafting. Problems in the analysis of force, stress, and vectors as well as primary geometric considerations	Prerequisites: A grade of C or better in DFT106 or equivalent.		Occ	LEC 3.0 3.0 3.0	S
DFT110	2018 Fall	Introduction to Drafting		Fundamentals of drafting including lettering, basic drawing concepts, geometric construction and multiview projection.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
DFT111	2018 Fall	Intermediate Drafting		Dimensioning and tolerancing, sectional views and auxiliary views.	Prerequisites: A grade of C or better in DFT105AA, or DFT110, or equivalent.		Occ	L+L 3.0 6.0 6.0	T
DFT112	2018 Fall	Advanced Drafting		Detail and assembly drawings, dimensioning and tolerancing per current manufacturing standards.	Prerequisites: A grade of C or better in (DFT111 and DFT254AA) or equivalent.		Occ	L+L 3.0 6.0 6.0	T

DFT114	1999 Summer I	Machine Trades Blueprint Reading		Analysis and interpretation of technical drawings, common to manufacturing and the machine trades	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
DFT115	2020 Fall	Geometric Dimensioning and Tolerancing		Principles and application of the latest techniques in geometric dimensioning and tolerancing in accordance with current American Society of Mechanical Engineers (ASME) Y14.5M. Recommended for all manufacturing personnel who read or produce engineering drawings related to contracts with the U.S. Government.	Prerequisites: A grade of C or better in DFT110 or Corequisites: DFT110 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
DFT126	1994 Fall	Building Trades Blueprint Reading		Analysis and interpretation of technical drawings common to the construction industry and building trades	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
DFT254AA	2018 Fall	Computer Aided Drafting II: AutoCAD		Advanced AutoCAD techniques in constructing three-dimensional objects and symbols, dimensioning and text; advanced techniques for projection, rotation, and translation of objects; advanced plotter use.	Prerequisites: A grade of C or better in DFT105AA or equivalent or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
DFT255	2020 Fall	3D Printing/Additive Manufacturing		Rapidly advancing additive manufacturing (AM) technologies, often called 3D printing, provide us a direct way of converting digital data into physical objects. Additive manufacturing enables the building of customized parts previously impossible to fabricate. Design for additive manufacturing teaches background, terminology, fundamentals designing for additive manufacturing, and current AM technology as well as advantages and limitations of 3D printing, materials, and post-processing. Students will learn and apply technique through lab activities, machine operation and maintenance, part design and analysis, adapting stereolithography files, printing models, and post-processing.	Prerequisites: A grade of C or better in DFT254AA or or permission of Department or Division.		Occ	L+L 4.0 4.0 4.0	T

DFT296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
DFT296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
DFT296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6		Occ	LAB 3.0 15.0 0.0	Z

				related to the career objectives of the students.	grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
DFT296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
DFT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				aspects of independent study and individualized learning to be combined to maximize student development.					
DFT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
DFT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
DHE110	2021 Spring	Pharmacology		Study of the principles of pharmacology and drugs affecting oral health and dental treatment. Topics include drug interactions, oral manifestations, drugs used in dentistry and alternative medicine.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
DHE112	2021 Spring	Oral Pathology		Identification, classification, etiology and treatment of lesions of the oral mucosa and atypical conditions of the oral cavity and supporting structures. Understanding of abnormal conditions to recognize the parameters of comprehensive dental hygiene care. Multimedia resources are used extensively for identification of oral lesions.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
DHE115	2021 Fall	Emergency Medicine		Introduction to recording and interpreting medical history. Additional	Prerequisites: Admission to the		Occ	LEC 2.0	S

				topics include: recognition of signs and symptoms of medical emergencies, procedures and techniques introduced to prevent emergencies and management of emergency situations in the dental environment.	Dental Hygiene Program.			2.0 2.0	
DHE117	2021 Fall	Dental Radiography		Physics of radiography, theory of radiation production, exposure techniques, radiation protection, image processing, mounting, and interpretation of radiography. Course activities include multimedia resources.	Prerequisites: Admission to the Dental Hygiene Program or permission of Program Director.		Occ	LEC 2.0 2.0 2.0	S
DHE119	2019 Fall	Head and Neck Anatomy		Study of the structures of the head and neck relevant to dental hygiene. Topics include: osteology, musculature, vascular supply, lymph and glandular tissue, cranial nerves and routes of infection. Course activities include use of skulls, models and multimedia resources.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
DHE120	2022 Fall	Pre-Clinical Dental Hygiene		Introduction to the dental hygiene profession and the process of care. Infection control, patient assessment, preventive treatment and dental hygiene instrumentation are practiced. Students are introduced to self assessment skills and quality improvement.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.		Occ	L+L 6.0 12.0 12.0	T
DHE121	2022 Fall	Dental Anatomy, Embryology and Histology		Includes the histology and embryology of oral tissues; developmental disturbances of the face, oral cavity, and related structures; tooth composition and morphology including anomalies; eruption patterns and occlusal evaluation. Use of skulls, models and multimedia resources also covered.	Prerequisites: Admission to the Dental Hygiene Program.		Occ	L+L 2.0 3.0 3.0	T
DHE125	2021 Fall	Dental Radiography Laboratory		Radiation safety and infection control procedures for operator and patient. Image receptor placement, exposure, processing, mounting and evaluation of dental radiographs. Operation and maintenance of X-ray and processing	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: (DHE117 and admission to the		Occ	LAB 1.0 3.0 3.0	T

				equipment. Interpretation of radiographic findings.	Dental Hygiene Program) or permission of Program Director.				
DHE127	2019 Fall	Prevention of Dental Disease		Introduction to preventive aids, agents, and coaching to help patients achieve optimum oral health, reduce incidence of disease, and minimize risk of oral injury. Instills critical thinking in etiologic agents, cariology, fluorides, sealants, nutrition, and their oral and systemic implications.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
DHE132	2023 Fall	Dental Hygiene Theory I		Study of the dental hygiene process of care with emphasis on assessment, planning and implementation. Topics include instrumentation, adjunct dental hygiene services, instrument sharpening, computer technology, dental specialties and professional accountability.	Prerequisites: A grade of C or better in (DHE120 and admission to the Dental Hygiene Program) or permission of Instructor. Corequisites: DHE133.		Occ	L+L 3.0 5.0 5.0	T
DHE133	2023 Fall	Dental Hygiene Clinic I		Application of the dental hygiene process of care with emphasis on assessment, planning, and implementation. Introduction to evaluation of dental hygiene therapy.	Prerequisites: A grade of C or better in DHE120 and admission to the Dental Hygiene Program. Corequisites: DHE132 and current CPR card.		Occ	LAB 3.0 9.0 9.0	T
DHE201	2021 Fall	Dental Materials		Composition, properties and criteria for use of dental materials. Principles of manipulation of restorative, preventive, and laboratory dental materials.	Prerequisites: Admission to the Dental Hygiene Program or permission of Program Director/Chair. Corequisites: DHE202.		Occ	LEC 2.0 2.0 2.0	S
DHE202	2021 Fall	Dental Materials Laboratory		Manipulate permanent and temporary restorative materials, impression materials/systems, cements, bases and liners. Fabricate mouth protectors, tooth whitening appliances and study models. Laboratory	Prerequisites: Admission to the Dental Hygiene Program or permission of Program		Occ	LAB 1.0 3.0 3.0	T

				proficiency in margination of permanent restorative materials.	Director/Chair. Corequisites: DHE201.				
DHE212	2023 Fall	Dental Hygiene Theory II		Study of the dental hygiene process of care with emphasis on comprehensive care planning, case presentation, and clinical decision making. Introduction to advanced periodontal instrumentation.	Prerequisites: A grade of C or better in DHE132 and DHE133 and admission to the Dental Hygiene Program. Corequisites: DHE213.		Occ	L+L 2.0 3.0 3.0	T
DHE213	2023 Fall	Dental Hygiene Clinic II		Application of the dental hygiene process of care with emphasis on comprehensive care planning, case presentation, clinical decision making, advanced instrumentation and improved time utilization.	Prerequisites: A grade of C or better in DHE132 and DHE133 and admission to the Dental Hygiene Program. Corequisites: DHE212.		Occ	LAB 5.0 15.0 15.0	T
DHE219	2021 Spring	Practice Management		Integration of practice management concepts and comprehensive quality patient care in preparation for future collaborative practice between dental hygienists and dentists. Students are challenged with practice situations including productivity, conflict management, ethical and legal issues.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
DHE225	2019 Fall	Periodontics		Principles of periodontology; etiology, microbiology, pathogenesis, classification and characteristics of healthy and diseased periodontal tissues. Surgical treatment of periodontal disease and the effects of dental hygiene therapy, surgical techniques and maintenance therapy. Evaluation of the scientific literature and multi-media resources are used extensively.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
DHE227	2019 Fall	Dental Anesthesia		A comprehensive lecture and laboratory course providing concepts and techniques for the administration of local anesthetic agents and nitrous oxide. Experience gained in medical	Prerequisites: A grade of C or better in DHE119.		Occ	LEC 2.0 2.0 2.0 LAB	T

				history review, electronic recordkeeping, patient management, and hands-on experience administering local anesthetics and nitrous oxide in a clinical setting.				0.0 3.0 3.0	
DHE229	2021 Spring	Community Oral Health		An examination of methods used to assess the oral health status of the community and to plan, implement, finance and evaluate dental public health programs. Focus on community-based health promotion and disease prevention measures to improve the oral health of the population, as well as the characteristics of dental care delivery systems and the social, political, psychological and economic factors affecting utilization within the system.	Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
DHE232	2023 Fall	Dental Hygiene Theory III		Study of the dental hygiene process of care with emphasis on the patient with special needs and advanced instrumentation. Students participate in field observations and present case documentations.	Prerequisites: A grade of C or better in (DHE212 and DHE213) and admission to the Dental Hygiene Program. Corequisites: DHE233.		Occ	L+L 2.0 2.0 2.0	T
DHE233	2023 Fall	Dental Hygiene Clinic III		Application of the dental hygiene process of care with emphasis on diverse populations. Students prepare for clinical practice using self assessment, evaluation and critical thinking skills.	Prerequisites: A grade of C or better in (DHE212 and DHE213) and admission to the Dental Hygiene Program. Corequisites: DHE232.		Occ	LAB 5.0 15.0 15.0	T
DHE298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				combined to maximize student development.					
DHE298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
DHE298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
DIE104	2019 Spring	Electrical for Diesel Engines I		Introduces electrical principles and circuit theory through the operation, diagnostics and repair of batteries, starting and charging circuits. Concepts include magnetism, electrical circuits, DC electricity, electrical schematic reading, interpretation, and testing.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
DIE106	2019 Spring	Mobile Hydraulics and Pneumatics		The transmission of energy through hydraulic and pneumatic systems. Defines the function and operation of valves, cylinders, pumps, motors, accumulators, reservoirs, coolers, hoses, fluids, filters, seals and contamination control. Basic troubleshooting and schematic interpretation emphasized. Pneumatic functions discussed.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
DIE108	2019 Spring	Heavy Duty Diesel PowerTrains		Introduction to powertrain concepts and operation of basic components of	Prerequisites: None.		Occ	L+L 3.0	T

				the powertrain system. Basic powertrain maintenance industry practices and skills that include but not limited to pressure testing and adjustments. Clutch fill calibration and some component disassembly will be covered.				4.0 4.0	
DIE112	2019 Spring	General Diesel Engines		Introduction to diesel engine operation and related systems. Concepts include basic engine maintenance, engine tear-down, inspection, reassembly, and all necessary adjustments.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
DIE296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
DIE296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of		Occ	LAB 2.0 10.0 0.0	Z

					instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
DIE296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
DIE296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class		Occ	LAB 4.0 20.0 0.0	Z

					which is related to students major or career interest or with permission of Instructor.				
DIE298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
DIE298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
DIE298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
DMI220	2017 Spring	Sectional Anatomy	DMS220 ICE220	Sectional human anatomy in the transverse, sagittal and coronal planes. Emphasis on the brain, neck, chest, abdomen and pelvic cavity.	Prerequisites: (BIO160 or BIO201) and (HCC145 or HCC146), or a graduate of a related		Occ	LEC 3.0 3.0 3.0	S

					medical program of study or currently registered as a technologist in radiography, nuclear medicine, radiation therapy or sonography OR Admission to the Medical Radiography Program or permission of Instructor.				
DMI228	2012 Spring	Radiography Practicum VII		Advanced imaging procedures.	Prerequisites: Permission of Instructor and acceptance by sponsoring clinical institution.	DMI228 may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 6.0 0.0	C
DMS100	2010 Fall	Introduction to Diagnostic Medical Sonography		Role of health care worker in diagnostic medical sonography. Job duties, responsibilities, working conditions and work environments in the inpatient and outpatient clinical settings. Overview of diagnostic and therapeutic procedures. Shadowing experience in diagnostic sonography department.	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
DMS101	2020 Fall	Patient Care in Diagnostic Sonography		Safety procedures for the hospitalized patient. Transfer, moving and positioning techniques. Patient assessment methods and procedures. Protection of drains, tubes, intravenous lines, and infusion pumps. Gloving, gowning, and sterile procedures. Safe use and application of sonography equipment. Professional behavior and responsibility of the sonographer in the diagnostic imaging lab.	Prerequisites: Admission to the Diagnostic Medical Sonography program or permission of Instructor.		Occ	LAB 1.0 3.0 3.0	T
DMS110	2021 Spring	Introduction to Diagnostic Sonography		Use of ultrasound including medical applications. Job description including opportunities, licensure, use of sonography equipment, responsibilities of diagnostic medical	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 3.0 3.0 3.0	S

				sonographers in the workplace, and medical ethics.					
DMS110LL	2018 Fall	Introduction to Diagnostic Sonography Laboratory,		Use and maintenance of sonography equipment, and responsibilities of Diagnostic Medical Sonographers in the workplace.	Prerequisites: A grade of C or better in DMS110 or Corequisites: DMS110.		Occ	LAB 1.0 3.0 3.0	T
DMS120	2023 Fall	Ultrasound Imaging: Abdominal Procedures I		Ultrasound evaluation of upper abdominal organs. Normal and pathologic ultrasound appearances of the liver, gallbladder, pancreas, biliary tree, spleen, adrenal glands, kidneys, major vascular structures, and lymph nodes.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 3.0 3.0 3.0	S
DMS120LL	2018 Fall	Ultrasound Imaging: Abdominal Procedures I Laboratory		Ultrasound evaluation of upper abdominal organs. Normal ultrasound appearances of the liver, gallbladder, pancreas, biliary tree, spleen, adrenal glands, kidneys, major vascular structures, small parts, and lymph nodes.	Prerequisites: A grade of C or better in DMS120 or Corequisites: DMS120.		Occ	LAB 1.0 3.0 3.0	T
DMS121	2012 Fall	Ultrasound Imaging: Abdominal Procedures II		Ultrasound evaluation of upper abdominal organs. Normal and pathologic ultrasound appearances of the liver, gallbladder, pancreas, biliary tree, spleen, adrenal glands, kidneys, major vascular structures, lymph nodes, and small parts.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 3.0 3.0 3.0	S
DMS130	2021 Spring	Ultrasound Imaging: OB/GYN Procedures		Ultrasound evaluation of the female pelvis, reproductive system, and fetus. Diagnostic tests related to the ultrasound procedure. Normal and pathologic ultrasound appearances of the fetus, placenta, uterus, cervix, fallopian tubes, and ovaries.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 3.0 3.0 3.0	S
DMS130LL	2021 Fall	Ultrasound Imaging: OB/GYN Procedures Laboratory		Application of diagnostic concepts to evaluation of the pelvis, reproductive system, and fetus. Normal and pathologic ultrasound appearances of the fetus, placenta, uterus, cervix, fallopian tubes, ovaries, and male pelvis.	Prerequisites: None. Corequisites: DMS130 or permission of the Program Director.		Occ	LAB 1.0 3.0 3.0	T
DMS140	2010 Fall	Ultrasound Case Studies: Part I		Medical terminology, anatomy, physical principles, and techniques for determining proper technical factors. Anatomical variants, normal, and	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 2.0 2.0 2.0	S

				pathological sonographic findings in diagnostic ultrasound case presentations.					
DMS145	2015 Fall	Clinical Pathology for Diagnostic Imaging		Disease etiology and impact on the human body. Physiologic effects of disease on body systems. Role of Diagnostic Medical Imaging (DMI) modalities in the diagnosis and treatment of selected disease processes. DMI as part of the health care team. Cultural implications in the prevention and treatment of disease.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 1.0 1.0 1.0	S
DMS148	2017 Spring	Introduction to Musculoskeletal Sonographic Imaging		Ultrasound terminology. Ethics. Tissue structure and physiology in imaging. Legal ramifications. Documentation and reporting. Billing and coding. Professional standards. Roles healthcare clinicians and relationships to Sonography.	Prerequisites: Admission to Diagnostic Medical Sonography program or permission of the Program Director.		Occ	LEC 1.0 1.0 1.0	S
DMS150	2021 Spring	Sonographic Principles and Instrumentation I		Sonographic principles and instrumentation necessary for the performance of diagnostic sonographic imaging and vascular examinations. Quality control materials and procedures. Biological effects of ultrasound energy.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 3.0 3.0 3.0	S
DMS150LL	2018 Fall	Sonographic Principles and Instrumentation Laboratory		Laboratory experience in support of DMS150.	Prerequisites: A grade of C or better in DMS150 or Corequisites: DMS150.		Occ	LAB 1.0 3.0 3.0	T
DMS151	2015 Fall	Sonographic Principles and Instrumentation II		Sonographic principles and instrumentation necessary for the performance of diagnostic sonographic examinations using Hemodynamics and Doppler imaging. Identifying and reducing image artifacts. Quality control materials and procedures. Biological effects of ultrasound energy.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 2.0 2.0 2.0	S
DMS155	2024 Fall	Introduction to Clinical Care for Sonography		Observation of correct hospital policies and procedures in clinical simulation. The job description, duties, and functions of the sonographer. Career opportunities in ultrasound.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LAB 1.0 3.0 3.0	T

DMS161	2024 Fall	Clinical Practicum II-AA		Technical and professional aspects of diagnostic ultrasound in a simulated clinical setting at the beginner level. Simulation of hospital and clinical procedures and policies. Observation, assistance, and performance of clerical, patient care, and sonographic duties under strict supervision.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LAB 1.0 3.0 3.0	T
DMS162	2022 Spring	Clinical Practicum II-AB		Development of technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the beginner level. Hospital procedures and policies. Continued observation, assistance and performance of clerical, patient care and sonographic duties under strict supervision.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LAB 2.0 10.0 0.0	C
DMS171	2021 Spring	Clinical Practicum III-AA		Technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the advanced beginner level. Reinforcement and broadening of knowledge base related to hospital procedures and policies. Observation, assistance and performance of patient care and sonographic duties under moderate supervision.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LAB 2.0 10.0 0.0	C
DMS172	2021 Spring	Clinical Practicum III-AB		Continued technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the advanced beginner level. Ongoing reinforcement and broadening of knowledge base related to hospital procedures and policies. Continued observation, assistance and performance of patient care and sonographic duties under moderate supervision.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LAB 2.0 10.0 0.0	C
DMS210	2024 Fall	Concepts of Vascular Imaging		Vascular physics and terminology. Application of imaging concepts to arterial, venous, and cerebrovascular ultrasound. Normal, abnormal and pathologic states of human vascular anatomy. Review and demonstration of selected scanning protocols to	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 3.0 3.0 3.0	S

				include extremity, cerebral vascular systems, and abdominal duplex.					
DMS210LL	2024 Fall	Concepts of Vascular Imaging Laboratory		Application of diagnostic concepts to arterial, venous, and cerebrovascular vasculature. Normal human vascular anatomy. Demonstration of selected scanning protocols to include extremity and visceral vascular systems.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: DMS210.		Occ	LAB 1.0 3.0 3.0	T
DMS220	2017 Spring	Sectional Anatomy	DMI220 ICE220	Sectional human anatomy in the transverse, sagittal and coronal planes. Emphasis on the brain, neck, chest, abdomen and pelvic cavity.	Prerequisites: (BIO160 or BIO201) and (HCC145 or HCC146), or a graduate of a related medical program of study or currently registered as a technologist in radiography, nuclear medicine, radiation therapy or sonography OR Admission to the Medical Radiography Program or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
DMS225	2013 Fall	High Risk Obstetric/Gynecology Sonography		Sonographic overview of the female reproductive system. High risk intervention and tests related to sonography. Normal and abnormal sonographic presentations of the uterus and fetus in pregnancy.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 1.0 1.0 1.0	S
DMS230	2010 Fall	Introduction to Echocardiography		Anatomy and physiology of the heart. Normal, abnormal and pathologic states of cardiac anatomy as it relates to diagnostic sonography. Demonstration of scanning techniques in echocardiography.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 1.0 1.0 1.0	S
DMS235	2010 Fall	Ultrasound Breast Imaging		Ultrasound imaging of the breast. Includes terminology, technique, physics and instrumentation. Breast anatomy, physical examination and procedure findings. Pathology and correlation with other imaging modalities.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 1.0 1.0 1.0	S

DMS240	2010 Fall	Ultrasound Case Studies: Part II		Medical terminology, anatomy, physical principles, and technology for determining proper technical factors. Anatomical variants, normal, and pathological sonographic findings in diagnostic ultrasound case presentations.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 2.0 2.0 2.0	S
DMS241	2010 Fall	Ultrasound Case Studies: Part III		Medical terminology, anatomy, physical principles, and technology for determining proper technical factors. Anatomical variants, normal, and pathological sonographic findings in diagnostic ultrasound case presentations.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 2.0 2.0 2.0	S
DMS245	2010 Fall	Neurosonography		Neuroanatomy and neurosonography of the brain and spinal cord.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 1.0 1.0 1.0	S
DMS250	2018 Fall	Musculoskeletal Sonography and Small Parts		Normal sonographic human anatomy in sagittal, transverse, oblique, coronal planes. Emphasis on musculoskeletal imaging, and small parts.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	L+L 2.0 2.0 2.0	T
DMS252	2018 Fall	Musculoskeletal Procedures I		Ultrasound terminology and physics. Anatomical variants, normal, and pathological sonographic findings in musculoskeletal diagnostic ultrasound of the upper extremity.	Prerequisites: Admission to Diagnostic Medical Sonography program or permission of the Program Director.		Occ	L+L 4.0 6.0 6.0	T
DMS254	2018 Fall	Musculoskeletal Procedures II		Ultrasound terminology and physics. Anatomical variants, normal, and pathological sonographic findings in musculoskeletal diagnostic ultrasound of the lower extremity.	Prerequisites: Admission to Diagnostic Medical Sonography program or permission of the Program Director.		Occ	L+L 4.0 6.0 6.0	T
DMS255	2024 Fall	Abdominal Extended Sonography		Ultrasound imaging of the pediatric population and extended anatomy for abdominal procedures. Includes terminology, technique, physics and instrumentation. Embryology, anatomy, physical examination and procedure findings. Pathology and correlation with other imaging modalities.	Prerequisites: Admission to Diagnostic Medical Sonography program, or Registered Diagnostic Medical Sonographer (RDMS) credentialed and permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S

DMS261	2021 Spring	Clinical Practicum IV-AA		Technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the intermediate level. Reinforcement and broadening of knowledge base related to hospital procedures and policies. Observation, assistance and performance of patient care and sonographic duties under limited supervision.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LAB 2.0 10.0 0.0	C
DMS262	2021 Fall	Clinical Practicum IV-AB		Development of technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the intermediate level. Ongoing reinforcement and broadening of knowledge base related to hospital procedures and policies. Continued observation, assistance and performance of patient care and sonographic duties under limited supervision.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LAB 2.0 10.0 0.0	C
DMS263	2017 Spring	Vascular Clinical Practicum I		Technical and professional aspects of diagnostic vascular ultrasound in a hospital or clinical setting at the intermediate level. Reinforcement and broadening of knowledge base related to hospital procedures and policies. Observation, assistance and performance of patient care and vascular sonographic duties under limited supervision.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LAB 2.0 10.0 0.0	C
DMS265	2017 Spring	Musculoskeletal Clinical Practicum		Musculoskeletal Clinical Practicum of 240 hours in healthcare setting Ultrasound imaging instrumentation, protocol implementation and positioning techniques. Application of Ultrasound safety, quality control procedures and effective patient care and communication skills.	Prerequisites: Admission to Diagnostic Medical Sonography program or permission of the Program Director.		Occ	LAB 4.0 24.0 0.0	C
DMS267	2017 Spring	Musculoskeletal Case Studies		Medical terminology, anatomy, physical principles, and technology for determining proper technical factors. Anatomical variants, normal, and pathological sonographic findings in musculoskeletal diagnostic ultrasound case presentations.	Prerequisites: Admission to Diagnostic Medical Sonography program or permission of the Program Director.		Occ	LEC 1.0 1.0 1.0	S

DMS270	2022 Summer	Clinical Practicum V-AA		Technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the advanced level. Clinical diagnostic experiences in routine/high risk obstetrics, pelvic, vascular, abdominal and small parts scanning.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LAB 2.0 10.0 0.0	C
DMS271	2021 Spring	Clinical Practicum V-AB		Development of technical and professional aspects of diagnostic ultrasound in a hospital or clinical setting at the advanced level. Continued opportunity for clinical diagnostic experiences in routine/high risk obstetrics, pelvic, vascular, abdominal and small parts scanning. Focus on progression to independent level of function.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LAB 2.0 10.0 0.0	C
DMS272	2021 Spring	Clinical Practicum V-AC		Culminating clinical practice course with application of theoretical and practical concepts related to diagnostic ultrasound. Emphasis on independent performance of all clinical diagnostic procedures including routine/high risk obstetrics, pelvic, vascular, abdominal and small parts scanning.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LAB 2.0 10.0 0.0	C
DMS273	2017 Spring	Vascular Clinical Practicum II		Development of technical and professional aspects of diagnostic vascular ultrasound in a hospital or clinical setting at the advanced level. Continued opportunity for clinical diagnostic experiences in routine/complex vascular scanning. Focus on progression to independent level of function.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LAB 2.0 10.0 0.0	C
DMS281	2022 Spring	Ultrasound Registry Preparation Seminar: Physics and Instrumentation		Intensive review of major content measured in the American Registry for Diagnostic Medical Sonography certification examination. Physics and instrumentation in ultrasound technology.	Prerequisites: Admission into the Diagnostic Medical Sonography program or permission of the Program Director.		Occ	LEC 1.0 1.0 1.0	S
DMS282	2022 Spring	Ultrasound Registry Preparation Seminar: Abdominal and		Intensive review of major content measured in the American Registry for Diagnostic Medical Sonography certification examination. Specialties of abdominal and small parts imaging.	Prerequisites: Admission into the Diagnostic Medical Sonography program		Occ	LEC 1.0 1.0 1.0	S

		Small Parts Imaging			or permission of the Program Director.				
DMS283	2022 Spring	Ultrasound Registry Preparation Seminar: Obstetrics and Gynecology		Intensive review of major content measured in the American Registry for Diagnostic Medical Sonography certification examination for obstetrics and gynecology.	Prerequisites: Admission into the Diagnostic Medical Sonography program or permission of the Program Director.		Occ	LEC 1.0 1.0 1.0	S
DMS284	2022 Spring	Ultrasound Registry Preparation: Vascular Imaging		Anatomy and physiology of the vascular system. Testing parameters and methods for vascular examinations. Scan protocol for sonographic evaluation of head and neck, extremities, upper abdomen and pelvis vasculature. Interpret scans and special cases.	Prerequisites: Admission into the Diagnostic Medical Sonography program or permission of the Program Director.		Occ	LEC 1.0 1.0 1.0	S
DMS285	2011 Fall	Intermediate Vascular Technology		Sonographic evaluation of the upper and lower peripheral vascular system and the cerebrovascular system. Normal and pathologic sonographic imaging and Doppler evaluation of the venous, arterial systems of the upper and lower extremities, and intra and extracranial vessels.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 2.0 2.0 2.0	S
DMS286	2024 Fall	Advanced Vascular Technology		Vascular evaluation of the intracranial cerebrovascular system, indirect imaging techniques of the peripheral arterial and venous systems. Capabilities, limitations, protocols, and techniques required for diagnosis of the systemic, hepatoportal, collateral systems, and extremities. Roles of ultrasound in surgical techniques, treatment, and advanced imaging techniques.	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 3.0 3.0 3.0	S
DMS286LL	2024 Fall	Advanced Vascular Technology Laboratory		Application of advanced vascular imaging. Demonstration of selected scanning protocols to include lower extremity non-invasive procedures, transcranial doppler and grafts. Entry-level proficiency for most vascular exams performed in clinical practice.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: DMS286.		Occ	LAB 1.0 3.0 3.0	T
DMS290	2010 Fall	Advanced Medical Ultrasound Procedures		Presentation of advanced topics in sonography including state of the art equipment. Superficial organs, heart and vessels, neurosonography,	Prerequisites: Admission to Diagnostic Medical Sonography program.		Occ	LEC 4.0 4.0 4.0	S

				musculoskeletal, intraoperative, and interventional procedures. Aseptic technique, medical-legal and patient record keeping and image acquisition for performance of advanced sonographic examinations.					
DMS295	2018 Fall	Stress Echocardiography		Anatomy and physiology of the heart. Normal and stressed states of cardiac anatomy as it relates to diagnostic sonography. Performance of stress echocardiography exam. Pharmacological agents used in stress echocardiography.	Prerequisites: Completion of echocardiography program, or Registered Diagnostic Cardiac Sonographer (RDCS), or Registered Diagnostic Medical Sonographer (RDMS), or Registered Cardiac Sonographer (RCS) credentials.		Occ	L+L 2.0 3.5 3.5	T
ECE102	2024 Spring	Engineering Analysis Tools and Techniques		Learning culture of engineering, engineering use of computer tools, and computer modeling as applied to engineering analysis and design.	Prerequisites: A grade of C or better in MAT15+ or higher-level mathematics course, or an appropriate District placement above MAT15+, or permission of Instructor or Division or Department Chair.		Acad	L+L 2.0 4.0 4.0	T
ECE103	2021 Fall	Engineering Problem Solving and Design		Fundamentals of the design process: engineering modeling, communication and problem-solving skills in a team environment. Emphasis on process-based improvements to the design process. Introduction to engineering as a profession.	Prerequisites: A grade of C or better in ECE102 or permission of Instructor or Division or Department Chair.	Student may receive credit for only one of the following: ECE103 or ECE103E P.	Acad	L+L 2.0 4.0 4.0	T
ECE103EP	2019 Fall	Engineering Problem Solving		Fundamentals of the design process: engineering modeling, communication and problem-solving skills in a team	Prerequisites: A grade of C or better in ECE102 or	ECE103E P students may	Acad	L+L 2.0	T

		and Design (with EPICS projects)		environment. Emphasis on process-based improvements to the design process. Introduction to engineering as a profession.	permission of Instructor.	receive credit for only one of the following: ECE103 or ECE103E P.		4.0 4.0	
ECE104	2020 Fall	EPICS Gold I		EPICS Gold is the first of a sequence of two two-credit service learning courses in which EPICS teams are formed from students potentially representing all engineering, computer science, and construction disciplines, as well as other majors, including sustainability, business, liberal arts, sciences, and others.	Prerequisites: None.	Students who complete this course and transfer to ASU may participate in the upper division EPICS classes following this introductory class, which may include continuation of the project from this class or different projects. Student participation for multiple consecutive semesters on a project is encourage	Acad	L+L 2.0 2.0 2.0	T

						d. ECE104 may be repeated for a total of four (4) credit hours.			
ECE105	2019 Fall	MATLAB Programming		Use MATLAB to solve engineering problems. An overview of programming, including matrices, structures, strings, functions, control flow, file management, data analysis, graphing capabilities, and mathematical calculations.	Prerequisites: A grade of C or better in [(MAT150 or MAT151 or MAT152 or MAT155 or MAT156) and MAT182] or MAT187 or higher level mathematics course or permission of Instructor or Division or Department Chair.		Acad	L+L 1.0 2.0 2.0	T
ECE106	2006 Fall	Survey of Nanotechnology		Reading and discussion on topics in nanotechnology. Includes key issues in the development of nanoscale engineering	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
ECE111	2018 Fall	Bioengineering Systems		Introduction to biological concepts and application of engineering to biological and earth systems. Analysis of materials, structures, fluid mechanics, bioelectricity, and dynamics as applied to biological and environmental systems	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0	T
ECE150	2022 Fall	Exploring Engineering and its Impact on Society		Introduction to the profession of engineering and its impact on culture and society.	Prerequisites: None.	Course Attribute(s)): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ECE205	2024 Fall	Introduction to Mining Engineering		Introduction to the process of mineral and metal extraction. From location,	Prerequisites: A grade of C or better in ECE102.		Acad	LEC 3.0	S

				design, operation to reclamation of a mine site.				3.0 3.0	
ECE211	2024 Spring	Engineering Mechanics-Statics		Modeling of static equilibrium in particles and rigid bodies through analysis of forces and mechanical properties.	Prerequisites: A grade of C or better in PHY115 or PHY121 or permission of Instructor or Division or Department Chair. Corequisites: MAT230 or MAT231 or permission of Instructor or Division or Department Chair.		Acad	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0	T
ECE212	2024 Spring	Engineering Mechanics-Dynamics		Modeling of dynamic motion in particles and rigid bodies through kinetics and kinematics. Work and energy principles; impulse and momentum principles; planar kinematics; equations of motion; conservation of energy and momentum.	A grade of C or better required in all Prerequisites. Prerequisites: [ECE211 and (PHY115 or PHY121)] or permission of Instructor or Division or Department Chair. Prerequisites or Corequisites: MAT240 or MAT241 or permission of Instructor or Division or Department Chair.		Acad	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0	T
ECE214	2018 Fall	Engineering Mechanics		Foundations of engineering mechanics, including force systems, resultants, equilibrium of particles and rigid bodies, centroids and centers of mass, area and mass moments of inertia, friction, internal forces in structures, kinematics and kinetics of particles, kinematics and kinetics of rigid bodies, energy and momentum principles.	Prerequisites: A grade of C or better in (ECE103 or ECE103AB or ECE103EP) and (MAT230 or MAT231) and (PHY115 or PHY121). Corequisites: MAT240 or MAT241.		Acad	LEC 4.0 4.0 4.0 LAB 0.0 2.0 2.0	T
ECE215	2019 Fall	Mechanics of Materials		Designed to provide students with a strong fundamental foundation in the mechanics of solids. Includes the concepts of stress and strain applied to the analysis and design of members subjected to axial and	Prerequisites: A grade of C or better in (ECE211 or ECE214).		Acad	L+L 3.0 5.0 5.0	T

				torsional loads and members subjected to shear and bending, applications and transformation of plane stress and plane strain, deformation of beams, and elastic buckling of columns.					
ECE216	2019 Fall	Computer-Aided Engineering		Introduction to engineering graphics, including tolerancing and fasteners, as well as creation and use of engineering drawings.	Prerequisites: A grade of C or better in ECE103, or ECE103EP, or permission of Instructor. Corequisites: ECE216LL.		Acad	LEC 2.0 2.0 2.0	S
ECE216AA	2024 Fall	Computer-Aided Engineering		Study and application of engineering graphics, parts modeling, assemblies modeling, and engineering drawings including tolerancing and fasteners using Computer-Aided Design (CAD) software.	Prerequisites: A grade of C or better in ECE103, or ECE103EP, or permission of Instructor or Division or Department Chair.	ECE216A A students may receive credit for only one of the following: (ECE216 and ECE216L L), or ECE216A A.	Acad	L+L 3.0 4.0 4.0	T
ECE216LL	2019 Fall	Computer-Aided Engineering Laboratory		Laboratory experience in support of ECE216.	Prerequisites: A grade of C or better in ECE103, or ECE103EP, or permission of Instructor. Corequisites: ECE216.		Acad	LAB 1.0 2.0 2.0	T
ECE230	2018 Fall	Introduction to the Chemical Engineering Process		Introduces fundamental skills and principles needed to analyze the industrial processes of importance to the chemical engineering profession.	Prerequisites: A grade of C or better in CHM152 and MAT231.	ECE230 course is designed for chemical engineering students.	Acad	L+L 3.0 5.0 5.0	T

ECE231	2018 Fall	Introduction to Fluid Transport Phenomena		Fundamental skills and principles of fluid transport on both macroscopic and microscopic scales using mass balances, momentum balances and energy balances to analyze and/or design fluid systems of interest in the chemical engineering profession.	Prerequisites: A grade of C or better in MAT271 and PHY121.		Acad	L+L 3.0 5.0 5.0	T
ECE280	2022 Fall	Foundational Statistics for Engineers	MAT280	Fundamentals of probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, regression analysis, analysis of variance, and design of experiments.	Prerequisites: A grade of C or better in MAT220, or MAT221, or equivalent.		Acad	L+L 3.0 5.0 5.0	T
ECE285	2018 Fall	Introduction to Astrodynamics	AST285 PHY285	Introduction to celestial mechanics and the dynamics of spacecraft navigation. Introduction to rocket propulsion and spacecraft design. Orbital and interplanetary celestial mechanics and maneuvers. Astrophysics and characteristics of the space environment. Lab is project-based, utilizing a real-time spacecraft simulation environment.	Prerequisites: A grade of C or better in ENG101 and (PHY115 or PHY121).		Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
ECE294	2018 Fall	Special Topics in Engineering		Exploration and investigation of a focused topic in engineering.	Prerequisites: Permission of Instructor or Department or Division Chair.	ECE294 may be repeated for credit.	Acad	L+L 3.0 3.0 3.0	T
ECE294AA	2018 Fall	Special Topics in Engineering		Exploration and investigation of a focused topic in engineering.	Prerequisites: Permission of Instructor or Department or Division Chair.	ECE294A A may be repeated for credit.	Acad	L+L 2.0 2.0 2.0	T
ECE294AB	2018 Fall	Special Topics in Engineering		Exploration and investigation of a focused topic in engineering.	Prerequisites: Permission of Instructor or Department or Division Chair.	ECE294A B may be repeated for credit.	Acad	L+L 1.0 1.0 1.0	T
ECE294AC	2018 Fall	Special Topics in Engineering		Exploration and investigation of a focused topic in engineering.	Prerequisites: Permission of Instructor, or Department or Division Chair.	ECE294A C may be repeated for credit.	Acad	L+L 0.5 0.5 0.5	T
ECE296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome	Prerequisites: Completion of at least twelve (12) college		Acad	LAB 1.0	Z

				related to the career objectives of the students.	credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.			5.0 0.0	
ECE296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z
ECE296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to		Acad	LAB 3.0 15.0 0.0	Z

					students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
ECE296WD	2023 Fall	Cooperative Education		Prerequisites: Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z
ECE297WA	2024 Spring	Engineering Internship		Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes.	Prerequisites: Permission of Instructor or Division Chair or Department Chair.		Acad	LAB 1.0 5.0 0.0	C
ECE297WB	2024 Spring	Engineering Internship		Supervised work experience in engineering environment. Includes	Prerequisites: Permission of		Acad	LAB 2.0	C

				experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes.	Instructor or Division Chair or Department Chair.			10.0 0.0	
ECE297WC	2024 Spring	Engineering Internship		Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes.	Prerequisites: Permission of Instructor or Division Chair or Department Chair.		Acad	LAB 3.0 15.0 0.0	C
ECE297WD	2024 Spring	Engineering Internship		Supervised work experience in engineering environment. Includes experience working with engineers or technicians, related to troubleshooting, system design, or other processes. Also includes experiences in problem solving, working as a team, soft skills, time and resource management; and exposure to specific processes.	Prerequisites: Permission of Instructor or Division Chair or Department Chair.		Acad	LAB 4.0 20.0 0.0	C
ECE298AA	2019 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Instructor, or Department or Division Chair.		Acad	LAB 1.0 1.0 0.0	Z
ECE298AB	2019 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-	Prerequisites: Permission of Instructor, or Department or Division Chair.		Acad	LAB 2.0 2.0 0.0	Z

				type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
ECE298AC	2019 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Instructor, or Department or Division Chair.		Acad	LAB 3.0 3.0 0.0	Z
ECG100	2023 Fall	Introduction to Healthcare: Medical, Legal, Ethics		This course is designed to offer the student a foundation in allied health career skills. Students will demonstrate knowledge of the healthcare delivery system, health occupations, basic infection control procedures, Health Insurance Portability and Accountability Act (HIPAA) guidelines, and the general laws and ethical responsibilities of healthcare workers. Students will learn to handle emergency situations, practice safety and security procedures, build interpersonal communication skills as well as define the roles and responsibilities of an electrocardiogram (ECG) technician. Students will learn medical terminology used in healthcare, with special care populations and in special services. Body systems approach to terms related to structures, functions, diseases, procedures and diagnostic tests. Building and analyzing terms using word parts. Medical abbreviations and symbols and term spelling.	Prerequisites: Successful completion of RDG100 or higher or appropriate reading placement into CRE101.		CLK	25	

ECG101	2023 Fall	The Cardiovascular System: Anatomy & Physiology and Pathophysiology of Cardiovascular Disease		In this course, students will explore the structure and functions of the cardiovascular system. This course covers the anatomical structures of the heart, the composition of blood, the path of the blood through the heart, and the electrical conduction system. Students will learn how these systems act as one to supply vital oxygen, nutrients and hormones to tissues and remove carbon dioxide and metabolic waste products. This course also covers pathophysiologic concepts and interventions for patients with heart and coronary vessel disease and disorders such as coronary artery disease (CAD), angina pectoris, myocardial infarction (MI), congestive heart failure (CHF), dysrhythmias, inflammatory processes and valvular heart disease.	Prerequisites: ECG100.		CLK	30	
ECG102	2023 Fall	Introduction to ECG		Students will learn the fundamentals of electrocardiography. Students will be able to describe the electrophysiologic basis of cardiac arrhythmias, illustrate the electrical conduction system through the heart, and the process of recording an electrocardiogram (ECG). Students will learn how to acquire 3-lead ECG, 4-lead ECG, 12-lead ECG and interpret rhythm strips.	Prerequisites: ECG101.		CLK	40	
ECG103	2023 Fall	Applied ECG: Atrial, Junctional, Ventricular Rhythms and Heart Blocks		Students will learn to recognize arrhythmias that originate within the atria, the ventricle, the AV junction, AV node as well as heart blocks. Students will identify the specific features of each arrhythmia, where it originates from and diseases associated with each.	Prerequisites: ECG102.		CLK	50	
ECG104	2023 Fall	Advanced Cardiac Life Support		Designed for the allied healthcare provider who initiates, directs, or participates in the management of cardiopulmonary arrest and other cardiovascular emergencies. Provides the allied healthcare provider with the	Prerequisites: ECG103.		CLK	20	

				<p>knowledge and skills to recognize and manage cardiopulmonary arrest, acute arrhythmia, stroke, and acute coronary syndromes (ACS) according to current advanced emergency cardiovascular care (ECC) guidelines. Requires prior knowledge of basic electrocardiograph rhythm interpretation, pharmacologic agents, and other interventions used in advanced cardiac life support (ACLS). Upon completion of this course, students will be eligible to take the American Heart Association's (AHA's) Basic Life Support (BLS) and ACLS certification examinations.</p>					
ECG105	2023 Fall	Advanced ECG: Diagnostic Procedures, Certification Prep and Exam		<p>In this course, students will learn the skills and knowledge to perform patient assessments, obtain vital signs, start IVs and conduct blood draws. Students will learn how to attach a Holter monitor to produce a diagnostic trace and analyze the trace following the monitoring process. Students will also learn how to conduct clinical exercise stress tests utilizing exercise electrocardiography for patients with known or suspected coronary artery disease. In this course, students will also learn how to conduct telemetry monitoring while in a hospital setting and assess and evaluate pacemakers. Diagnostic testing procedures will be performed within a prescribed range of functions involving routine and non-routine methods as well as diagnostic procedures which require the exercise of some discretion and judgment. Prior to completion of this course, students will have completed an exam prep course and taken the Certified ECG Technician (CET) Exam by the National Healthcareer Association (NHA). The exam is a 100-question exam and students will have 2 hours</p>	Prerequisites: ECG104.		CLK	80	

				to complete it. The exam is timed and proctored.					
ECG106	2021 Fall 1	Clinical Practicum		This course serves as the clinical practicum for Electrocardiogram (ECG) Technician in which the students synthesize standard of care and scope of practice through diagnostic technology, patient assessment, patient advocacy, ethical and professional behaviors, critical thinking and decision making while in the healthcare industry setting. Mandatory attendance for all 80 hours is required for successful completion.	Prerequisites: 1. ECG105 2. Background check requirements in compliance with the Maricopa County Community College District Supplemental Background Check Policy. 3. Students also must provide a copy of an Arizona Department of Public Safety Level One Fingerprint Clearance Card. Students must maintain current fingerprint clearance throughout the externship(s). 4. Complete and submit the Allied Health Student Health and Safety Documentation Checklist, with included documentation. 5. Students are responsible to meet the requirements of the background check, fingerprint clearance card, and health and safety documentation.		CLK	80	
ECH128	2024 Fall	Early Learning: Play and the Arts		Examines theory, research and practices relating to play and the creative arts in early childhood. Considers practical constraints and alternative perspectives.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ECH140	2025 Fall	Learning Made Visible Through Documentation		The study of pedagogical documentation in early childhood settings, including strategies to reflect	Prerequisites: None.		Acad	LEC 1.0	S

				on children's thinking, hypothesis development, and multiple relationships essential in learning environments.				1.0 1.0	
ECH141	2023 Fall	Explore the Fundamentals of the Reggio Emilia Approach		Investigation and critically examination of the integral elements of the organization and philosophy of the Reggio Emilia approach to early childhood education.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
ECH176	2023 Fall	Child Development	CFS176	Study of the science of human development from conception through adolescence. Includes observation skills, parent and adult roles in the lives of children, and contemporary issues.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
ECH267	2025 Fall	Child Development Associate Preparation Practicum I		Participation in early childhood education related work experience for the purpose of final preparation for the Child Development Associate (CDA) national credential process.	Prerequisites: None.		Acad	LAB 1.0 1.0 0.0	C
ECH268	2025 Fall	Child Development Associate Preparation Practicum II		Participation in early childhood education related work experience for the purpose of final preparation for the Child Development Associate (CDA) national credential process.	Prerequisites: None.		Acad	LAB 1.0 1.0 0.0	C
ECH269	2025 Fall	Early Childhood Education Seminar	CFS269	Emphasizes professional experiences including employment procedures, human relations, employment related issues, and career exploration.	Prerequisites: Permission of Department or Division.	CFS/ECH 269 may be repeated for a total of three (3) credit hours.	Acad	LEC 1.0 1.0 1.0	S
ECH270	2025 Fall	Observing Young Children		Introduction to observation techniques, recording methods and interpretation of collected data for children from birth to age eight while addressing legal and ethical implications.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
ECH271	2024 Fall	Arranging the Environment	CFS271	Exploration of the influence of the environment on the behavior and development of young children.	Prerequisites: None.		Acad	LEC 1.0	S

				Considers indoor and outdoor spaces from the perspective of safety, age-related needs, spatial requirements, and usage.				1.0 1.0	
ECH272	2025 Fall	Science and the Young Child		Methods and techniques for recognizing and supporting scientific thinking in young children between the ages of birth and age eight. Focus upon social constructivist theory.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
ECH273	2025 Fall	Math and the Young Child		Methods and techniques for recognizing and supporting mathematical thought in young children between the ages of birth through age eight. Focus upon social constructivist theory.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
ECH274	2023 Fall	Books and Verse for the Young Child		Introduction to verse, storytelling, books and bookmaking for infants, toddlers, and preschoolers. Information as well as storybooks considered.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
ECH275	2025 Fall	Literacy Development and the Young Child		Literacy development from birth through age eight. Focus on communication and multiliteracies within social contexts.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
ECH279	2025 Fall	Early Childhood Curriculum Development		An intensive focus on the process of building curriculum appropriate to the interests and capabilities through the use of design, implementation and evaluation of materials and experiences for children, birth through age eight.	Prerequisites: None.	ECH279 may be repeated for a total of four (4) credit hours.	Acad	LEC 1.0 1.0 1.0	S
ECH280	2023 Fall	Food Experiences with Young Children		A discussion of the nutritional needs of young children and the cultural and social meanings of foods, feeding and eating. Includes planning and managing food experiences in home and group settings.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
ECH281	2024 Fall	Movement/Music for the Young Child		Consideration of motor development in the toddler through the 8-year-old and exploration of age-appropriate rhythmic, musical and creative movement methods.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
ECH282	2023 Fall	Discipline/Guidance of Child Groups		Exploration of techniques for guiding children in groups with focus on individual child and adult needs for a disciplined environment.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S

ECH284AA	2023 Fall	Early Childhood Teaching Internship	CFS284AA	Work experience in child care centers. 80 hours of designated work per credit.	Prerequisites: A grade of C or better in CFS/ECH176 and permission of Department or Division.	CFS/ECH 284AA may be repeated for a total of six (6) credit hours.	Acad	L+L 1.0 1.0 0.0	C
ECH284AB	2025 Fall	Early Childhood Teaching Internship	CFS284AB	Work experience in early care and education settings centers. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	CFS/ECH 284AB may be repeated for a total of six (6) credit hours.	Acad	L+L 3.0 3.0 0.0	C
ECH287	2023 Fall	Professional Development in Early Childhood Education	CFS287	Emerging professionalism within the field of early childhood education. Consideration of job responsibilities, rewards, ethics and current issues facing practitioners. Includes assessment and career planning.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
ECH288	2025 Fall	Community Resources and Referral		Survey of current community agencies, resources, and support groups for a variety of child and family needs. Considers appropriate procedures for referral, handling of information, confidentiality and follow up.	Prerequisites: None.		Acad	LAB 1.0 1.0 0.0	C
ECH298AA	2023 Fall	Special Projects	EDU298AA	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
ECH298AB	2023 Fall	Special Projects	EDU298AB	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z

				expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
ECH298AC	2023 Fall	Special Projects	EDU298AC	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
ECN100	2007 Spring	Economics in American Society		Selected principles of macroeconomic and microeconomic analysis. Recommended as a social science elective and for some paraprofessional programs. Not for business transfer students; credit will not be granted if ECN111 or ECN112 has been completed	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ECN105	1994 Fall	Consumer Economics		The relationship between the consumer and the economy in American society. Socioeconomic forces that impact on consumer purchases, debt, and budgeting. Consumerism as a movement	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ECN160	1994 Fall	Economic History of the United States		A description of the trends of American population, industry, and wealth through examination of major American institutions, historical events, and economic thought. Emphasis on the roles of technology and natural resources in agriculture and industry, the labor force, the monetary system, market structures, and the economic impact of government	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Social	Acad	LEC 3.0 3.0 3.0	S

						and Behavioral Sciences - [SB]			
ECN204	2009 Spring	Macroeconomic Issues		Macroeconomic principles applied to current problems of economic policy, e.g., inflation, unemployment, gross national product (GDP), forecasting, ramifications for the international system.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ECN208	2009 Spring	Microeconomic Issues		Microeconomic principles applied to current problems of market structure, consumer preference, supply and demand, and the theory of the firm. Topics will include contemporary events that are suitable for application of the economic way of thinking.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ECN211	2024 Fall	Macroeconomic Principles		A descriptive analysis of the structure and functioning of the American economy. Emphasis on basic economic institutions and factors that determine national income and employment levels. Consideration given to the macroeconomic topics of national income, unemployment, inflation and monetary and fiscal policies.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ECN212	2024 Fall	Microeconomic Principles		Microeconomic analysis including the theory of consumer choice, price determination, resource allocation and income distribution. Includes non-competitive market structures such as monopoly and oligopoly; and the effects of government regulation.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ECN213	2018 Fall	The World Economy		An analysis of the economic interdependence among nations, with emphasis on international trade and finance. Consideration given to the role and function of the multinational enterprise	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Social	Acad	L+L 3.0 3.0 3.0	T

						and Behavioral Sciences - [SB]			
ECN250	2018 Fall	World Economic Systems		A descriptive analysis of capitalist, socialist and mixed economies. Some consideration also given to the problems of less developed economies	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	L+L 3.0 3.0 3.0	T
ECN263	2007 Spring	The Economics of Natural Resources, Population and the Environment		Applies economic analysis to both the causes and possible remedies of the problems of environmental deterioration and natural resource depletion. Includes discussion of the economic problems of urban communities and the relationship between population and economic growth and the depletion of natural resources and environmental pollution	Prerequisites: A grade of C or better in ECN100 or ECN211 or ECN2112.		Acad	LEC 3.0 3.0 3.0	S
ECN296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is		Acad	LAB 1.0 5.0 0.0	Z

					related to student's major or career interest or with permission of the Instructor.				
ECN296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z
ECN296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with		Acad	LAB 3.0 15.0 0.0	Z

					permission of the Instructor.				
ECN296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Acad	LAB 4.0 20.0 0.0	Z
ECN298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
ECN298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z

				combined to maximize student development.					
ECN298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
EDT100	2022 Fall	Introduction to Endoscopy		Interpret endoscopy technology purpose, design, and structure. Basic understanding of the history and advancement of endoscopic procedures; anatomy of flexible endoscopes; role and importance of endoscopy technicians; introductory endoscopy reprocessing; regulating agencies and professional endoscopy organizations impacting the current field of endoscopy.	Prerequisites: None. Corequisites: EDT101, EDT102, EDT105, or permission of Program Director.		Occ	L+L 1.0 1.0 1.0	T
EDT101	2022 Fall	Microbiology and Infection Control in Endoscopy		Identify and review the basic concepts of microbiology and microorganisms affecting endoscopic reprocessing and procedures. Indicate the requirements for all endoscopic work areas and staff to properly insure asepsis and best patient outcomes.	Prerequisites: None. Corequisites: EDT100, EDT102, EDT105, or permission of Program Director.		Occ	LEC 1.0 1.0 1.0	S
EDT102	2022 Fall	Fundamentals of Endoscope Care and Handling		Learn the fundamentals of endoscope care and handling including cleaning, decontamination, testing, and preparation for disinfection and sterilization.	Prerequisites: None. Corequisites: EDT100, EDT101, EDT105, or permission of Program Director.		Occ	L+L 3.0 3.0 3.0	T
EDT105	2022 Fall	Advanced Endoscopy Care and Handling		Learn advanced endoscope care and handling including recordkeeping, transport, manual and mechanical high-level disinfection and storage of rigid, semi-rigid, and flexible endoscopes.	Prerequisites: None. Corequisites: EDT100, EDT101, EDT102, or permission of Program Director.		Occ	L+L 3.0 3.0 3.0	T
EDT200	2022 Fall	Clinical Practicum		Direct preceptor supervision of students applying knowledge from the	Prerequisites: A grade of C or better		Occ	LAB 3.0	C

				Endoscopy program to include communication, policy and procedures, aseptic and sterile technique, endoscopy instruments, trays and packs, sterilization equipment, documentation, and patient assistance performed in the clinical environment.	in (EDT100 and EDT101 and EDT102 and EDT105) or permission of Program Director. Corequisites: EDT201 or permission of Program Director.			22.5 0.0	
EDT201	2022 Fall	Endoscopy Procedures		Roles and responsibilities of endoscopy room personnel focusing on the endoscopy technician under the direction of the clinical facility preceptor demonstrating the role of the endoscopy technician and scope of practice and standard of recommendations.	Prerequisites: A grade of C or better in (EDT100 and EDT101 and EDT102 and EDT105) or permission of Program Director. Corequisites: EDT200 or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
EDU101AA	2007 Summer I	Tutor Training and Practicum		Tutor training with an opportunity to gain insights into instructional support services through a minimum of 30 hours of supervised on-site experience within an educational setting. Overview of the role and responsibilities of instructional tutors as well as tutoring techniques, with particular focus on reading and writing strategies	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
EDU110	2018 Spring	Education in Film		Analysis of the portrayal of teaching, schooling and learning in mass media films, including documentary, feature length and emerging platforms. Considers historical, cultural, national and global perspectives on teaching, learning and schooling. Emphasis on identifying factors that contribute to successes as well as failures of schooling within a society.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
EDU115	2021 Fall	Digital Literacy for Teaching and Learning in Education	EED115	Overview of digital literacy for identifying the skills needed to become informed users of technology to communicate, instruct, create and think critically with digital tools. Explores how emerging technologies	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

				are used to teach and learn across varied educational environments (face-to-face, hybrid, online, etc). Includes skills focused on basic computer operations, productivity software, digital citizenship, instructional practices, information literacy and family and professional partnerships. Discusses current trends and related issues about the use of technology and its impacts in P20 education.					
EDU204	2024 Spring	Fine Arts in Educational Settings		Exploration of fine arts integration in the K-12 classroom setting. Focus on the impact on life-long learning and education goal achievement when curriculum includes fine arts. Arizona art standards of dance, visual, theater and music also covered.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
EDU220	2022 Spring	Introduction to Serving English Language Learners (ELL)		Historical overview of current educational and legal issues for serving English Learners (EL). Comparison and evaluation of various types of language educational models including Structured English Immersion (SEI), Sheltered English Instruction, and bilingual/Dual Language Immersion (DLI). Includes SEI, Sheltered English Instruction, and bilingual/DLI strategies.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
EDU221	2005 Fall	Introduction to Education		Overview of the historical, political, economic, social, and philosophical factors that influence education and make it so complex. Opportunity for students to assess their interest and suitability for teaching .	Prerequisites: None.	EDU221 requires a minimum of 30 hours of field experience in elementary or secondary classroom environment. Course	Acad	LEC 3.0 3.0 3.0	S

						Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB]			
EDU222	2017 Spring	Introduction to the Exceptional Learner		Overview of the exceptional learner with emphasis on factors relating to current practices, identification, characteristics, and educational adaptations. Issues related to mild disabilities, severe disabilities, emotional and behavioral disorders, intellectual disabilities, and students who are gifted.	Prerequisites: None.	EDU222 requires an approved field experience. Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
EDU223AA	2014 Spring	Emotional Disabilities in the Classroom		Investigation into the characteristics of and teaching strategies for students with emotional disabilities. Emphasis on Professional Teaching Standards. Includes current research findings related to teaching students with emotional disabilities.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and a grade of C or better in EDU222.	EDU223A A requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EDU223AB	2014 Spring	Learning Disabilities in the Classroom		Investigation into the characteristics of and teaching strategies for students with learning disabilities. Emphasis on Professional Teaching Standards. Includes current research	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-	EDU223A B requires an approved field	Acad	LEC 3.0 3.0 3.0	S

				findings related to teaching students with learning disabilities.	baccalaureate teacher preparation program and a grade of C or better in EDU222.	experience.			
EDU223AC	2014 Spring	Mild and Moderate Intellectual Disability in the Classroom		Investigation into the characteristics of and teaching strategies for students with mild and moderate intellectual disability. Emphasis on Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and a grade of C or better in EDU222.	EDU223A C requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EDU223AD	2014 Spring	Physical and Other Health Impairments in the Classroom		Investigation into the characteristics of and teaching strategies for students with physical and other health impairments. Emphasis on Professional Teaching Standards. Includes current research findings related to teaching students with physical and other health impairments.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and a grade of C or better in EDU222.	EDU223A D requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EDU223AF	2020 Spring	Assessment and Eligibility in Special Education		A basic overview of eligibility requirements for special services of students with disabilities, as well as investigation into the concepts, laws, issues, and procedures that relate to the formal and informal assessment of students with disabilities. Covers educational achievement tests and standardized diagnostic tests for students with disabilities as well as intelligence and adaptive behavior measurements. Includes current research findings related to assessing students with special needs and how assessment is used to inform and guide instruction.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.		Acad	LEC 3.0 3.0 3.0	S
EDU224	2013 Fall	Brain Development and Learning		Exploration of fine arts integration in the K-12 classroom setting. Focus on the impact on life-long learning and education goal achievement when curriculum includes fine arts. Arizona	Prerequisites: Formal acceptance to a Maricopa Community College undergraduate state		Acad	LEC 3.0 3.0 3.0	S

				art standards of dance, visual, theater and music also covered.	approved teacher preparation program or permission of Department or Division.				
EDU225	2022 Spring	Professionalism and Ethics in Education		Exploration of topics relative to the professionalism, legal knowledge, and ethical development of classroom teachers. Topics include professionalism within the teaching profession, legal considerations, ethics vs. code of conduct, dispositions, and impact of personal and community values. Prepares individuals for the professional, legal, and ethical issues that are routinely seen in an educational setting.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
EDU230	2022 Spring	Cultural Diversity in Education		Examination of the relationship of cultural values to the formation of self-concept and learning styles. Examination of the role of prejudice, stereotyping and cultural incompatibilities in education. Emphasis on teacher preparation (preservice and/or inservice) to offer an equal educational opportunity to students of all cultural groups	Prerequisites: None.	General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
EDU235	2020 Spring	The Exceptional Learner		Overview of the exceptional learner, one who differs from the average or typical, with emphasis on factors relating to current practices, identification, characteristics, and educational adaptations. Issues related to mildly disabled, severely disabled, emotionally and behaviorally disordered, intellectual disabilities, and gifted students. Includes current research findings related to teaching exceptional learners.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.	EDU235 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S

EDU236	2010 Spring	Classroom Relationships		Analysis of K-12 classroom interactions, classroom environment, and classroom management skills from a teacher's point of view. Focus on classroom as a multidimensional environment in which principles of classroom design, communication, management, and resources determine effectiveness.	Prerequisites: None. EDU221 suggested but not required.		Acad	LEC 3.0 3.0 3.0	S
EDU237	2022 Spring	Grades K-8 Structured English Immersion		A foundation course designed to serve needs of English Learners (EL) grades K-8. Includes comparison and evaluation of various language educational models including Structured English Immersion (SEI) and the Arizona Language Development Approach with a focus on asset based behaviors and expectations, integrated and targeted English Language Development (ELD) instruction. Covers legal and historical foundations and current issues.	Prerequisites: Formal admission to an undergraduate educator preparation program or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
EDU238	2022 Spring	Grades 6-12 Structured English Immersion		A foundational course designed to serve needs of English Learners (EL) grades 6-12. Includes comparison and evaluation of various Structured English Immersion (SEI) models and the Arizona Language Development Approach including asset based behaviors and expectations, integrated and targeted English Language Development (ELD) instruction, assessment monitoring and feedback. Also covers legal and historical foundations and current issues.	Prerequisites: Formal admission to an undergraduate educator preparation program or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
EDU239	2022 Spring	Structured English Immersion Grades K-8		A foundation course designed to prepare educators to serve the needs of English Learners (EL) grades K-8. Includes Structured English Immersion (SEI) models and the Arizona Language Development Approach with emphasis on asset based behaviors and expectations, integrated and targeted English	Prerequisites: Baccalaureate Degree or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S

				Language Development (ELD) instruction, assessment monitoring and feedback. Also covers legal and historical foundations and current issues.					
EDU240	2022 Spring	Structured English Immersion Grades 6-12		A foundational course designed to serve needs of English Learners (EL) grades 6-12. Includes comparison and evaluation of various Structured English Immersion (SEI) models and the Arizona Language Development Approach including asset based behaviors and expectations, integrated and targeted English Language Development (ELD) instruction, assessment monitoring and feedback. Also covers legal and historical foundations and current issues.	Prerequisites: Baccalaureate Degree or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
EDU241	2018 Fall	Special Education: Language Development and Disorders		Language development and language acquisition of typical children and children with disabilities. Includes language characteristics of children with a variety of disabilities and the creation of enhanced learning experiences in the classroom. Covers the referral process, as well as augmentative and alternative communication tools. Also compares Language Disorders and Language Differences.	Prerequisites: Formal admission to an undergraduate teacher preparation program or permission of Department or Division.		Acad	LAB 2.0 2.0 2.0	T
EDU242	2018 Fall	Language Developmental and Disorders		Language development and language acquisition of typical children and children with disabilities. Includes language characteristics of children with a variety of disabilities and the creation of enhanced learning experiences in the classroom. Covers the referral process, as well as augmentative and alternative communication tools. Also compares Language Disorders and Language Differences.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program or permission of Department or Division.		Acad	LAB 2.0 2.0 2.0	T
EDU243	2018 Fall	Effective Collaboration and Communication		Principles of effective collaboration, consultation, and co-teaching to improve programs, services, and	Prerequisites: Formal admission to an undergraduate		Acad	LAB 1.0	T

		Practices in Special Education		outcomes for individuals with exceptionalities and their families. Includes critical interpersonal communication strategies and tools for working with diverse groups of people in addition to the benefits of collaboration as well as the challenges that educators currently face.	teacher preparation program or permission of Department or Division.			1.0 1.0	
EDU244	2018 Fall	Special Education Collaboration and Communication Practices		Principles of effective collaboration, consultation, and co-teaching to improve programs, services, and outcomes for individuals with exceptionalities and their families. Includes critical interpersonal communication strategies and tools for working with diverse groups of people in addition to the benefits of collaboration as well as the challenges that educators currently face.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program or permission of Department or Division.		Acad	LAB 1.0 1.0 1.0	T
EDU250	2007 Fall	Teaching and Learning in the Community College		The history, functions, organization and current issues in the community/junior college with emphasis on the Arizona community colleges. Includes focus on the design and practice of effective community college teaching and learning with special emphasis on the Maricopa County Community College District	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
EDU254	2019 Fall	Education Internship		Teaching experience in PK-12 classroom setting. Required to work 120 hours. Supervised and evaluated by a faculty coordinator.	Prerequisites: Permission of Department or Division and admission into a post-baccalaureate teacher certification program.	EDU254 may be repeated for a total of three (3) credits with permission of Department or Division.	Acad	LAB 1.5 7.5 0.0	C
EDU255AA	2005 Spring	Intern Certificate Student Teaching Lab Elementary Education		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom	Prerequisites: Baccalaureate Degree and formal acceptance of a		Acad	LAB 4.0 12.0 0.0	Z

				procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district.				
EDU255AB	2005 Spring	Intern Certificate Student Teaching Lab Elementary Education		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep two year program plan by an Arizona Department of Education approved college program the partnering school district EDU255AA and a minimum of 50% successful completion of all designated required course work.		Acad	LAB 4.0 12.0 0.0	Z
EDU255AC	2007 Summer I	Intern Certificate Student Teaching Lab - Elementary Education I		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district.		Acad	LAB 2.0 6.0 0.0	Z
EDU255AD	2007 Summer I	Intern Certificate Student Teaching Lab - Elementary Education II		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an		Acad	LAB 2.0 6.0 0.0	Z

				engagement, and learner outcome awareness.	Arizona Department of Education approved college program the partnering school district EDU255AC and a minimum of 25% successful completion of all designated required course work.				
EDU255AE	2007 Summer I	Intern Certificate Student Teaching Lab - Elementary Education III		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program the partnering school district EDU255AD and a minimum of 50% successful completion of all designated required course work.		Acad	LAB 2.0 6.0 0.0	Z
EDU255AF	2007 Summer I	Intern Certificate Student Teaching Lab - Elementary Education IV		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program the partnering school district EDU255AE and a minimum of 75% successful completion of all		Acad	LAB 2.0 6.0 0.0	Z

					designated required course work.				
EDU256AA	2005 Spring	Intern Certificate Student Teaching Lab Secondary Education		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district.		Acad	LAB 4.0 12.0 0.0	Z
EDU256AB	2005 Spring	Intern Certificate Student Teaching Lab Secondary Education		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep two year program plan by an Arizona Department of Education approved college program the partnering school district EDU256AA and a minimum of 50% successful completion of all designated required course work.		Acad	LAB 4.0 12.0 0.0	Z
EDU256AC	2007 Summer I	Intern Certificate Student Teaching Lab - Secondary Education I		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district.		Acad	LAB 2.0 6.0 0.0	Z

EDU256AD	2007 Summer I	Intern Certificate Student Teaching Lab - Secondary Education II		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep two year program plan by an Arizona Department of Education approved college program the partnering school district EDU256AC and a minimum of 25% successful completion of all designated required course work.		Acad	LAB 2.0 6.0 0.0	Z
EDU256AE	2007 Summer I	Intern Certificate Student Teaching Lab - Secondary Education III		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program the partnering school district EDU256AD and a minimum of 50% successful completion of all designated required course work.		Acad	LAB 2.0 6.0 0.0	Z
EDU256AF	2007 Summer I	Intern Certificate Student Teaching Lab - Secondary Education IV		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program the		Acad	LAB 2.0 6.0 0.0	Z

					partnering school district EDU256AE and a minimum of 75% successful completion of all designated required course work.				
EDU257AC	2007 Summer I	Intern Certificate Student Teaching Lab - Special Education I		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district.		Acad	LAB 2.0 6.0 0.0	Z
EDU257AD	2007 Summer I	Intern Certificate Student Teaching Lab - Special Education II		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep two year program plan by an Arizona Department of Education approved college program the partnering school district EDU257AC and a minimum of 25% successful completion of all designated required course work.		Acad	LAB 2.0 6.0 0.0	Z
EDU257AE	2007 Summer I	Intern Certificate Student Teaching Lab - Special Education III		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education		Acad	LAB 2.0 6.0 0.0	Z

					approved college program the partnering school district EDU257AD and a minimum of 50% successful completion of all designated required course work.				
EDU257AF	2007 Summer I	Intern Certificate Student Teaching Lab - Special Education IV		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program the partnering school district EDU257AE and a minimum of 75% successful completion of all designated required course work.		Acad	LAB 2.0 6.0 0.0	Z
EDU260AA	2014 Spring	Art Methods and Curriculum Development for Elementary		Overview and practical application of teaching elementary art. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	EDU260A A requires an approved field experience.	Acad	LEC 4.0 4.0 4.0	S
EDU260AB	2014 Spring	Art Methods and Curriculum Development for Secondary		Overview and practical application of teaching secondary art. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	EDU260A B requires an approved field experience.	Acad	LEC 4.0 4.0 4.0	S
EDU261AA	2014 Spring	Dance Methods and Curriculum		Overview and practical application of teaching elementary dance and movement. Covers teaching	Prerequisites: Baccalaureate Degree and formal	EDU261A A requires an	Acad	LEC 4.0	S

		Development for Elementary		strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	admission to a state approved post-baccalaureate teacher preparation program.	approved field experience.		4.0 4.0	
EDU261AB	2014 Spring	Dance Methods and Curriculum Development for Secondary		Overview and practical application of teaching secondary dance and movement. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	EDU261A B requires an approved field experience.	Acad	LEC 4.0 4.0 4.0	S
EDU262AA	2014 Spring	Dramatic Arts Methods and Curriculum Development for Elementary		Overview and practical application of teaching elementary dramatic arts. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	EDU262A A requires an approved field experience.	Acad	LEC 4.0 4.0 4.0	S
EDU262AB	2014 Spring	Dramatic Arts Methods and Curriculum Development for Secondary		Overview and practical application of teaching secondary dramatic arts. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	EDU262A B requires an approved field experience.	Acad	LEC 4.0 4.0 4.0	S
EDU263AA	2014 Spring	Music Methods and Curriculum Development for Elementary		Overview and practical application of teaching elementary music. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	EDU263A A requires an approved field experience.	Acad	LEC 4.0 4.0 4.0	S
EDU263AB	2014 Spring	Music Methods and Curriculum Development for Secondary		Overview and practical application of teaching secondary music. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	EDU263A B requires an approved field experience.	Acad	LEC 4.0 4.0 4.0	S

EDU267	2022 Fall	Reading Instructional Practices, Interventions, and Assessments		Overview of instructional practices, interventions, and assessments associated with reading instruction and the systematic teaching of phonics. Course will address historical methods and current research in reading; analyze research-based instructional practices; analyze research-based assessments and possible interventions; review support provided by Multi-Tiered Systems of Support (MTSS) and Response to Intervention (RTI); and explore Reading disabilities (Dyslexia) and laws associated with Reading disabilities.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	EDU267 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EDU268	2022 Fall	Science of Reading Including Systematic Phonics Instruction		Overview of the science of reading with an emphasis on explicit instructional practices associated with research based systematic phonics instruction. Covers research based on the science of reading related to the teaching of reading in the K-8 school setting to include understanding reading research; essential components of reading instruction; implementation of effective methods for reading instruction; and alignment of reading instruction to systematic phonics instruction.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	EDU268 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EDU269	2022 Fall	Educational Technology		Overview and practical application of teaching methodology integrating technology into curriculum development for teachers. Explores how emerging technologies are used to teach and learn across varied educational environments (face-to-face, hybrid, online, etc.). Includes skills focused on basic computer operations, productivity software, digital citizenship, instructional practices, information literacy and family and professional partnerships. Emphasis placed on effective use of technology in teaching and learning. Discusses current trends and related	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S

				issues about technology and its impacts in P12 education.					
EDU270	2013 Fall	Learning and the Brain		Teaching and learning issues within a cognitive processes context. Covers emotion, memory, and recall as well as early brain development and its relationship to learning. Emphasis on current neuroscientific brain research and how it impacts teaching practice in preK-12 classrooms.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
EDU270AB	2012 Summer I	Secondary Reading and Decoding		Focus on the theories, methods and models of teaching literacy and decoding in the content areas of secondary grades.	Prerequisites: Baccalaureate Degree and formal admission to a state approved Post Baccalaureate teacher preparation program.		Acad	LEC 3.0 3.0 3.0	S
EDU272	2020 Spring	Educational Psychology		Focus on the study and application of psychological principles, theories, and methodologies related to teaching and learning. Emphasis on developmental, learning, and motivational theories. Current trends also covered.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
EDU274	2014 Spring	Understanding Adolescent Behavior in the Classroom		Focuses on understanding adolescents' development including psychosocial, emotional, cognitive and physical. Covers impact of early experiences, relationships, and learning abilities. Establishment of a learning environment supportive of the adolescent emphasized. Includes current research findings related to adolescents.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	EDU274 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EDU276	2015 Fall	Classroom Management and Behavior Analysis		Classroom management techniques, and behavior analysis. Classroom discipline models, student behavior and misbehavior, group dynamics, student self-motivation and learning	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state	EDU276 requires an approved field	Acad	LEC 3.0 3.0 3.0	S

				styles covered. Professional Teaching Standards emphasized.	approved post-baccalaureate teacher preparation program or permission of Department or Division.	experience.			
EDU277AA	2023 Fall	Elementary Student Teaching		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Formal admission to an undergraduate teacher preparation program, and a grade of C or better in EDU287AB and permission of Department or Division.		Acad	LAB 8.0 5.0 5.0	T
EDU277AB	2023 Fall	Secondary Student Teaching		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Formal admissions to an undergraduate teacher preparation program, and a grade of C or better in EDU287AB and permission of Department or Division.		Acad	LAB 8.0 5.0 5.0	T
EDU277AC	2023 Fall	Special Education: Cross-Categorical Student Teaching		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Formal admission to an undergraduate teacher preparation program, and a grade of C or better in EDU287AB and permission of Department or Division.		Acad	LAB 8.0 5.0 5.0	T
EDU278	2001 Spring	Educational Assessment and Evaluation		Examination of assessing student performance. Assessment criteria and development of various types of assessment covered. Instructor developed assessments emphasized. Standardized, norm-referenced and criterion-referenced tests also included. Arizona State Board of	Prerequisites: A grade of C or better in EDU272.		Acad	LEC 3.0 3.0 3.0	S

				Education Professional Teaching Standards emphasized					
EDU282AA	2013 Fall	Service-Learning Experience in Education		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	EDU282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
EDU282AB	2013 Fall	Service-Learning Experience in Education		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	EDU282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L
EDU282AC	2013 Fall	Service-Learning Experience in Education		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	EDU282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined	Acad	LAB 3.0 3.0 0.0	L

						in catalog. Course Attributes: General Education Designatio n: Cultural Diversity - [C] General Education Designatio n: Literacy and Critical Inquiry - [L]			
EDU287AA	2013 Fall	Master Teacher Seminar I		Special topics in education with an emphasis on current issues not covered in education courses.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post- baccalaureate teacher preparation program or permission of Department or Division.	EDU287A A may be repeated for a total of four (4) credit hours.	Acad	LEC 1.0 1.0 1.0	S
EDU287AB	2004 Summer I	Master Teacher Seminar II		Special topics in education with an emphasis on current issues not covered in education courses.	Prerequisites: Formal admission to an undergraduate teacher preparation program.	EDU287A B may be repeated for a total of four (4) credit hours.	Acad	LEC 1.0 1.0 1.0	S
EDU287AC	2004 Summer I	Master Teacher Seminar III		Special topics in education with an emphasis on current issues not covered in education courses.	Prerequisites: Baccalaureate degree and formal admission to a state approved post baccalaureate teacher preparation program.	EDU287A C may be repeated for a total of four (4) credit hours.	Acad	LEC 1.0 1.0 1.0	S

EDU288AA	2008 Summer I	Student Teaching Lab - Elementary		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and a grade of C or better in EDU251 and permission of Department or Division.		Acad	LAB 8.0 5.0 0.0	Z
EDU288AB	2008 Summer I	Student Teaching Lab - Secondary		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and a grade of C or better in EDU251 and permission of Department or Division.		Acad	LAB 8.0 5.0 0.0	Z
EDU289	2012 Summer I	Secondary Methods and Curriculum Development		Overview and practical application of teaching methodology and curriculum development for secondary education teachers. Teaching strategies, curriculum design, lesson objectives, time management skills, teaching resources and student assessments covered. Professional Teaching Standards emphasized. Includes current research findings related to secondary education methods and curriculum development.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	Upon completion of EDU289, students are required to enroll in one of the following courses: EDU289A A or EDU289A B or EDU289A C or EDU289A D or EDU289A	Acad	LEC 1.0 1.0 1.0	S

						E or EDU289A F.			
EDU289AA	2018 Fall	Secondary Social Studies Methods and Curriculum Development		Overview and practical application of social studies teaching methodology and curriculum development for secondary teachers. Teaching strategies and learning styles covered. Curriculum design, lesson objectives, time management skills, teaching resources and student assessment also included. Professional Teaching Standards emphasized. Includes current research findings related to the application and learning of secondary social studies content; the methods alignment will be centered around History, Geography, Economics, or Political Science.	Prerequisites: Baccalaureate Degree and acceptance of formal application into a state approved post-baccalaureate teacher preparation program or permission of Department or Division. A grade of C or better in EDU289 or Corequisites: EDU289.	EDU289A A requires an approved school-based field experience.	Acad	L+L 2.0 2.0 2.0	T
EDU289AB	2018 Fall	Secondary Mathematics Methods and Curriculum Development		Overview and practical application of mathematics teaching methodology and curriculum development for secondary teachers. Teaching strategies and learning styles covered. Curriculum design, lesson objectives, time management skills, teaching resources and student assessment also included. Professional Teaching Standards emphasized. Includes current research findings related to the application and learning of secondary mathematics content.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program. Prerequisites: A grade of C or better in EDU289 or Corequisites: EDU289.	EDU289A B requires an approved field experience.	Acad	L+L 2.0 2.0 2.0	T
EDU289AC	2018 Fall	Secondary Science Methods and Curriculum Development		Overview and practical application of science teaching methodology and curriculum development for secondary teachers. Teaching strategies and learning styles covered. Curriculum design, lesson objectives, time management skills, teaching resources and student assessment also included. Professional Teaching Standards emphasized. Includes current research findings related to the	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program. Prerequisites: A grade of C or better in EDU289 or	EDU289A C requires an approved field experience.	Acad	L+L 2.0 2.0 2.0	T

				application and learning of secondary science content.	Corequisites: EDU289.				
EDU289AD	2018 Fall	Secondary English Methods and Curriculum Development		Overview and practical application of English teaching methodology and curriculum development for secondary teachers. Teaching strategies and learning styles covered. Curriculum design, lesson objectives, time management skills, teaching resources and student assessment also included. Professional Teaching Standards emphasized. Includes current research findings related to the application and learning of secondary English content.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program. Prerequisites: A grade of C or better in EDU289 or Corequisites: EDU289.	EDU289A D requires an approved field experience.	Acad	L+L 2.0 2.0 2.0	T
EDU289AE	2018 Fall	Secondary Methods and Curriculum Development in Special Topics		Overview and practical application of teaching methodology and curriculum development for secondary teachers in special topics such as Music, Theater, Art, Economics, Foreign Languages, Computers, PE, etc. Teaching strategies and learning styles covered. Curriculum design, lesson objectives, time management skills, teaching resources and student assessment also included. Professional Teaching Standards emphasized. Includes current research findings related to specific content teaching areas in Secondary Education.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program. Prerequisites: A grade of C or better in EDU289 or Corequisites: EDU289.	EDU289A E requires an approved field experience.	Acad	L+L 2.0 2.0 2.0	T
EDU290	2014 Spring	Science Methods and Curriculum Development		Overview and practical application of teaching elementary science. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on Professional Teaching Standards. Includes current research findings related to the application and learning of elementary science content.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	EDU290 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EDU291	2023 Fall	Children's Literature	ENH291	Review of folk and modern literature from a variety of world cultures, including application of literary criteria to folk and modern literature for children.	Prerequisites: None.	Course Attribute(s): General Education Designatio	Acad	LEC 3.0 3.0 3.0	S

						n: Humanities, Arts and Design - [HU]			
EDU292	2023 Fall	The Art Of Storytelling	HUM292 STO292	Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
EDU293	2014 Spring	Mathematics Methods and Curriculum Development		Overview and practical application of teaching mathematics in K-8 grades. Development of lesson plans and assessment instruments emphasized. Current trends, Professional Teaching Standards and National Council of Teachers of Mathematics Standards also covered. Includes current research findings related to the application and learning of elementary mathematics content.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	EDU293 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EDU294	2001 Fall	Multicultural Folktales	ENH294 STO294	Study of multicultural folktales, exploring the impact of the oral tradition in American society and showing classroom applications	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S

EDU295	2014 Spring	Social Studies Methods and Curriculum Development		Overview of teaching elementary social studies. Topics include lesson plans preparation, teaching strategies, assessments, classroom management techniques and teaching resources. Emphasis on Professional Teaching Standards. Includes current research findings related to the application and learning of elementary social studies content.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program.	EDU295 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EDU296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
EDU296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least		Acad	LAB 2.0 10.0 0.0	Z

					one class which is related to student's major or career interest or with permission of the Instructor.				
EDU296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
EDU296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with		Acad	LAB 4.0 20.0 0.0	Z

					permission of the Instructor.				
EDU297	2024 Spring	Language Arts Methods and Curriculum Development		Methods to teach research-based instruction in elementary English language arts including reading, writing, speaking, and listening. Topics include developmentally appropriate instruction, assessment, cross-curricular integration, lesson plan preparation, evidence-based teaching strategies, and teaching resources.	Prerequisites: Baccalaureate degree and formal admission to a post-baccalaureate teacher preparation program, or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
EDU298AA	2023 Fall	Special Projects	ECH298AA	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
EDU298AB	2023 Fall	Special Projects	ECH298AB	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
EDU298AC	2023 Fall	Special Projects	ECH298AC	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

				combined to maximize student development.					
EDU337	2023 Fall	Structured English Immersion in Grades K-8		Overview of teaching to serve the needs of diverse English learner (EL) students in grades K-8. Includes comparison and evaluation of various language educational models, including Structured English Immersion (SEI) and the Arizona Language Development Approach (LDA) with a focus on asset based behaviors and expectations, integrated and targeted English Language Development (ELD) instruction. Covers legal and historical foundations and current issues.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
EDU367	2023 Fall	Science of Reading with Systematic Phonics Instruction in Grades K-8		Overview of the science of reading with an emphasis on explicit instructional practices associated with research-based systematic phonics instruction. Uses analysis of science of reading-based research to identify best practices for effectively teaching reading in the K-8 school setting, including essential components, pedagogical strategies and alignment to systematic phonics instruction.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	EDU367 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EDU368	2023 Fall	Reading Instructional Practices, Interventions, and Assessments in Grades K-8		Application of instructional practices, interventions and assessments associated with reading instruction and the systematic teaching of phonics to support readers of varying ages and ability levels, including students with dyslexia. This course addresses historical methods, current research, research-based instructional practices, assessments and interventions using Multi-tiered Systems of Support (MTSS) or Response to Intervention (RTI).	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	EDU368 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EDU372	2023 Fall	Educational Psychology for Teachers (Grades K-12)		Overview of scientific research and psychological principles, theories, and methodologies related to teaching and learning. Emphasis on developmental, learning, and motivational theories. Focuses on	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program		Acad	LEC 3.0 3.0 3.0	S

				human diversity, theories of learning, intelligence, memory, creativity, assessment, and factors influencing effective instruction and learning.	or permission of Department or Division.				
EDU427	2023 Fall	Social Studies Teaching Methods and Pedagogical Strategies for Grades K-8		Application of research-based instruction in elementary social studies. Topics include developmentally appropriate instruction, and assessment, cross-curricular integration of social studies, lesson plan preparation, evidence-based teaching strategies, and teaching resources. Emphasis on current professional teaching standards and Arizona Academic Standards.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	EDU427 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EDU428	2023 Fall	English Language Arts Teaching Methods and Pedagogical Strategies for Grades K-8		Application of research-based instruction in elementary English Language Arts, including reading, writing, speaking, and listening. Topics include developmentally appropriate instruction, and assessment, cross-curricular integration of language arts, lesson plan preparation, evidence-based teaching strategies, and teaching resources. Emphasis on current professional teaching standards and Arizona Academic Standards.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	EDU428 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EDU429	2023 Fall	Science Teaching Methods and Pedagogical Strategies for Grades K-8		Application of research-based instruction in elementary science. Topics include developmentally appropriate instruction, and assessment, cross-curricular integration of scientific concepts and problem solving skills, lesson plan preparation, evidence-based teaching strategies, and teaching resources. Emphasis on current professional teaching standards and Arizona Academic Standards.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	EDU429 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EDU431	2023 Fall	Mathematics Teaching Methods and Pedagogical Strategies for Grades K-8		Application of research-based instruction in elementary mathematics. Topics include developmentally appropriate instruction, and assessment, cross-	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher	EDU431 requires an approved field	Acad	LEC 3.0 3.0 3.0	S

				curricular integration of mathematics and logical problem solving, lesson plan preparation, evidence-based teaching strategies, and teaching resources. Emphasis on current trends, professional teaching standards and Arizona Academic Standards.	preparation program or permission of Department or Division.	experience.			
EDU477	2023 Fall	Student Teaching: Elementary (Grades K-8)		Supervised student teacher practicum in a K-8 classroom. Emphasis on the provision of instruction to learners. Covers lesson plan development, teaching strategies, classroom management, assessing the trajectory of student learning, and professionalism.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	EDU477 requires a minimum of eight (8) weeks, full-time classroom instruction.	Acad	LAB 6.0 6.0 0.0	Z
EDU487	2023 Fall	Professional Seminar: Current Trends in Elementary and Special Education		Special topics in K-12 (elementary and special) education with an emphasis on current topics and trends.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	EDU487 may be repeated for a total of four (4) credit hours.	Acad	LEC 2.0 2.0 2.0	S
EEC205	2014 Spring	Early Learning: Instructional Methodologies of Language, Math, Science, Social Studies and the Arts		Overview and practical application of teaching elementary language, math, science, social studies and the arts. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on Early Learning Standards (Birth to Age 5), Arizona Academic Standards Kindergarten-Third (K-3) Grade, and State Board of Education Professional Teaching Standards.	Prerequisites: Must hold a provisional or standard elementary or special education teaching certificate or permission of Department or Division.	EEC205 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EED111	2024 Fall	Multimedia and the Early Childhood Education Classroom		Explores theories and teaching strategies related to the use of multimedia with children from birth through 8 years of age. Examines usage of various multimedia in early childhood education settings and ways to meaningfully integrate it to foster cognitive development. Explores the use of multimedia and	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

				early childhood education (ECE) professional growth.					
EED115	2021 Fall	Digital Literacy for Teaching and Learning in Education	EDU115	Overview of digital literacy for identifying the skills needed to become informed users of technology to communicate, instruct, create and think critically with digital tools. Explores how emerging technologies are used to teach and learn across varied educational environments (face-to-face, hybrid, online, etc). Includes skills focused on basic computer operations, productivity software, digital citizenship, instructional practices, information literacy and family and professional partnerships. Discusses current trends and related issues about the use of technology and its impacts in P20 education.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
EED200	2024 Fall	Foundations of Early Childhood Education		Overview of early childhood education (birth to age eight) in American society, including current issues and responsibilities. Emphasis on issues of professionalism, ethics and program types. Opportunities for students to explore potential career paths.	Prerequisites: None.	EED200 includes practicum designed to explore the field of early childhood education.	Acad	LEC 3.0 3.0 3.0	S
EED205	2009 Fall	The Developing Child: Prenatal to Age Eight		Examination of process of physical, social, emotional, cognitive, language, and literacy development of typical and atypical young children; prenatal through age eight. Includes practical application and fieldwork experience	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
EED210	2008 Summer I	Creative and Cognitive Play		Benefits of play for children birth to 8 years of age. Inclusion of art, music, and movement used in all dimensions of play. Identify uses and roles in the development of children.	Prerequisites: A grade of C or better in CFS176 ECH176, or CFS235, or EED205.		Acad	LEC 3.0 3.0 3.0	S

EED211	2008 Summer I	Language Acquisition in the Young Child		Define speech and language and discuss theories of language acquisition in young children, birth through 8 years of age in a variety of settings. Explore techniques to encourage and support the development of language, assessment techniques and family involvement.	Prerequisites: A grade of C or better in CFS/ECH176, or CFS235, or EED205.		Acad	LEC 3.0 3.0 3.0	S
EED212	2024 Fall	Guidance, Effective Interactions and the Environment		Principles for guiding young children in early care and education environments. Exploration of guidance, effective interactions, and how the environment impacts the lives of young children. Includes observation of children, birth to age eight.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
EED215	2024 Fall	Early Learning: Health, Safety, Nutrition and Physical Fitness		Consideration of public health issues and safety procedures within early childhood settings that serve young children birth to age eight. Overview of nutritional needs and issues of physical fitness and well-being in young children. Includes practicum designed to explore the field of early childhood education.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
EED220	2019 Summer	Child, Family, Community and Culture		Examines family, community and cultural influences on development of the young child (birth to age eight). Considers trends and threats to attachment, relationships and cultural identity. Includes social and emotional experiences and their impact on the developing brain.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
EED222	2024 Fall	Introduction to the Exceptional Young Child: Birth to Age Eight		Overview of the exceptional learner (birth - age eight), one who differs from the average or the norm, with emphasis on observation, techniques, characteristics, identification, types of programs, and work with families. Issues related to learning exceptionalities, sensory and communication disorders, social and emotional problems, physical and health related disorders, and giftedness. Includes practicum	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Cultural Diversity - [C] General Education Designatio n: Social	Acad	LEC 3.0 3.0 3.0	S

				designed to explore the field of early childhood education.		and Behavioral Sciences - [SB]			
EED225	2024 Fall	Language and Literacy in the Context of Culture and Relationships		Introduces children's language acquisition and literacy development. Exploration of the relationships among language, literacy, family, culture, and community. Study of educational practices and advocacy opportunities that support language acquisition, literacy development and the preservation of heritage languages.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design [HU]	Acad	LEC 3.0 3.0 3.0	S
EED250	2005 Summer I	Early Literacy Development		Overview of emergent literacy, early literacy development, and appropriate early experiences with books, reading, and writing. Emphasis placed on reading and writing readiness, methods to enhance literacy development, and strategies for selecting and using children's books	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
EED255	2019 Spring	Portfolio Development and Writing for the Profession		Portfolio development, completion, and presentation. Self-assessment and educational short-term and long-term planning, professional development, writing and critical learning included.	Prerequisites: A grade of C or better in completion of twelve (12) credit hours of EED Early Education coursework and permission of Program Coordinator.		Acad	LEC 3.0 3.0 0.0	C
EED260	2019 Spring	Early Childhood Infant/Toddler Internship		Work experience with infants and toddlers in early care and education settings. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	EED260 may be repeated for a total of six (6) credit hours.	Acad	LAB 1.0 1.0 0.0	C

EED261	2019 Spring	Early Childhood Preschool Internship		Work experience with preschoolers in early care and education settings. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	EED261 may be repeated for a total of six (6) credit hours.	Acad	LAB 1.0 1.0 0.0	C
EED262	2019 Spring	Early Childhood Internship: Infant/Toddler		Work experience with infants and toddlers in early care and education settings.	Prerequisites: Permission of Department or Division.		Acad	LAB 2.0 2.0 0.0	C
EED263	2019 Spring	Early Childhood Internship: Preschool		Work experience with preschoolers in early care and education settings.	Prerequisites: Permission of Department or Division.		Acad	LAB 2.0 2.0 0.0	C
EED265	2016 Spring	Early Childhood Internship: K-3		Supervised student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: A grade of C or better in EED200, EED212, EED215, EED220, EED222, EED270, EED275, and EED280.		Acad	LAB 4.0 5.0 0.0	Z
EED270	2008 Summer I	Early Learning Development: Birth to Age Eight		Teaching and early learning issues within a cognitive processes context. Covers emotion, memory, and recall as well as early brain development and its relationship to early learning for the young child, birth to age eight.	Prerequisites: A grade of C or better in CFS/ECH176 or CFS205 or CFS235 or EED205 or permission of instructor.		Acad	LEC 3.0 3.0 3.0	S
EED272	2005 Fall	Early Childhood Educational Psychology		Focus on the study and application of psychological principles, theories, and methodologies related to early childhood teaching and learning. Emphasis on early childhood developmental, learning, and motivational theories. Current trends also covered	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
EED275	2014 Spring	Early Learning Curriculum and Instruction: Math and Science		Overview and practical application of teaching math and science concepts to typical and atypical toddlers, preschoolers, and students Kindergarten-third grade (K-3). Covers teaching strategies, learning environments, teaching resources,	Prerequisites: A grade of C or better in CFS/ECH176 or EED205.	EED275 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S

				and use of technology. Emphasis on overview and practical application of National Association for the Education of Young Children Standards, Early Learning Standards, Arizona Academic Standards (K-3), State Board of Education Professional Teaching Standards and National Council of Teachers of Mathematics Standards.					
EED277	2014 Spring	Early Learning Curriculum and Instruction: Language Arts, Social Studies, Art, Music and Movement		Overview and practical application of teaching language arts, social studies, art, music and movement to typical and atypical toddlers, preschoolers, and students K-3. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on overview and practical application of National Association for the Education of Young Children Standards, Early Learning Standards, Arizona Academic Standards (K-3), and State Board of Education Professional Teaching Standards.	Prerequisites: A grade of C or better in CFS/ECH176 or EED205.	EED277 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EED278	2023 Fall	Early Learning Curriculum and Instruction - Birth to Age Eight		Considerations and evaluations of curriculum appropriate to the developmental characteristics of learners, birth through eight years. Includes how early childhood standards, philosophies, and program settings relate to the teaching, learning, and assessment process. Includes field experience.	Prerequisites: A grade of C or better in EED200.		Acad	LEC 3.0 3.0 3.0	S
EED280	2008 Summer I	Standards, Observation & Assessment of Typical/Atypical Behaviors of Young Children Birth to Age Eight		Standards, observation, and assessment of typical and atypical behaviors, overview of standards, observation and assessment methodologies for typical and atypical young children (birth to age eight). Includes ethics, referral and reporting procedures, and collaboration with families and other professionals.	Prerequisites: A grade of C or better in CFS/ECH176 or CFS235 or EED205.		Acad	LEC 3.0 3.0 3.0	S
EED282AA	2014 Spring	Service-Learning Experience in		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	EED282A A may be repeated	Acad	LAB 1.0	L

		Early Childhood Education				for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog. Repeats 6.0 6.0		1.0 0.0	
EED282AB	2014 Spring	Service-Learning Experience in Early Childhood Education		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	EED282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog. Repeats 3.0 6.0	Acad	LAB 2.0 2.0 0.0	L
EED282AC	2014 Spring	Service-Learning Experience in Early Childhood Education		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	EED282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L

						Repeats 2.0 6.0			
EEE120	2024 Fall	Digital Design Fundamentals	CSC120	Number systems, conversion methods, binary and complement arithmetic, Boolean switching algebra and circuit minimization techniques. Analysis and design of combinational logic, flip-flops, simple counters, registers, Read Only Memory (ROMs), Programmable Logic Device (PLDs), synchronous and asynchronous sequential circuits, and state reduction techniques. Building physical circuits.	Prerequisites: None. Corequisites: CSC100 or (CSC110 or CSC110AB) or permission of Instructor or Division or Department Chair.		Acad	L+L 4.0 6.0 6.0	T
EEE202	2024 Fall	Circuits and Devices		Introduction to circuits and devices. Component models, transient analysis, steady state analysis, Laplace transform, and active and passive filter networks.	Prerequisites: None. Corequisites: (PHY116, or PHY131, or permission of Instructor or Division or Department Chair) and (MAT276 or permission of Instructor or Division or Department Chair).		Acad	LEC 5.0 4.0 4.0 LAB 0.0 3.0 3.0	T
EEE203	2023 Fall	Signals and Systems		Introduction to continuous and discrete time signal and system analysis, linear systems, Fourier, and z-transforms.	Prerequisites: A grade of C or better in EEE202.		Acad	L+L 3.0 5.0 5.0	T
EEE220	2018 Fall	Programming for Computer Engineering	CSC220	Introduction to procedural programming (C/C++) and hardware description language (VHDL).	Prerequisites: A grade of C or better in ((EEE120 or CSC120) and CSC205) or permission of Instructor.		Acad	L+L 3.0 5.0 5.0	T
EEE230	2024 Fall	Computer Organization and Assembly Language	CSC230	Assembly language programming including input/output (I/O) programming and exception/interrupt handling. Register-level computer organization, I/O interfaces, assemblers, and linkers. Processor organization and design, data path, control, pipelining, and input/output. Memory organization with cache and virtual memory.	Prerequisites: A grade of C or better in [(CSC100 or CSC110 or CSC110AB) and CSC/EEE120], or permission of Instructor or Division or Department Chair.		Acad	L+L 4.0 5.0 5.0	T

EEG115	2015 Spring	Biomedical Electronic Technology I		Review of basic principles of math and physics as applied to Biomedical Electronic technology and monitoring applications within the fields of electroneurodiagnostic technology and polysomnography technology.	Prerequisites: Admission to the Electroneurodiagnostic Technology program or Polysomnographic Technology program.		Occ	LEC 2.0 2.0 2.0	S
EEG116	2016 Fall	Biomedical Electronic Technology II		Electronic concepts, electrical connections including grounding, and electrical and patient safety as applied to medical electronic technology and monitoring applications within the fields of electroneurodiagnostic technology and polysomnography technology.	Prerequisites: Admission to the Electroneurodiagnostics Technology program or the Polysomnographic Technology program.		Occ	LEC 3.0 3.0 3.0	S
EEG130	2018 Fall	Introduction to EEG		Introduction to EEG (Electroneurodiagnostic) theory, with emphasis on instrumentation, testing protocol and major disorders for which EEG is diagnostically useful. Introduction and hands on experience with the 10/20 International Electrode Application System.	Prerequisites: Admission to the Electroneurodiagnostics Program or admission to Polysomnographic Technology Program.		Occ	L+L 4.0 4.0 4.0	T
EEG140	2018 Fall	Basic Electroneurodiagnostic Skills		Theory and clinical procedures germane to the electroneurodiagnostic (EEG) department. Stress on hospital orientation, job competency, professional growth, and interpersonal communications with staff and patients.	Prerequisites: Admission to the Electroneurodiagnostic (END) Technology program. Corequisites: EEG140LL.		Occ	LEC 1.0 1.0 1.0	S
EEG140LL	2018 Fall	Basic Electroneurodiagnostic Skills Laboratory		Practical application, and clinical procedures germane to the electroneurodiagnostic (EEG) department. Stress on hospital orientation, job competency, professional growth, and interpersonal communications with staff and patients.	Prerequisites: Admission to the Electroneurodiagnostic (END) Technology program. Corequisites: EEG140.		Occ	LAB 1.0 3.0 3.0	T
EEG200	2012 Spring	Clinical Rotation I		Clinical application of Electroneurodiagnostic (EEG) skills and knowledge acquired during required program classroom and lab courses. Full supervision of tests performed with progression to independent testing.	Prerequisites: Admission to the Electroneurodiagnostics Program.		Occ	LAB 3.0 18.0 0.0	C

EEG201	2018 Fall	Intermediate EEG		Expanded study of neurological and neurophysiological medicine. Discuss the studies in cerebrovascular and central nervous system lesions, metabolic and infectious disease, trauma, congenital, and pediatric disorders. Extensive record review. Evaluate the normal and abnormal electrocardiogram (ECG) patterns related to electroencephalogram (EEG) testing.	Prerequisites: Admission to the Electroneurodiagnostic (END) Technology program. Corequisites: EEG201LL.		Occ	LEC 3.0 3.0 3.0	S
EEG201LL	2018 Fall	Intermediate EEG Laboratory		Expanded study and application of neurological and neurophysiological medicine. Studies in cerebrovascular and central nervous system lesions, metabolic and infectious disease, trauma, congenital, and pediatric disorders. Extensive record review. Normal and abnormal electrocardiogram (ECG) patterns related to electroencephalogram (EEG) testing.	Prerequisites: Admission to the Electroneurodiagnostic (END) Technology program. Corequisites: EEG201.		Occ	LAB 1.0 3.0 3.0	T
EEG205	2018 Fall	Applied Evoked Potentials and Nerve Conduction Studies		Theoretical aspects of Evoked Potentials (EP), mainly Visual Evoked Response (VER), Brain Auditory Evoked Response (BAER), and Somatosensory Evoked Potential (SSEP) tests. EP instrumentation, recording techniques and data analysis of electrical activity of the nervous system elicited by using selected physical stimuli (evoked potentials) and concepts of signal averaging, (in accordance with the most recent American Clinical Neurophysiology Society (ACNS) guidelines on Evoked Potentials.)	Prerequisites: Admission to the Electroneurodiagnostic (END) Technology program. Corequisites: EEG205LL.		Occ	LEC 1.0 1.0 1.0	S
EEG205LL	2018 Fall	Applied Evoked Potentials and Nerve Conduction Studies Laboratory		Practical aspects of Evoked Potentials (EP), mainly Visual Evoked Response (VER), Brain Auditory Evoked Response (BAER), and Somatosensory Evoked Potential (SSEP) tests. EP instrumentation, recording techniques and data analysis of electrical activity of the nervous system elicited by using	Prerequisites: Admission to the Electroneurodiagnostic (END) Technology program. Corequisites: EEG205.		Occ	LAB 1.0 3.0 3.0	T

				selected physical stimuli (evoked potentials) and concepts of signal averaging, (in accordance with the most recent American Clinical Neurophysiology Society (ACNS) guidelines on Evoked Potentials.)					
EEG206	2024 Fall	Advanced EEG		Comprehensive study of neurological and neurophysiological medicine. Studies in cerebrovascular and central nervous system lesions, metabolic and infectious disease, trauma and congenital and pediatric disorders. Normal and abnormal pattern review. Case presentations.	Prerequisites: Admission to the Electroneurodiagnostic (END) program. Corequisites: EEG206LL.		Occ	LEC 2.0 2.0 2.0	S
EEG206LL	2018 Fall	Advanced EEG Laboratory		Comprehensive advanced study and application of methods of neurological and neurophysiological medicine. Studies in cerebrovascular and central nervous system lesions, metabolic and infectious disease, trauma and congenital and pediatric disorders. Normal and abnormal pattern review. Case presentations. Board examination review in the laboratory setting.	Prerequisites: Admission to the Electroneurodiagnostic (END) Technology program. Corequisites: EEG206.		Occ	LAB 1.0 3.0 3.0	T
EEG207	2018 Fall	Electroneurodiagnostic Record Review		Normal and abnormal pattern review for adults and pediatric patients, Nerve Conduction Velocity (NCV) pattern recognition and review, special procedures, Long Term Monitoring (LTM), and Intraoperative Monitoring (IOM) pattern recognition and review.	Prerequisites: Admission to the Electroneurodiagnostics (END) Technology Program.		Occ	L+L 4.0 4.0 4.0	T
EEG210	2012 Summer I	Applied Neurophysiology		Introduction to central nervous system. Emphasis on conduction pathways, anatomy, and blood supply. Survey of neurotransmitters, pharmacology and current research.	Prerequisites: Admission to the Electroneurodiagnostic Technology program or Polysomnographic Technology program.		Occ	LEC 3.0 3.0 3.0	S
EEG211	2012 Spring	Clinical Rotation II		Clinical application of Electroneurodiagnostic (EEG) skills and knowledge acquired during didactic courses and clinical practicums. Full supervision of tests	Prerequisites: Admission to the Electroneurodiagnostics Program.		Occ	LAB 3.0 18.0 0.0	C

				performed with progression to independent testing.					
EEG220	2012 Spring	Clinical Rotation III		Advanced clinical application of Electroneurodiagnostic (EEG) skills and knowledge acquired during didactic courses and clinical practicums. Full supervision of tests performed with progression to independent testing.	Prerequisites: Admission to the Electroneurodiagnostic Program.		Occ	LAB 3.0 18.0 0.0	C
EEG280	2024 Fall	EEG Board Exam Review		Includes a review of all material covered in the Electroneurodiagnostic Technology program. Taught during students' final semester of coursework to prepare them for their board examination.	Prerequisites: Admission into the Electroneurodiagnostic Technology program or permission of Program Director.		Occ	LEC 2.0 2.0 2.0	S
EEG282AA	2018 Fall	Volunteerism for Electroneurodiagnostic Technology: Service Learning Experience		Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	EEG282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 1.0 1.0 1.0	T
EEP224	2013 Fall	Child Development: Prenatal to Age Eight		Examination of process of physical, social, emotional, cognitive, language, and literacy development of typical and atypical young children; prenatal through age eight. Consideration of public health issues and safety procedures within early childhood settings. Overview of nutritional needs and issues of physical fitness and well-being in typical and atypical young children. Includes practical application and fieldwork experience.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
EEP240	2013 Fall	Early Childhood Foundations		Overview of early childhood education (birth to age eight) in American	Prerequisites: Baccalaureate		Acad	LEC 3.0	S

				society, including current issues and responsibilities. Emphasis on issues of professionalism, ethics and program types. Opportunities for students to explore potential career paths. Includes field experience.	Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.			3.0 3.0	
EEP242	2013 Fall	Early Childhood Guidance and Management		Principles for guiding young children in early care and education environments. Exploration of guidance, management, and how the environment impacts the lives of typical and atypical young children. Includes observation of classrooms of children ages birth to age eight.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
EEP244	2013 Fall	Early Childhood Introduction to the Exceptional Young Child		Overview of the exceptional learner (birth to age eight), one who differs from the average or the norm, with emphasis on observation, techniques, characteristics, identification, types of programs, and work with families. Issues related to learning exceptionalities, sensory and communication disorders, social and emotional problems, physical and health related disorders, and giftedness. Includes field experience.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation program or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
EEP246	2013 Fall	Early Childhood Culture, Community, Family and the Child		Examines family, community, and cultural influences on development of the young child birth to third grade. Considers trends and threats to attachment, relationships and cultural identity. Includes social and emotional experiences and their impact on the developing brain.	Prerequisites: Baccalaureate Degree and formal acceptance to a Maricopa Community College state approved post-baccalaureate teacher preparation		Acad	LEC 3.0 3.0 3.0	S

					program or permission of Department or Division.				
EEP260	2008 Summer I	Early Childhood Curriculum and Methods of Math - Birth to Age Eight		Overview and practical application of teaching math concepts to toddlers, preschoolers, and students Kindergarten through third grade (K-3). Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on overview and practical application of Early Learning Standards, Arizona Academic Standards (K-3), State Board of Education Professional Teaching Standards and National Council of Teachers of Mathematics Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate early childhood teacher preparation program.	EEP260 requires an approved school-based practicum.	Acad	LEC 3.0 3.0 3.0	S
EEP262	2014 Spring	Early Childhood Curriculum and Methods of Science - Birth to Age Eight		Overview and practical application of teaching science concepts to toddlers, preschoolers, and students Kindergarten and third grade (K-3). Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on overview and practical application of Early Learning Standards, Arizona Academic Standards K-3, State Board of Education Professional Teaching Standards.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate early childhood teacher preparation program.	EEP262 requires an approved field experience.	Acad	LEC 2.0 2.0 2.0	S
EEP264	2014 Spring	Early Childhood Curriculum and Methods of Social Studies - Birth to Age Eight		Overview and practical application of teaching social studies to toddlers, preschoolers, and students K-3. Covers teaching strategies, learning environments, and teaching resources. Emphasis on overview and practical application of Early Learning Standards, Arizona Academic Standards Kindergarten through third grade (K-3).	Prerequisites: accalaureate Degree and formal admission to a state approved post-baccalaureate early childhood teacher preparation program.	EEP264 requires an approved field experience.	Acad	LEC 1.0 1.0 1.0	S
EEP266	2008 Summer I	Early Childhood Curriculum and Methods in Language Arts - Birth to Age Eight		Overview and practical application of teaching Language Arts concepts to toddlers, preschoolers, and students in Kindergarten through third grade (K-3). Covers communication skills of reading, writing, listening and	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate early		Acad	LEC 1.0 1.0 1.0	S

				speaking, interpreting visual messages and creating visual messages. Emphasis on overview and practical application of Early Learning Standards, Arizona Language Arts Standards (K-3), and State Board of Education Professional Teaching Standards	childhood teacher preparation program.				
EEP268	2008 Summer I	Early Childhood Curriculum and Methods in The Arts - Birth to Age Eight		Exploration of fine arts integration, birth to age 8, in early childhood settings. Focus on the impact on life-long learning and education goal achievement when curriculum includes fine arts. Arizona art standards of dance, visual, theater and music also covered.	Prerequisites: Baccalaureate Degree and formal admission to a post-baccalaureate early childhood teacher preparation program.		Acad	LEC 1.0 1.0 1.0	S
EEP276	2008 Summer I	Standards, Observation and Assessment of Typical and Atypical Behaviors Birth to Age Eight		Observation and assessment of typical and atypical behaviors, overview of standards, observation and assessment methodologies for typical and atypical young children birth to age eight. Includes ethics, referral and reporting procedures, and collaboration with families and other professionals.	Prerequisites: A grade of C or better in EEP260, EEP262, EEP264, EEP266, EEP268 and Baccalaureate Degree and formal admission to a state approved post-baccalaureate early childhood teacher preparation program.		Acad	LEC 3.0 3.0 3.0	S
EEP288	2009 Spring	Student Teaching Lab - Early Childhood		Supervised (K-3) student teacher practicum. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and a grade of C or better in (EDU220, EDU251, EEP240, EEP242, EEP244, EEP246 and EEP276) and permission of Department or Division.		Acad	LAB 4.0 5.0 0.0	Z

EEP289	2009 Spring	Internship: Early Childhood Infant, Toddler, Preschool		Supervised field experience with infants, toddlers and/or preschoolers in early care and education settings.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate early childhood teacher preparation program and (EDU220 EDU251 EEP240 EEP242 EEP244 EEP246 and EEP276) and permission of Department or Division.		Acad	LEC 4.0 4.0 0.0	Z
EEP311	2023 Fall	Foundations of Dual Language Learning - Birth to Age Eight		Examination of the needs of dual language learners birth to grade three. Includes comparison and evaluation of various language educational models with a focus on asset based behaviors and expectations, integrated and targeted dual language instruction. Covers legal and historical foundations and current issues.	Prerequisites: A grade of C or better in EED200 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or Division).		Acad	LEC 3.0 3.0 3.0	S
EEP312	2023 Fall	Family, Community, and School Collaboration for Dual Language Learners - Birth to Age Eight		Examines multiple influences on the development of the dual language learner (birth to age eight). Considers foundational structure provided by and reinforced by the family. Recognizes multiple messages of value and power communicated through community structures. Includes strategies for relationship building between families, school, and community with a long term goal of encouraging dual language learners.	Prerequisites: A grade of C or better in EED200 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of		Acad	LEC 3.0 3.0 3.0	S

					Department or Division).				
EEP313	2023 Fall	Bilingual and ESL Methods - Birth to Age Eight		Culturally responsive strategies for working with the dual language learners in early childhood settings. Components of dual language curriculum content and learning techniques focusing on bilingual and English as a Second Language (ESL) strategies.	Prerequisites: A grade of C or better in EED200 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or Division).		Acad	LEC 3.0 3.0 3.0	S
EEP314	2023 Fall	Teaching of Reading and Writing for Dual Language Learners - Birth to Age Eight		Introduction to teaching reading and writing for dual language learners in early childhood settings. Includes second language acquisition terminology, theories, and strategies. Emphasis on instructional and assessment strategies as well as reading comprehension and writing skills.	Prerequisites: A grade of C or better in EED200 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or Division).		Acad	LEC 3.0 3.0 3.0	S
EEP315	2023 Fall	Social Studies and Arts Methods for Dual Language Learners - Birth to Age Eight		Overview and practical application of teaching social studies and arts for dual language learners in early childhood settings. Covers teaching strategies, learning environments, and teaching resources. Emphasis on overview of relevant guidelines and standards for children birth through third grade (pre-K-3).	Prerequisites: A grade of C or better in EED200 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual		Acad	LEC 3.0 3.0 3.0	S

					Language program or permission of Department or Division).				
EEP316	2023 Fall	Math and Science Methods for Dual Language Learners - Birth to Age Eight		Overview and practical application of teaching math and science for dual language learners in early childhood settings. Covers teaching strategies, learning environments, and teaching resources. Emphasis on overview of relevant guidelines and standards for children birth through third grade (pre-K-3).	Prerequisites: A grade of C or better in EED200 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or Division).	EEP316 requires an approved field experience. For some employment and field experiences (including internship courses), students will be required to have a current Identity Verified Print (IVP) Fingerprint Clearance Card and a current TB test.	Acad	LEC 3.0 3.0 3.0	S
EEP411	2023 Fall	Sheltered Instruction for Dual Language Settings - Birth to Age Eight		Analysis of sheltered instruction strategies designed to serve the needs of dual language learners ages birth to eight. Includes comparison and evaluation of various language educational models with a focus on asset based behaviors and expectations as well as integrated and targeted language instruction.	Prerequisites: A grade of C or better in EEP311 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual		Acad	LEC 3.0 3.0 3.0	S

					Language program or permission of Department or Division).				
EEP412	2023 Fall	Assessment of Dual Language Learners - Birth to Age Eight		Teaching and assessment of dual language learners ages birth to eight. Covers differentiated instruction, special education needs vs. language needs, learning environments and utilizing ongoing assessment of student learning to guide instruction.	Prerequisites: A grade of C or better in EEP311 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or Division).		Acad	LEC 3.0 3.0 3.0	S
EEP413	2023 Fall	Reading Instructional Practices, Interventions, and Assessments - Birth through Adolescence		Overview of instructional practices, interventions, and assessments associated with reading instruction and the systematic teaching of phonics to children from birth through adolescence. Includes historical methods and current research in reading; research-based instructional practices; research based assessments and possible interventions; support provided by Multi-Tiered Systems of Support (MTSS) and Response to Intervention (RTI). Focus on reading disabilities (dyslexia) and laws associated with reading disabilities for children from birth through adolescence.	Prerequisites: A grade of C or better in EEP311 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or Division).		Acad	LEC 3.0 3.0 3.0	S
EEP414	2023 Fall	Science of Reading and Systematic Phonics Instruction for Birth through Adolescence		Overview of the science of reading with an emphasis on explicit instructional practices associated with research-based, systematic phonics instruction for children from birth through adolescence. Covers research-based on the science of reading related to the teaching of reading in the pre-K-8 school setting	Prerequisites: A grade of C or better in EEP311 or permission of Instructor and (formal admission to an undergraduate educator preparation program or	EEP414 requires an approved field experience. For some employe	Acad	LEC 3.0 3.0 3.0	S

				to include understanding reading research; essential components of reading instruction; implementation of effective methods for reading instruction; and alignment of reading instruction to systematic phonics instruction.	declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or Division).	nt and field experiences (including internship courses), students will be required to have a current Identity Verified Print (IVP) Fingerprint Clearance Card and a current TB test.			
EEP415	2024 Fall	Student Teaching in a Dual Language K-3 Setting		Supervised (K-3) student teacher practicum in a dual language setting. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: A grade of C or better in EEP311 or permission of Instructor and (formal admission to an undergraduate educator preparation program or declaration of the BA in Early Childhood Education - Dual Language program or permission of Department or Division).	EEP415 students will be required to have a current Identity Verified Print (IVP) Fingerprint Clearance Card and a current TB test for some employment and field experiences (including internship courses). EEP415	Acad	LEC 3.0 3.0 0.0	C

						may be repeated for credit.			
EFE232	2023 Fall	Mild-Moderate Disabilities Student Teaching		Supervised student teaching. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Formal admission to an undergraduate teacher preparation program and permission of Department or Division.		Acad	LAB 8.0 5.0 0.0	Z
EFE260	2009 Summer I	Student Teaching Lab K-12 - Art		Supervised student teacher practicum. Emphasis on the provision of K-12 art instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state-approved post-baccalaureate teacher preparation program and permission of Department or Division.		Acad	LAB 12.0 9.0 0.0	Z
EFE260AC	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Art Education I		Supervised student teacher practicum. Emphasis on the provision of K-12 art instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district.		Acad	LAB 3.0 9.0 0.0	Z
EFE260AD	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Art Education II		Supervised student teacher practicum. Emphasis on the provision of K-12 art instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college		Acad	LAB 3.0 9.0 0.0	Z

					program the partnering school district EFE260AC and a minimum of 25% successful completion of all designated required course work.				
EFE260AE	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Art Education III		Supervised student teacher practicum. Emphasis on the provision of K-12 art instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program the partnering school district EFE260AD and a minimum of 50% successful completion of all designated required course work.		Acad	LAB 3.0 9.0 0.0	Z
EFE260AF	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Art Education IV		Supervised student teacher practicum. Emphasis on the provision of K-12 art instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program the partnering school district EFE260AE and a minimum of 75% successful completion of all designated required course work.		Acad	LAB 3.0 9.0 0.0	Z

EFE261	2009 Summer I	Student Teaching Lab K-12 - Dance		Supervised student teacher practicum. Emphasis on the provision of K-12 dance instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state-approved post-baccalaureate teacher preparation program and permission of Department or Division.		Acad	LAB 12.0 9.0 0.0	Z
EFE261AC	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Dance Education I		Supervised student teacher practicum. Emphasis on the provision of K-12 dance instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district.		Acad	LAB 3.0 9.0 0.0	Z
EFE261AD	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Dance Education II		Supervised student teacher practicum. Emphasis on the provision of K-12 dance instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE261AC and a minimum of 25% successful completion of all designated required course work.		Acad	LAB 3.0 9.0 0.0	Z
EFE261AE	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Dance Education III		Supervised student teacher practicum. Emphasis on the provision of K-12 dance instruction to learners. Covers lesson plan development,	Prerequisites: Baccalaureate Degree and formal acceptance of a		Acad	LAB 3.0 9.0 0.0	Z

				classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE261AD and a minimum of 50% successful completion of all designated required course work.				
EFE261AF	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Dance Education IV		Supervised student teacher practicum. Emphasis on the provision of K-12 dance instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE261AE and a minimum of 75% successful completion of all designated required course work.		Acad	LAB 3.0 9.0 0.0	Z
EFE262	2009 Summer I	Student Teaching Lab K-12 - Drama		Supervised student teacher practicum. Emphasis on the provision of K-12 drama instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state-approved post-baccalaureate teacher preparation program and permission of Department or Division.		Acad	LAB 12.0 9.0 0.0	Z
EFE262AC	2009 Summer I	Intern Certificate Student Teaching		Supervised student teacher practicum. Emphasis on the provision of K-12 drama instruction to learners.	Prerequisites: Baccalaureate Degree and formal		Acad	LAB 3.0	Z

		Lab K-12 - Drama Education I		Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district.			9.0 0.0	
EFE262AD	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Drama Education II		Supervised student teacher practicum. Emphasis on the provision of K-12 drama instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE262AC and a minimum of 25% successful completion of all designated required course work.		Acad	LAB 3.0 9.0 0.0	Z
EFE262AE	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Drama Education III		Supervised student teacher practicum. Emphasis on the provision of K-12 drama instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE262AD and a minimum of 50% successful completion of all designated required course work.		Acad	LAB 3.0 9.0 0.0	Z

EFE262AF	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Drama Education IV		Supervised student teacher practicum. Emphasis on the provision of K-12 drama instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE262AE and a minimum of 75% successful completion of all designated required course work.		Acad	LAB 3.0 9.0 0.0	Z
EFE263	2009 Summer I	Student Teaching Lab K-12 - Music		Supervised student teacher practicum. Emphasis on the provision of K-12 music instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state-approved post-baccalaureate teacher preparation program and permission of Department or Division.		Acad	LAB 12.0 9.0 0.0	Z
EFE263AC	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Music Education I		Supervised student teacher practicum. Emphasis on the provision of K-12 music instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district.		Acad	LAB 3.0 9.0 0.0	Z
EFE263AD	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Music Education II		Supervised student teacher practicum. Emphasis on the provision of K-12 music instruction to learners. Covers lesson plan development,	Prerequisites: Baccalaureate Degree and formal acceptance of a		Acad	LAB 3.0 9.0 0.0	Z

				classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE263AC and a minimum of 25% successful completion of all designated required course work.				
EFE263AE	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Music Education III		Supervised student teacher practicum. Emphasis on the provision of K-12 music instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE263AD and a minimum of 50% successful completion of all designated required course work.		Acad	LAB 3.0 9.0 0.0	Z
EFE263AF	2009 Summer I	Intern Certificate Student Teaching Lab K-12 - Music Education IV		Supervised student teacher practicum. Emphasis on the provision of K-12 music instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a specified teacher prep two year program plan by an Arizona Department of Education approved college program and the partnering school district EFE263AE and a minimum of		Acad	LAB 3.0 9.0 0.0	Z

					75% successful completion of all designated required course work.				
EFE291	2015 Fall	Special Education: Mild-Moderate Student Teaching		Supervised student teaching. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and (a grade of C or better in EDU223AF and EDU293) and permission of Department or Division.		Acad	LAB 8.0 5.0 0.0	Z
EFE291AC	2015 Fall	Special Education: Mild-Moderate Student Teaching I		Supervised student teaching. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and (a grade of C or better in EDU223AF and EDU293) and permission of Department or Division.		Acad	LAB 2.0 6.0 0.0	Z
EFE291AD	2015 Fall	Special Education: Mild-Moderate Student Teaching II		Supervised student teaching. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and (a grade of C or better in EDU223AF and EDU293) and permission of Department or Division.		Acad	LAB 2.0 6.0 0.0	Z

EFE291AE	2015 Fall	Special Education: Mild-Moderate Student Teaching III		Supervised student teaching. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and (a grade of C or better in EDU223AF and EDU293) and permission of Department or Division.		Acad	LAB 2.0 6.0 0.0	Z
EFE291AF	2015 Fall	Special Education: Mild-Moderate Student Teaching IV		Supervised student teaching. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal admission to a state approved post-baccalaureate teacher preparation program and (a grade of C or better in EDU223AF and EDU293) and permission of Department or Division.		Acad	LAB 2.0 6.0 0.0	Z
EFE297AA	2011 Spring	Intern Certificate Student Teaching Lab - K-3 Part A		Supervised student teacher practicum in K-3 grade classroom. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep program plan by an Arizona Department of Education approved college program and the partnering school district.	Students fulfilling internship credits for certification through the Arizona Department of Education may choose to complete one of the following course sequencin	Acad	LAB 2.0 6.0 0.0	Z

						g for a total of four (4) credits: (EFE297A A and EFE297A B) or (EFE297A C, EFE297A D, EFE297A E, and EFE297A F).			
EFE297AB	2011 Spring	Intern Certificate Student Teaching Lab - K-3 Part B		Supervised student teacher practicum in K-3 grade classroom. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep plan by an Arizona Department of Education approved college program, the partnering school district, EFE297AA, and a minimum of 50% successful completion of course work.	Students fulfilling internship credits for certification through the Arizona Department of Education may choose to complete one of the following course sequencing for a total of four (4) credits: (EFE297A A and EFE297A B) or (EFE297A C, EFE297A D,	Acad	LAB 2.0 6.0 0.0	Z

						EFE297A E, and EFE297A F).			
EFE297AC	2011 Spring	Intern Certificate Student Teaching Lab - K-3 Level I		Supervised student teacher practicum in K-3 grade classroom. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep program plan by an Arizona Department of Education approved college program and the partnering school district.	Students fulfilling internship credits for certification through the Arizona Department of Education may choose to complete one of the following course sequencing for a total of four (4) credits: (EFE297A A and EFE297A B) or (EFE297A C, EFE297A D, EFE297A E, and EFE297A F).	Acad	LAB 1.0 3.0 0.0	Z
EFE297AD	2011 Spring	Intern Certificate Student Teaching Lab - K-3 Level II		Supervised student teacher practicum in K-3 grade classroom. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep plan by an Arizona Department of Education approved	Students fulfilling internship credits for certification through the Arizona	Acad	LAB 1.0 3.0 0.0	Z

				preparation, learner engagement, and learner outcome awareness.	college program, the partnering school district, EFE297AC, and a minimum of 25% successful completion of course work.	Department of Education may choose to complete one of the following course sequencing for a total of four (4) credits: (EFE297A A and EFE297A B) or (EFE297A C, EFE297A D, EFE297A E, and EFE297A F).			
EFE297AE	2011 Spring	Intern Certificate Student Teaching Lab - K-3 Level III		Supervised student teacher practicum in K-3 grade classroom. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep plan by an Arizona Department of Education approved college program, the partnering school district, EFE297AD, and a minimum of 50% successful completion of course work.	Students fulfilling internship credits for certification through the Arizona Department of Education may choose to complete one of the following course sequencing for a total of	Acad	LAB 1.0 3.0 0.0	Z

						four (4) credits: (EFE297A A and EFE297A B) or (EFE297A C, EFE297A D, EFE297A E, and EFE297A F).			
EFE297AF	2011 Spring	Intern Certificate Student Teaching Lab - K-3 Level IV		Supervised student teacher practicum in K-3 grade classroom. Emphasis on the provision of instruction to learners. Covers lesson plan development, classroom procedures, classroom management, and educator professionalism. Includes learner preparation, learner engagement, and learner outcome awareness.	Prerequisites: Baccalaureate Degree and formal acceptance of a teacher prep plan by an Arizona Department of Education approved college program, the partnering school district, EFE297AE, and a minimum of 75% successful completion of course work.	Students fulfilling internship credits for certification through the Arizona Department of Education may choose to complete one of the following course sequencing for a total of four (4) credits: (EFE297A A and EFE297A B) or (EFE297A C, EFE297A D, EFE297A E, and	Acad	LAB 1.0 3.0 0.0	Z

						EFE297A F).			
EHS100	2024 Fall	Aesthetics Essentials i		As students begin their training in Aesthetics, they will begin to develop and demonstrate proficiencies in effective client communication, interpersonal skills, and will learn how to deliver an effective skin care facial treatment and client pre and post consultations. Topics will also include sanitation, Arizona laws, client care, and facial care.	Prerequisites: Admission to the Aesthetics program, or Program Manager's approval.		CLK	184	
EHS105	2024 Fall	Aesthetics Essentials II		As students continue their training in Aesthetics, they will further develop and demonstrate proficiencies in effective client communication, interpersonal skills, and will learn how to deliver an effective skin care facial treatment and client pre and post consultations. Topics will also include sanitation, Arizona laws, client care, and facial care.	Prerequisites: Completion of EHS100 with a grade of 80% or better.		CLK	132	
EHS110	2024 Fall	Advanced Aesthetics		Theory and application of advanced skin care modalities, resurfacing, and cosmetic chemistry. Hair removal techniques, makeup application, and an introduction to body treatments are also included. Application of theory and skills through treatment services provided to the public. Focus on communication and documentation to create customized treatment plans and product recommendations for clients that follow all safety and infection control procedures in compliance with the Arizona Barbering and Cosmetology Board (BCB).	Prerequisites: EHS105 with a grade of 80% or Program Manager's approval.		CLK	180	
EHS115	2024 Fall	Aesthetics Mastery		Focus on theories and performance of comprehensive professional aesthetics treatments for the public including communication and documentation to create customized treatment plans and product recommendations for clients that follow all safety and infection control	Prerequisites: EHS110 with a grade of 80% or better, or Program Manager's approval.		CLK	104	

				procedures in compliance with the Arizona Barbering and Cosmetology Board (BCB). Overview of business planning and employment in the field including marketing, job search strategies, professional development, and self promotion. BCB licensure examination preparation.					
ELA111	2018 Fall	Construction Electricity I		Introduction to the electrical construction trade incorporating safety awareness, introductory concepts in electrical theory, math review, solving simple equations, ratios, percentages and proportions. Study of the National Electrical code (NEC), practical use of materials and tools of the electrical construction trade. Basic splicing, anchoring, and fusing procedures; basic conduit bending calculations and installations, introduction to blueprint reading for electricians, rigging and lifting techniques.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ELA112	2018 Fall	Construction Electricity II		Introduction to the fundamentals electricity, basic direct current (DC) theory through advanced DC theory, advanced conduit fabrication, bending applications and calculations. Practical applications for wiring devices and conduit bending.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ELA113	2018 Fall	Introduction to National Electrical Code		Development, content, structure, and definitions in the National Electrical Code (NEC). Application of the NEC for proper and safe electrical installations and wiring methods.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
ELA123	2018 Fall	Construction Electricity III		American labor history, parliamentary procedures. Electrical theory of alternating current systems pertaining to inductance, and capacitance; use of alternating current (AC) and direct current (DC) meters, rectifiers and capacitors.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ELA124	2018 Fall	Construction Electricity IV		Transformers principles and applications in regards to use, connection, installation and safety	Prerequisites: Registered apprenticeship status		Occ	L+L 6.0	T

				related to transformer principles and applications including requirements specified by the National Electrical Code (NEC). Filters and power quality for electrical systems, direct current generation, application of test instruments for power quality, instrumentation, insulation testing and voice-data-video. Blueprint reading for electricians, commercial drawings, specifications, and schedules.	or permission of the Apprenticeship Coordinator.			6.0 6.0	
ELA125	2018 Fall	National Electric Code I		National Electrical Code (NEC) related to branch circuits, feeders, services, devices, conductors, raceways and cable assemblies. Electrical safety incorporating Occupational Safety and Health Association (OSHA) requirements and National Fire Protection Association (NFPA) 70E guidelines.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
ELA235	2018 Fall	Advanced Construction Electricity I		Advanced industrial blueprint reading, lighting design, healthcare systems including the National Electrical Code (NEC) requirements. Motors and motor controls.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ELA236	2018 Fall	Advanced Construction Electricity II		Motor Controls, types of motor controls, components, motor control circuitry, and installations of motor control components and circuitry: Instrumentation and process controls, theory of process controls, installation, calibration, and troubleshooting of instruments and control circuitry.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ELA238	2018 Fall	National Electric Code II		National Electrical Code requirements for Grounding and bonding electrical installations. Continued study of electrical safety incorporating Occupational Safety and Health Association (OSHA) requirements and National Fire Protection Association (NFPA) 70E guidelines.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.		Occ	LAB 3.0 3.0 3.0	T
ELA246	2018 Fall	National Electric Code III		National Electrical Code (NEC) requirements for special occupancies, conditions, and equipment.	Prerequisites: Registered apprenticeship status		Occ	LAB 3.0	T

				Calculations for conductor ampacities, conductor fill specific branch circuits. Installation and NEC requirements for Photovoltaic (PV) Systems.	or permission of the Apprenticeship Coordinator.			3.0 3.0	
ELA247	2022 Fall	Advanced Construction Electricity III		Leadership and motivation techniques for the electrical industry, digital electronics, Boolean algebra and logic gates. Power quality for electrical systems, distributed generation, information technologies sites, uninterruptable power supplies, and fuel cells. Torque theory and applications. National Electrical Code (NEC) related to over current protective devices (OCPDs), types, sizing, and ratings. Tape rules, fault current calculations and ratings, motor branch circuits and circuit/transformer protection.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ELA248	2022 Fall	Advanced Construction Electricity IV		Introduction to fire alarm systems, requirements, devices, wiring methods and applicable codes; fire alarm blueprints and specifications. Cables, cabling systems, terminations, grounding and bonding. Telecommunications Industry Association/Electronic Industries Alliance (TIA/EIA) standards. Hazardous location introduction and history, area classification, protection techniques, equipment, wiring requirements, and special occupancies. National Electrical Code (NEC) updates, installation of emergency and standby systems over 600 volts, remote-control, signaling, and power-limited circuit, specific raceways and cable tray systems, in-floor, multi-outlet assemblies, changes and update to the NEC.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
ELC103	2017 Fall	Electrical/Mechanical Calculations		Fundamental calculations in arithmetic, algebra, trigonometry, descriptive geometry, economics, and probability. Application of theories and formulas to solve design, installation, maintenance, and troubleshooting	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				problems for industrial, commercial, and residential electrical and mechanical systems.					
ELC115	2024 Fall	Motors, Controls and Wiring Diagrams	FAC115	Principles of three-phase motors. Wye and delta wiring. Calculation of motor current draw. Sequence of operation, wiring diagram and electrical components associated with industrial equipment. Procedures for evaluating electrical problems. Safety stressed.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ELC119	2017 Fall	Concepts of Electricity and Electronics		Introduction to theory and principles of electric circuits, magnetism and electromagnetism including basic motors, transformers and generators. Use of basic measuring instruments. Overview of Ohm's and Kirchhoff's law and electronics in the modern world.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ELC120	2017 Fall	Solid State Fundamentals		Theory of operation of semi-conductor devices, component and system construction, operation, installation, and service. Specific and practical applications in relations to temperature, light, speed and pressure control as used in industry today. Includes amplifiers, power supplies, integrated circuits, alternating current (AC) and direct current (DC) drives, fiber optics, and safety.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ELC123	2018 Fall	Residential Electrical Wiring and Codes		Analysis and interpretation of residential drawings, local codes and specific sections of the National Electrical Code. Including needed materials derived from plans and specifications and the proper procedures for wiring a residence and other special locations. Areas of focus include circuits, conductors, switches, outlets, heating, security, and communication systems.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
ELC124	2017 Fall	Industrial Electrical Wiring and Codes		Industrial electrical power techniques of low, medium and high voltage systems. Selection of electrical distribution components, single and	Prerequisites: A grade of C or better in ELC123 or permission of		Occ	LEC 3.0 3.0 3.0	S

				three phase systems, one-line diagrams, motors, transformers, protective devices, power factor, demand factor, conductor selection, system planning, grounding and energy management.	Instructor or admission to Electric League of Arizona program.				
ELC125	2018 Fall	Commercial Electrical Wiring and Codes		Commercial electrical power distribution techniques of low voltage (under 600 volt) systems. Selection of electrical distribution components, single and three systems, one-line diagrams and conductor selection. System grounding, planning and over current protection.	Prerequisites: A grade of C or better in ELC123 or permission of Instructor or admission to Electric League of Arizona program.		Occ	L+L 3.0 3.0 3.0	T
ELC144	2018 Fall	Basic Automated Systems Using Programmable Controllers		Principles of automated control systems. Principles and application of programmable controllers, control functions, hardware, logic, programming, documentation, troubleshooting, start-up, maintenance and operation. Commercial and industrial control applications. Introduction to commercial programmable controllers.	Prerequisites: A grade of C or better in ELC120 or permission of Instructor or admission to Electric League of Arizona program.		Occ	L+L 3.0 3.0 3.0	T
ELC160	2018 Summer	Applied Electrical Codes I		Analysis of diagrams and application of current code interpretations. Includes local exceptions and practices. Review of the National Electrical Code (NEC) related to definitions, installations, wiring and protection, wiring methods, materials, and equipment.	Prerequisites: A grade of C or better in ELC119 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
ELC161	2018 Summer	Applied Electrical Codes II		National Electrical Code (NEC) requirements for hazardous locations, special use and occupancies. Commercial, industrial and service locations. Fiber optics, communications and other state-of-the-art applications. Local inspection practices and requirements.	Prerequisites: A grade of C or better in ELC160 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
ELC162	1995 Fall	Electrical Codes and Inspection I		Analysis of diagrams and application of current code interpretations. Includes local exceptions and practices	Prerequisites: A grade of C or better in (ELE100 and ELE101) or		Occ	LEC 3.0 3.0 3.0	S

					permission of Instructor.				
ELC164	2017 Fall	Grounding and Bonding		Electrical theory and calculation of electrical current. Grounding and bonding terminology including National Electric Code (NEC) Articles 250. Interpreting code requirements for grounding and bonding. Code requirements for field installation and sizing.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ELC210	2017 Fall	AC Machinery and DC Machinery		Principles and operation of AC (Alternating current) and DC (direct current) motors, generators, and alternators. Includes single-phase motors along with induction, synchronous, and wound-rotor types of three-phase motors. DC motors including shunt-field, series field, wound rotor, permanent magnet, stepper and brushless types.	Prerequisites: A grade of C or better in ELC119 or permission of Instructor or admission to Electric League of Arizona program.		Occ	LEC 3.0 3.0 3.0	S
ELC217	2018 Fall	Motor Controls		Electrical symbols, line diagrams and logic. Contacts and starters, control devices, reversing circuits and power distribution systems. Magnetism and magnetic solenoids, reduced voltage starters, and circuits. Hand tools and safety procedures.	Prerequisites: A grade of C or better in ELC119 or permission of Department or Division or admission to Electric League of Arizona program.		Occ	L+L 3.0 3.0 3.0	T
ELC218	2017 Fall	Variable Frequency Drives		Principles and operation of frequency controlled AC (Alternating current) motor drives, including current source inverters (CSI), variable voltage inverters (VVI) and pulse width modulated inverters (PWM). Heating, ventilation and air conditioning (HVAC) applications along with energy savings, motor pump sizing and torque load calculations.	Prerequisites: A grade of C or better in ELC120 or permission of Instructor or admission to Electric League of Arizona program.		Occ	LEC 3.0 3.0 3.0	S
ELC219	2018 Fall	Programmable Controllers		Principles and applications of programmable logic controls (PLC's). Numbering systems, control strategies, and ladder logic. Basic machine functions and operations to include programming, troubleshooting and maintenance. Application of PLC	Prerequisites: A grade of C or better in ELC/FAC/HVA105 and ELC/FAC115 and ELC119 or permission of Instructor.		Occ	L+L 4.0 6.0 6.0	T

				programming, operations and troubleshooting skills.					
ELC296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
ELC296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
ELC296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and	Prerequisites: Completion of at least		Occ	LAB 3.0	Z

				employers to accomplish an outcome related to the career objectives of the students.	twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.			20.0 0.0	
ELC296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 20.0 0.0	Z
ELC298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
ELC298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
ELC298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
ELE100	2018 Fall	Concepts of Electricity and Electronics		Principles of electric circuits, magnetism and electromagnetism including basic motors and generators. Use of basic measuring instruments. Includes an overview of electronics in the modern world	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
ELE101	2013 Spring	Beginning Algebra for Technology		Basic axioms of algebra, linear equations in one or two variables, operations on polynomials, rational expressions, simultaneous solutions of linear equations, laws of exponents.	Prerequisites: Score of 19 on Technical Mathematics placement test or a Grade of C or better in GTC107 or MAT082 or equivalent.		Occ	LEC 3.0 3.0 3.0	S

ELE105	2004 Fall	Algebra- Trigonometry for Technology		Topics from college algebra and trigonometry essential to the study of electronics; polynomials, exponential and logarithmic functions, complex numbers, and trigonometric functions and identities.	Prerequisites: A grade of C or better in either ELE101 or MAT090 or MAT091 or MAT092 or equivalent or score of 16 on Technical Algebra placement test.		Occ	LEC 5.0 5.0 5.0	S
ELE111	2020 Fall	Circuit Analysis I		Direct current (DC) and alternating current (AC) electric circuits. Ohm's law, Kirchoff's laws, series, parallel and series-parallel circuits, fundamentals of inductance and capacitance, and the transient behavior of circuits containing resistance and capacitance or resistance and inductance.	Prerequisites: None. Corequisites: MAT120, or MAT121, or MAT122, or equivalent.		Occ	L+L 4.0 6.0 6.0	T
ELE112	2018 Fall	Circuit Analysis II		Alternating current (AC) and direct current (DC) circuits containing resistance and reactance. Detailed coverage of AC/DC circuit parameters, including theorems, impedance matching, and resonance	Prerequisites: A grade of C or better in ELE111.		Occ	L+L 4.0 6.0 6.0	T
ELE121	2018 Fall	Solid-State Devices and Circuits I		Theory of operation of semiconductor diodes and transistors. Bipolar junction transistor biasing and load-line analysis. Alternating Current (AC) equivalent circuits applied to small signal amplifiers. Characteristics of large signal and power amplifiers	Prerequisites: A grade of C or better in ELE111.		Occ	L+L 4.0 6.0 6.0	T
ELE131	2020 Fall	Digital Logic and Circuits		Number systems, binary arithmetic, and Boolean algebra, combinational and sequential logic circuits, and memory elements.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
ELE161	2021 Spring	Custom Electric Guitar Fabrication		Offered to guitar or bass players, artists, woodworkers or anyone who wants to learn the specialized skills of a luthier or the art of electric guitar crafting, maintenance, and setup. Fabricate and integrate a complete guitar neck and body, and finish with a combination of paint, stain, and clear coats.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
ELE162	2021 Spring	Custom Acoustic Guitar Fabrication		Offered to guitar players, artists, woodworkers or anyone who wants to	Prerequisites: None.		Occ	L+L 3.0	T

				learn the specialized skills of a luthier or the art of acoustic guitar crafting, maintenance, and setup. Fabricate and integrate a complete guitar neck and body, and finish with a combination of paint, stain, and clear coats.				4.0 4.0	
ELE173	2018 Fall	Fabrication Techniques		Introduction to electronic assembly safety practices and procedures, hand tool, and measuring devices. Includes basic and special assembly tools, fastener installation and removal tools, precision measuring tools, fabrication tools, torque measuring instruments, Electrostatic Discharge (ESD) awareness and procedures, basic soldering/desoldering, prototype and troubleshooting.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
ELE181	2018 Fall	Computer Programming for Technology		Elementary computer programming techniques. Hands-on computer usage	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
ELE222	2018 Fall	Solid-State Devices and Circuits II		Theory and application of differential and operational amplifiers. Power supplies and regulators; special devices and circuits.	Prerequisites: A grade of C or better in ELE112 and ELE121.		Occ	L+L 4.0 6.0 6.0	T
ELE241	2018 Fall	Microprocessor Concepts		Architectures of selected microprocessors. Presentation of machine and assembly language programming	Prerequisites: A grade of C or better in ELE131.		Occ	L+L 4.0 6.0 6.0	T
ELE243	2021 Fall	Microprocessor Applications	ELT243	Presents the microprocessor in computing and control applications. System hardware and software used to control the microprocessor system to perform input/output operations.	Prerequisites: A grade of C or better in ELE241.		Occ	L+L 3.0 5.0 5.0	T
ELE245	2019 Fall	Advanced Microprocessors and Systems		Microprocessors and systems, in the expanding Internet of Things. Legacy, current, and future wired and wireless interfaces and protocols. Connecting modern software environments to real-world electronic hardware.	Prerequisites: A grade of C or better in (ELE131 and ELE181), or ELE241, or permission of Instructor.	ELE245 may be repeated for a total of nine (9) credit hours.	Occ	L+L 3.0 3.0 3.0	T
ELE251	2018 Fall	Electronic Measurements		Application and operation of common electronic and electrical test instruments including: oscilloscopes,	Prerequisites: A grade of C or better in ELE121.		Occ	L+L 3.0	T

				analog and digital multimeters, digital counters and signal sources. Transducers, amplifiers, and filters, as they apply to instrumentation systems. Laboratory reports and documentation are emphasized				5.0 5.0	
ELE261	2018 Fall	Communication Systems		Communication systems. Amplitude modulation (AM), frequency modulation (FM), single-sideband (SSB), radio receivers, pulse systems, radiation, antennas and wave propagation.	Prerequisites: A grade of C or better in ELE121 and ELE131. Corequisites: ELE222.		Occ	L+L 4.0 6.0 6.0	T
ELE263	2018 Fall	Digital Data Communications		Overview of modern telephone system. Telephone switching and modulation techniques. Familiarization with AM(amplitude modulation) and FM(frequency modulation) circuits. Operation of asynchronous and synchronous modems	Prerequisites: A grade of C or better in ELE121 and ELE241.		Occ	L+L 4.0 6.0 6.0	T
ELN100	2011 Spring	Foundations of eLearning Design for K-12		Overview of eLearning design foundations for K-12 environment. Includes the history, characteristics, and theories of eLearning. Principles and models of instruction design as well as eLearning technologies and course management systems covered.	Prerequisites: Must hold a Career and Technical Education (CTE), provisional or standard elementary, secondary or special education teaching certificate, or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
ELN103	2011 Spring	K-12 eLearning Technology and Media		Overview of technology and media used in K-12 eLearning environments. Covers types of media, learning settings, instructional strategies, and visual principles as well as current and future trends. Usage of audio and video technology included.	Prerequisites: Must hold a Career and Technical Education (CTE), provisional or standard elementary, secondary or special education teaching certificate, or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
ELN105	2011 Spring	Classroom Management in K- 12 eLearning		Procedures for management of the eLearning classroom. Emphasis on creating a supportive and engaging active learning environment for the	Prerequisites: Must hold a Career and Technical Education (CTE), provisional or		Acad	LEC 3.0 3.0 3.0	S

				distance learner. Covers characteristics of the distance learning student as well as procedures for creating a collaborative, integrated, and supportive learning environment.	standard elementary, secondary or special education teaching certificate, or permission of Department or Division.				
ELN106	2011 Spring	Discipline and Behavior in K-12 eLearning		Overview of discipline and behavior issues in the K-12 eLearning environment. Includes classroom discipline theories and approaches to discipline. Also covers formalization of a personal system of discipline.	Prerequisites: Must hold a Career and Technical Education (CTE), provisional or standard elementary, secondary or special education teaching certificate, or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
ELN107	2011 Spring	Parent Communication and Involvement in K-12 eLearning		Procedures for involving parents in K-12 eLearning. Includes law and public policy relating to compliance, student advocacy, and parental rights. Also covers parent-teacher communication issues as well as online education family involvement models.	Prerequisites: Must hold a Career and Technical Education (CTE), provisional or standard elementary, secondary or special education teaching certificate, or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
ELN108	2011 Spring	Legal Issues in K-12 eLearning		Overview of legal issues and regulations in an online K-12 classroom. Intellectual property, privacy, Internet security, and educational institution policies covered. Includes the Family Educational Rights and Privacy Act (FERPA) and Individuals with Disabilities Act (IDEA)	Prerequisites: Must hold a Career and Technical Education (CTE), provisional or standard elementary, secondary or special education teaching certificate, or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
ELN109	2011 Spring	Engaging K-12 eLearners		Overview of engaging K-12 learners in an eLearning environment. Phases of eLearning and eLearning activities covered. Tool usage and assessment emphasized.	Prerequisites: Must hold a Career and Technical Education (CTE), provisional or standard elementary, secondary or special		Acad	LEC 3.0 3.0 3.0	S

					education teaching certificate, or permission of Department or Division.				
ELN111	2011 Spring	K-12 eLearning Environments		Introduction to eLearning environments for K-12 teachers. Synchronous and asynchronous environments as well as online collaboration covered with an emphasis on considerations for K-12 students. Course management systems for K-12 learning environments also included.	Prerequisites: Must hold a Career and Technical Education (CTE), provisional or standard elementary, secondary or special education teaching certificate, or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
ELN112	2011 Spring	Methods of Building and Facilitating eLearning: 9-12		Methods for building and facilitating eLearning for 9-12 students. Includes course design principles and methods as well as copyright and intellectual property issues. Also covers student activities facilitation, assessment, and online classroom management concerns.	Prerequisites: Must hold a Career and Technical Education (CTE), provisional or standard elementary, secondary or special education teaching certificate, or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
ELN113	2011 Spring	Methods of Building and Facilitating eLearning: K-8		Methods for building and facilitating eLearning for K-8 students. Includes course design principles and methods as well as copyright and intellectual property issues. Also covers student activities facilitation, assessment, and online classroom management concerns. K-8 learner special considerations also included.	Prerequisites: Must hold a Career and Technical Education (CTE), provisional or standard elementary, secondary or special education teaching certificate, or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
ELN114	2011 Spring	Building Community with Online Learners		Procedures for building a community in an eLearning environment. Includes personalization of learning, collaborative learning, and transformative learning. Foundations for building an online community and technology usage also covered	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

ELN118	2011 Spring	Motivation and the Online Learner		Overview of motivation in the online classroom. Includes motivation theories, self-esteem vs. self-efficacy, and learner expectations as well as motivational problems and benefits of a motivational online learning environment. Facilitator's role, grouping of students, and assessment creation as motivation tools also covered	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ELN121	2011 Spring	Evaluating K-12 eLearning		Procedures for evaluating K-12 eLearning. Includes procedures for creating and integrating various types of student and course evaluation into the eLearning process.	Prerequisites: Must hold a Career and Technical Education (CTE), provisional or standard elementary, secondary or special education teaching certificate, or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
ELN122	2011 Spring	K-12 eLearning Assessment Creation		Procedures for creating assessments for K-12 eLearning environment. Emphasis on importance of and plans to measure learning as well as implications for K-12 eLearners. Covers learning outcomes, performance objectives, types of assessments. Online student interaction and collaboration included.	Prerequisites: Must hold a Career and Technical Education (CTE), provisional or standard elementary, secondary or special education teaching certificate, or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
ELN290AA	2018 Fall	eLearning Design Internship		eLearning design work experience in industry or education. Eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division.	ELN290A A may be repeated for a total of three (3) credit hours	Acad	L+L 1.0 1.0 1.0	T
ELN290AB	2018 Fall	eLearning Design Internship		eLearning design work experience in industry or education. Eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division.	ELN290A B may be repeated for a total of four (4) credit hours.	Acad	L+L 2.0 2.0 2.0	T

ELN290AC	2018 Fall	eLearning Design Internship		eLearning design work experience in industry or education. Eighty (80) hours of designated work per credit	Prerequisites: Permission of Department or Division.		Acad	L+L 3.0 3.0 3.0	T
ELR131	2023 Fall	Electrical Systems		Electricity related to residential and light commercial applications, to include common electrical components, alternating current (AC) and direct current (DC) circuits, and electrical safety. Provides an introduction to reading, interpreting, and creating wiring diagrams and the application of electrical power. Operation and use of specific meters, tools, and an introduction to the National Electrical Code (NEC).	Prerequisites: None.		CLK	140	
ELR132	2023 Fall	Distribution Panels, Wiring, and Circuit Protection in Electrical Systems		Course covers construction drawings and code related to conductors and cables (types, ratings), residential and commercial applications, wire sizes, utilities, meters, disconnects, breakers, grounding and bonding, rough-in wiring and circuit safety protection.	Prerequisites: None.		CLK	140	
ELR133	2020 Fall 1	Conduit, Raceways, and Termination in Electrical Systems		Course covers termination and the implementation of electricity in a facility. Considers topics related to box capacities, raceways, conduit sizes, termination practices, wire trays, and finish wiring.	Prerequisites: None.		CLK	120	
ELR133DC	2023 Fall	Conduit, Raceways, and Termination in Electrical Systems		Course covers termination and the implementation of electricity in a facility. Considers topics related to box capacities, raceways, conduit sizes, termination practices, wire trays, and finish wiring.	Prerequisites: None.		CLK	140	
ELR234	2020 Fall 1	Electric Power Distribution		Course covers the theory and applications of distribution of power from utilities to residential and commercial sites, including transformers and commercial electrical distribution equipment and services. Also includes safety, codes, and interpretation of construction drawings and specifications.	Prerequisites: None.		CLK	81	

ELR234DC	2023 Fall	Electric Power Distribution		Course covers the theory and applications of distribution of power from utilities to residential and commercial sites, including transformers and commercial electrical distribution equipment and services. Also includes safety, codes, and interpretation of construction drawings and specifications.	Prerequisites: None.		CLK	70	
ELR235	2020 Fall 1	Motors: Theory and Application		Course covers motor and motor controls in electricity. Explains how to select and install relays and troubleshoot control circuits. Distinctions between alternating current (AC) and direct current (DC) motors, motor speed control, design and operation characteristics, and connections and terminal markings	Prerequisites: None.		CLK	120	
ELR235DC	2023 Fall	Motors: Theory and Application		Course covers motor and motor controls in electricity. Explains how to select and install relays and troubleshoot control circuits. Distinctions between alternating current (AC) and direct current (DC) motors, motor speed control, design and operation characteristics, and connections and terminal markings	Prerequisites: None.		CLK	70	
ELR236	2020 Fall 1	Industrial Wiring Applications		Course covers a broad variety of electrical wiring applications, including healthcare facility, heating, ventilation, and air conditioning (HVAC), standby, emergency, and fire alarm systems.	Prerequisites: None.		CLK	81	
ELR236DC	2023 Fall	Industrial Wiring Applications		Course covers a broad variety of electrical wiring applications, including healthcare facility, heating, ventilation, and air conditioning (HVAC), standby, emergency, and fire alarm systems.	Prerequisites: None.		CLK	70	
ELT100	1993 Spring	Survey of Electronics		An introduction to the field of electronics for those who may not intend to specialize in electronics. Essentially nonmathematical in nature; includes familiarization with a wide range of electronic components. Application to electronic systems, such as radio transmitters and receivers - both AM(amplitude	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				modulation) and FM(frequency modulation), television transmitters and receivers, logic control, and computers. Application also to automotive electronics					
ELT101	1995 Fall	Mathematics for Electronics I		Basic principles of Algebra with applications to the analysis of electronic circuits. Emphasis on the use of the calculator for conversions and DC(direct current) circuit problems	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
ELT102	1995 Fall	Mathematics for Electronics II		The study of simultaneous equations, quadratic equations, trigonometric relationships, periodic functions and logarithms as applied to AC(alternating current) circuit analysis. Application of the scientific calculator to technical problem solving in electronics	Prerequisites: A grade of C or better in ELT101 or equivalent.		Occ	LEC 3.0 3.0 3.0	S
ELT113	2018 Fall	Basic Electronics		Direct and alternating current electrical circuits. Theory and practical lab experience, using the appropriate test equipment and computer solutions. Ohm's Law, Kirchhoff's Laws, and various network theorems applied to the study and analysis of series, parallel, and series-parallel circuit configurations. Includes complex algebra, impedance, frequency response, and resonance.	Prerequisites: A grade of C or better in ELT102 or Corequisites: ELT102 or equivalent.		Occ	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
ELT131	2020 Summer	Digital and Logic Circuits		Digital concepts and fundamentals, number systems and codes, Boolean algebra and combinational logic, logic reduction techniques, and logic hardware. Memories and programmable logic arrays. Hands-on hardware and computer-aided logic design experiments.	Prerequisites: A grade of C or better in ELT113, or ELC119, or permission of Instructor.		Occ	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
ELT195	2018 Fall	Solid State Electronics		Characteristics and use of solid state devices in practical circuit applications. Circuit analysis techniques and computer simulations. Includes, diodes, transistors, four-layer devices, operational amplifiers, and interfacing devices	Prerequisites: A grade of C or better in ELT113 or permission of Department or Division.		Occ	LEC 4.0 3.0 3.0 LAB 0.0	T

								3.0 3.0	
ELT243	2021 Fall	Microprocessor Applications	ELE243	Presents the microprocessor in computing and control applications. System hardware and software used to control the microprocessor system to perform input/output operations.	Prerequisites: A grade of C or better in ELE241.		Occ	L+L 3.0 5.0 5.0	T
ELT251	2020 Summer	Electronic Instrumentation		Electronic instruments and their usage in measuring and analyzing electronic circuits. Includes both analog and digital meters, oscilloscopes, and digital logic analyzers. Covers automatic test equipment, various transducers, and reliability requirements.	Prerequisites: A grade of C or better in ELT195, or ELC120, or permission of Department or Division.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
ELT296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
ELT296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job		Occ	LAB 2.0 10.0 0.0	Z

					may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
ELT296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
ELT296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be		Occ	LAB 4.0 20.0 0.0	Z

					concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
ELT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
ELT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
ELT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
EMC101	2023 Fall	CPR/Basic Cardiac Life Support		Designed to train students in the skills of cardiopulmonary resuscitation (CPR) to include mouth-to-mouth,	Prerequisites: Admission into the Emergency Medical	To receive an American	CLK	6	

				mouth-to-mask, cardiac compression, stabilization of adult, infant, and child victims with airway obstruction, respiratory, and cardiac arrest.	Technology program. Successful completion of RDG100 or higher or appropriate reading placement into CRE101.	Heart Association (AHA) Basic Life Support (BLS) course completion card and continue in the EMT program, students in the course must pass both the skills and written exams.			
EMC104	2023 Fall	Basic Emergency Medical Technology		Designed as the Emergency Medical Technician (EMT) lecture and lab to prepare students for scope of practice and standard of care with comprehensive assessment, diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical and trauma emergencies and non-emergencies. Scenario-based learning applied to the techniques of emergency medical care is in accordance with national and state curriculum. Students will participate in the simulated EMT practicum on campus, which demonstrates the skills, knowledge, and abilities learned in the lecture and lab.	Prerequisites: EMC101 or with Program Manager approval.		CLK	214	
EMC105	2022 Fall	Hazardous Materials Awareness and Operations		Basic methods of recognition and identification based upon the chemical and physical properties of hazardous materials; basic safety procedures when utilizing specific types of protective clothing and	Prerequisites: None.		CLK	40	

				equipment; basic tactical information relating to scene management. Satisfies minimum standards for certification testing set forth by the current ProBoard and/or Arizona State Training and Certifying Authority.					
EMC108	2021 Fall 1	Emergency Medical Services and Fire Preparatory Academy		This course is designed specifically for individuals seeking a career in the fire-medical service and addresses foundational emergency medical technology, hazardous materials, and firefighting content material, as well as meeting two of the prerequisites for the Fire Department Operations course also known as the "Fire Academy" (FSC102). These two prerequisites are Emergency Medical Technology (EMT/FSC104) and Hazardous Materials (FSC105). Upon successful completion of the course, the participant will be eligible to sit for the EMT and Hazardous Materials (Haz-Mat) certification examinations. The course meets current United States Department of Transportation (USDOT) national standard education guidelines for emergency medical technicians. Course teaches techniques of emergency medical care in accordance with national and state curriculum. Study of the human body, patient assessment, treatment of medically or traumatically compromised patients, special hazards, medical operations, intravenous (IV) monitoring, patient-assisted medication administration, automated external defibrillators (AEDs), and blood-glucose monitoring. The course meets the current Hazardous Materials First Responder certification requirements for the Arizona Center for Fire Service Excellence. The course will cover basic methods of recognition and	Prerequisites: Admission into the Emergency Medical Services and Fire Preparatory Academy program. Successful completion of RDG100 or higher or appropriate reading placement into CRE101.		CLK	300	

				identification based upon the chemical and physical properties of hazardous materials, basic safety procedures when utilizing specific types of protective clothing and equipment, and basic tactical information relating to scene management. Confined space operations in accordance with the National Fire Protection Agency.					
EMC110	2022 Fall	Wildland Firefighter		Basic-level course for individuals with little or no experience in the wildland environment. Preparation for performing as a beginning-level wildland firefighter with an organized fire department engine or hand crew. Satisfies minimum standards for certification testing set forth by the National Wildland Coordinating Group (NWCG).	Prerequisites: None.		CLK	50	
EMT101	2020 Fall	Basic Life Support/Cardiopul monary Resuscitation (CPR) for Health Care Providers		Designed to provide the allied healthcare provider with the knowledge and skills to perform Basic Life Support (BLS) according to current guidelines for emergency cardiovascular care (ECC).	Prerequisites: None.	EMT101 may be repeated for credit.	Occ	L+L 0.5 0.5 0.5	T
EMT101AB	2018 Fall	Basic Life Support/Cardiopul monary Resuscitation (CPR) Practicum for Health Care Providers		Designed to assess the allied healthcare provider in the skills of Basic Life Support (BLS) according to current guidelines for emergency cardiovascular care (ECC).	Prerequisites: Successful completion of Healthcare Provider CPR AED Online Part 1 course from an American Heart Association (AHA) certified program.	EMT101A B may be repeated for credit.	Occ	L+L 0.25 0.25 0.25	T
EMT102AB	2018 Fall	Emergency Medical Responder		A comprehensive course to train a lay person to provide care for patients suffering sudden illness or injury. For members of law enforcement agencies, industry, and the private sector.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
EMT104	2024 Fall	Emergency Medical Technology		Designed as the Emergency Medical Technician (EMT) lecture to prepare students for scope of practice and standard of care with comprehensive assessment, diagnostic technology,	Prerequisites: (A grade of C or better in EMT101, or current validation in Basic Life Support Health	EMT104 students must meet National Registry	Occ	LEC 10.0 10.0 10.0	S

				patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical and trauma emergencies and non-emergencies.	Care Provider/Professional Rescuer) and (Accuplacer: 74 or higher, or Next Gen Accuplacer 249 or higher, or Asset 42 or higher, or Compass 83 or higher, or EDReady Critical Reading & Thinking 90 or higher, OR High School GPA 3.0 or higher, or Associate's Degree or higher). Corequisites: EMT104AB.	of EMT requirements for certification. Additional information available at nremt.org EMT104 may be repeated for credit. Repeats 99.0 99.0			
EMT104AA	2020 Fall	Practical Skills Testing		Manipulative skills testing of specific skills identified by the scope of practice for EMT Basic Students. Successful completion qualifies the student for EMT Basic Written Exam for National Certification.	Prerequisites: None. Corequisites: EMT104.		Occ	LAB 0.5 0.5 0.5	T
EMT104AB	2021 Spring	Applied Practical Studies for Emergency Medical Technology		Simulation of actual emergency responses, with practical application of techniques and skills covered in EMT curricula. Scenario based learning applied to the techniques of emergency medical care in accordance with national and state curriculum. Practical application of anatomy, physiology, patient assessment, and treatment of medically or traumatically compromised patients, special hazards and medical operations. Also includes patient-assisted medication administration, semi-automatic external defibrillator and blood glucose monitoring. Students operate in outside, scenario based environments.	Prerequisites: None. Corequisites: EMT104.	EMT104A B may be repeated for credit.	Occ	LAB 0.5 0.5 0.5	T
EMT104LL	2020 Fall	Emergency Medical		Designed as the simulated Emergency Medical Technician (EMT) practicum in which the student	Prerequisites: A grade of C or better in EMT104 or	EMT104L L may be repeated	Occ	LAB 2.0	T

		Technology Practicum		synthesizes standard of care and scope of practice with comprehensive assessment and diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical and trauma emergencies. Provides scenario based learning applied to the techniques of emergency medical care in accordance with national and state curriculum.	permission of Instructor or Corequisites: EMT104.	for credit. Students must meet National Registry of EMT requirements for certification. Additional information available at nremt.org .		3.5 3.5	
EMT106	2018 Fall	Ambulance Operations		Practical application of rules and regulations governing care and transport of patient. Inventory, methods of disinfection, and charge procedures covered. Practical and defensive driving techniques and maintenance of the ambulance demonstrated and practiced, according to the U.S. Department of Transportation (DOT) National Highway Traffic Safety Administration (NHTSA).	Prerequisites: EMT at any level of certification.		Occ	L+L 2.0 2.0 2.0	T
EMT108	2018 Fall	Tactical Safety and Street Survival for EMTs		Principles of response to emergencies in potentially dangerous situations. Emphasis on recognizing and responding to potentially violent situations, including active crime scenes and domestic terrorism. Emphasis on personal protection, de-escalation, communication skills, defensive tactics, and interaction with local and national public safety and law enforcement professionals.	Prerequisites: Healthcare provider certification or licensure or police officer with POST certification. Level 1 DPS fingerprint clearance card or permission of Department or Division.		Occ	L+L 3.0 3.0 3.0	T
EMT116	2018 Fall	Emergency Medical Communications (EMD)		Designed to educate and train individuals as the emergency link among the community, health care providers, and law enforcement agencies. Comprehensive program to educate and train in procedures of communications, interrogation,	Prerequisites: A grade of C or better in EMT101 or Corequisites: EMT101 or any current American Red Cross or CPR		Occ	L+L 1.5 1.8 1.8	T

				assessment, and deployment. Includes interactive computer lab and scheduled observation with assignment at a dispatch center.	for the Professional Rescuer or American Heart Association Basic Life Support Health Care Provider validation.				
EMT120	1993 Spring	Spanish For Emergency-Care Providers		Participative course for prehospital and other emergency-care providers. Vocabulary, pronunciations, voice inflections, phrases, conversational terms, and methods of interviewing the ill or injured victim. Cultural information to facilitate approach and interaction with the victim, family, and/or significant other. Documentation of the interview content on the prehospital encounter form.	Prerequisites: Certified EMT or licensed medical personnel.		Occ	LEC 1.0 1.0 1.0	S
EMT165	2018 Fall	Pediatric Education for Prehospital Providers: Basic		An interactive, scenario-based course designed for Basic EMTs (Emergency medical technicians) who are not yet practicing in the field. Enables these EMTs to perform a rapid assessment of sick and injured children in a variety of different circumstances. Includes use of pediatric assessment triangle, developmental differences, injury prevention, basic airway management techniques, recognition of medical emergencies such as pediatric trauma, mechanism of injury, submersion events, children with special health care needs, abuse and neglect, child and family interactions, use of specialized equipment, and special issues in pediatric transportation. Treatment to children is in accordance with recommendations of the American Academy of Pediatrics.	Prerequisites: A grade of C or better in EMT/FSC104 or permission of Instructor.		Occ	L+L 2.0 2.87 2.87	T
EMT200	2018 Fall	Refresher Course for Certified Emergency Medical Technicians		Designed to meet National and Arizona Department of Health Services (A-DHS) recertification for EMTs. Enhances the knowledge base of the Emergency Medical Technician	Prerequisites: Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer or	EMT200 may be repeated for credit.	Occ	L+L 2.0 2.7 2.7	T

				(EMT) and reinforces basic skills competencies.	permission of Instructor.				
EMT200AA	2012 Fall	EMT Certification Renewal Challenge		Designed to contribute to Arizona Department of Health Services (A-DHS) Bureau of Emergency Medical Services (B-EMS) recertification requirements for Emergency Medical Technician (EMT) according to the U.S. Department of Transportation (DOT) EMT National Curriculum and the Arizona EMT Refresher Curriculum Guidelines.	Prerequisites: Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer or proof of current registry with the National Registry of Emergency Medical Technicians (NREMT).		Occ	LEC 0.6 0.6 0.6	S
EMT200AB	2004 Fall	EMT-Basic Certification Expanded Refresher Challenge		Designed to contribute to Arizona Department of Health Services (A-DHS) Bureau of Emergency Medical Services (B-EMS) recertification requirements for Emergency Medical Technician Basic (EMTB) according to the U.S. Department of Transportation (DOT) EMT-Basic National Curriculum and the Arizona EMT Basic Refresher Curriculum Guidelines.	Prerequisites: Current Basic Life Support American Heart Association Healthcare Provider CPR or equivalent and current EMT Basic certification in the state of Arizona Must be currently functioning as an EMT Basic.		Occ	LEC 1.0 1.0 1.0	S
EMT201	2018 Fall	Interactive Basic EMT Refresher		Designed to contribute to Arizona Department of Health Services recertification requirements for Emergency Medical Technicians (EMT) according to the US Department of Transportation (DOT) EMT-Basic National Curriculum and the Arizona Basic EMT Refresher Curriculum Guidelines. Enhances the knowledge base of the EMT. Updates a wide variety of subjects including respiratory and cardiac emergencies, and interaction with advanced life support providers	(Current EMT Basic certification in the state of Arizona or proof of current registry with the National Registry of Emergency Medical Technicians [NREMT]) and validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer.		Occ	L+L 1.0 2.2 2.2	T
EMT215	1994 Spring	Stress and Emergency Services Professionals		Participative course designed to familiarize students with differences which exist in the socioeconomic, cultural, organizational, and technologic environments and the distress that can occur to emergency-care providers functioning in those	Prerequisites: Currently employed as prehospital-care provider or registered nurse working in the prehospital setting.		Occ	LEC 3.0 3.0 3.0	S

				arenas. Physiologic, psychologic and behavioral manifestations of distress as it relates to emergency responders. Explores distress management options with emphasis on individual techniques and organizational programs.					
EMT230	2018 Fall	Advanced Concepts for EMTs		Designed to meet Arizona Department of Health Services recertification requirements for EMTs. Enhances the knowledge base of the Emergency Medical Technician (EMT) and incorporates new information into daily practice. Updates a wide variety of subjects including medical and trauma emergencies, cardiac life support, interaction with advanced life support providers, and emergency scene management	Current EMT certification in the state of Arizona.		Occ	L+L 1.5 1.5 1.5	T
EMT238	2004 Fall	Vehicular Extrication and Patient Stabilization	FSC238	Participative course designed for the Emergency Medical Technicians (EMT). Incorporates new knowledge and skills necessary to access, extricate, and care for victims of crash incidents. Provides exposure to scene management, including size-up, disentanglement, victim stabilization for single and multi-victim situations, hazardous materials incidents, integration of local emergency medical services (EMS) for patient assessment and management, and standard operating procedures to selected victim scenarios	Basic EMT certification current enrollment in an EMT-Basic program nurse with emergency department experience or law enforcement personnel or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
EMT245	2018 Fall	Trauma Management I		Designed to instruct prehospital care personnel in the critical skills necessary to manage the trauma victim and the emergency scene through the Incident Command System (ICS). Enhances basic emergency medical technology (EMT) skills by focusing on emergency care interventions. Provides exposure to victim assessment, initial treatment, resuscitative techniques, victim	Basic EMT certification or nurse with emergency room experience or permission of Department or Division.		Occ	L+L 2.0 3.5 3.5	T

				stabilization, transportation of the victim to an emergency care facility, and documentation					
EMT258	2023 Fall	Victimology and Crisis Management in Public Safety	AJS/FSC258	Victimology, the criminal justice system, techniques of crisis intervention and management, and the importance of a multicultural and global perspective. Includes violent crimes, sexual assault, family violence, post-traumatic stress disorder, the role of substance abuse, developing effective coping skills of victims and responders, appropriate community resources, and the cultural responsiveness of the justice system.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
EMT260	2018 Fall	Advanced Airway Management for EMTs		Designed to instruct emergency care personnel in the critical skills necessary to establish and maintain an airway of the traumatized or medically compromised patient. Airway skills include oxygen therapy with all adjuncts, administration of pharmaceuticals via the endotracheal (ET)/pharyngeal tracheal lumen airway (PTLA), management of the airway as a route for medications, and invasive airway procedures. Content concurrent with Department of Transportation Guidelines and the American College of Surgeons Division on Trauma Standards of Care.	Prerequisites: Certified EMT or licensed registered nurse with emergency department experience; EMT or emergency department licensed registered nurse with Medical Control physician supervision according to Arizona Department of Health Services (A-DHS) Bureau of Emergency Medical Services (B-EMS).		Occ	L+L 2.0 2.0 2.0	T
EMT264	2018 Fall	Vascular Access for EMTs		Includes review of anatomy of the circulatory system. Skills include peripheral intravenous cannulation techniques, fluid resuscitation, obtaining venous blood samples for laboratory analysis, infection control techniques for the safety of self and victim, and complications of intravenous cannulation; each and all with medical control. Content concurrent with American College of Surgeons Committee on Trauma, Standards of Care	(EMT-Basic or registered nurse with emergency department experience or licensed physician or physician assistant) or permission of Instructor.		Occ	L+L 1.0 1.0 1.0	T

EMT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
EMT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
EMT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
ENG100AA	2012 Fall	American-English Spelling System		American-English spelling system rules, mnemonic devices.	Prerequisites: Appropriate English placement test score, or a grade of C or better in ENG091 or ESL097 or permission of Instructor.		Acad	LEC 1.0 1.0 1.0	S
ENG100AB	2012 Fall	Vocabulary Development		Latin and Greek derivatives, development of competency and	Prerequisites: Appropriate English		Acad	LEC 1.0	S

				discrimination in word choice, specialized vocabulary.	placement test score or a grade of C or better in ENG091 or ESL097 or permission of Instructor.			1.0 1.0	
ENG100AC	2012 Fall	The Mechanics of Written English		Review of the mechanics of written English, including punctuation, arbitrary marks and usages, capitalization, agreement, tense, and sentence patterns.	Prerequisites: Appropriate English placement test score or a grade of C or better in ENG091 or ESL097 or permission of Instructor.		Acad	LEC 1.0 1.0 1.0	S
ENG100AD	2012 Fall	Grammar and Usage		The social aspects of grammar and usage, including appropriate levels of formal and informal language.	Prerequisites: Appropriate English placement test score or a grade of C or better in ENG091 or ESL097 or permission of Instructor.		Acad	LEC 1.0 1.0 1.0	S
ENG100AE	2012 Fall	Composition Skills		Developing generative and evaluative writing skills using selected software programs.	Prerequisites: Appropriate English placement test score or a grade of C or better in ENG091 or ESL097 or permission of Instructor.		Acad	LEC 1.0 1.0 1.0	S
ENG101	2023 Fall	First-Year Composition		Emphasis on rhetoric and composition with a focus on expository writing and understanding writing as a process. Establishing effective college-level writing strategies through four or more writing projects comprising at least 3,000 words in total.	Prerequisites: Appropriate writing placement test score, or (a grade of C or better in ENG091, or ESL097, or WAC101), or (a grade of B or better in ALT100), or (a grade of C in ALT100 and Corequisites: ENG101LL, or ENG107LL, or WAC101, or ENG100A+), or (a grade of C or better		Acad	LEC 3.0 3.0 3.0	S

					in ESL202 and Corequisites: ENG101LL, or ENG107LL, or WAC101, or ENG100A+).				
ENG101LL	2023 Fall	First-Year Composition Lab		Supplemental instruction for composition courses. Focus on developing effective writing processes to address a range of rhetorical situations.	Prerequisites: Appropriate writing placement test score, or (a grade of C or better in ESL202. Corequisites: ENG101, or ENG107).		Acad	LAB 1.0 3.0 3.0	T
ENG102	2011 Fall	First-Year Composition		Emphasis on rhetoric and composition with a focus on persuasive, research-based writing and understanding writing as a process. Developing advanced college-level writing strategies through three or more writing projects comprising at least 4,000 words in total.	Prerequisites: A grade of C or better in ENG101.	Course Attribute(s): General Education Designatio n: First- Year Compositi on - [FYC] Arizona Shared Unique Number SUN#: ENG 1102	Acad	LEC 3.0 3.0 3.0	S
ENG107	2023 Fall	First-Year Composition for ESL		Equivalent of ENG101 for students of English as a Second Language (ESL). Emphasis on rhetoric and composition with a focus on expository writing and understanding writing as a process. Establishing effective college-level writing strategies through four or more writing projects comprising at least 3,000 words in total.	Prerequisites: Appropriate writing placement test score, or (a grade of C or better in ENG091, or ESL097, or WAC101), or (a grade of B or better in ALT100), or (a grade of C in ALT100 and Corequisites: ENG101LL, or ENG107LL, or WAC101, or ENG100A+), or (a grade of C or better in ESL202 and		Acad	LEC 3.0 3.0 3.0	S

					Corequisites: ENG101LL, or ENG107LL, or WAC101, or ENG100A+).				
ENG107LL	2023 Fall	First-Year Composition Lab for ESL		Equivalent of ENG101LL for students of English as a Second Language (ESL). Supplemental instruction for composition courses. Focus on developing effective writing processes to address a range of rhetorical situations.	Prerequisites: Appropriate writing placement test score, or (a grade of C or better in ESL202. Corequisites: ENG101, or ENG107).		Acad	LAB 1.0 3.0 3.0	T
ENG108	2020 Fall	First-Year Composition for ESL		Equivalent of ENG102 for students of English as a Second Language (ESL). Emphasis on rhetoric and composition with a focus on persuasive, research-based writing and understanding writing as a process. Developing advanced college-level writing strategies through three or more writing projects comprising at least 4,000 words in total.	Prerequisites: A grade of C or better in ENG107.	Course Attribute(s): General Education Designation: First-Year Composition - [FYC]	Acad	LEC 3.0 3.0 3.0	S
ENG111	2024 Fall	Technical and Professional Writing		Introduces students to the genres, style, and design of technical documents that are used in various professional fields. Includes examining the role of workplace writing, preparing documents appropriate to diverse audiences, and integrating data and graphics into work-related documents.	Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Instructor.	Course Attribute(s): General Education Designation: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
ENG183	2023 Fall	Basic Manuscript Writing: Fiction		Basic skills and techniques used by the professional fiction writer in writing fiction for publication, including characterization, plot development, writing dialogue, setting scenes, and establishing mood. Emphasis on writing scenes.	Prerequisites: None.	ENG183 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
ENG200	1994 Fall	Reading and Writing About Literature		Emphasis on critical analysis of various genres of literature; includes study of necessary terminology, introduction to methods of literary	Prerequisites: A grade of C or better in ENG102.	Course Attribute(s): General Education Designatio	Acad	LEC 3.0 3.0 3.0	S

				criticism, and practice in interpretation and evaluation		n: Humanities, Arts and Design - [HU] General Education Designation: Literacy and Critical Inquiry - [L]			
ENG205	2001 Spring	Nature of Poetry		A foundational course which focuses on the reciprocal nature of reading and writing poetry as well as acquiring a "critical vocabulary" for the appreciation of poetry. Examines the technical, cultural and aesthetic sources of established poets as well as work produced by student writers. Explores the creative writing process as well as poetic themes, styles and perspectives that contribute to the writing of original student poetry	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ENG210	1994 Summer I	Creative Writing		Skills and techniques used in the production of marketable materials for contemporary publications that buy prose fiction, poetry, and expository articles.	Prerequisites: A grade of C or better in ENG102 or permission of Department or Division.	ENG210 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
ENG211	1993 Spring	Screenwriting		Principles and techniques necessary in planning, researching, and writing screenplays.	Prerequisites: A grade of C or better in ENG101 and ENG102 or permission of Instructor.	ENG211 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
ENG213	2010 Summer I	Introduction to the Study of Language		Study of language as code; phonetics, phonology, morphology, syntax, semantics; language acquisition; historical and socio-linguistics	Prerequisites: A grade of C or better in ENG102 or ENG111 or permission of Instructor.	Course Attribute(s): General Education Designation:	Acad	LEC 3.0 3.0 3.0	S

						Humanities, Arts and Design - [HU] General Education Designation: Social and Behavioral Sciences - [SB]			
ENG215	1995 Fall	Strategies of Academic Writing		Advanced course in techniques of analyzing and writing academic expository prose. Writing to be research based.	Prerequisites: A grade of C or better in ENG102 or ENG111 or permission of Instructor.	Course Attribute(s): General Education Designation: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
ENG216	1992 Fall	Persuasive Writing on Public Issues		Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers research based	Prerequisites: A grade of C or better in ENG102.	Course Attribute(s): General Education Designation: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
ENG217	2005 Spring	Personal and Exploratory Writing		Using writing to explore one's self and the world one lives in; emphasis on journal writing as a source and inspiration for public writing	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	Course Attribute(s): General Education Designation: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
ENG218	2005 Spring	Writing About Literature		Advanced writing course requiring analytical and expository essays	Prerequisites: A grade of C or better in ENG102.	Course Attribute(s): General	Acad	LEC 3.0	S

				about fiction, poetry, and drama. For non-English majors		Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Literacy and Critical Inquiry - [L]		3.0 3.0	
ENG235	2023 Fall	Magazine Article Writing		Basic skills and techniques used by professional writers for publication in magazines. Includes analyzing markets, identifying article slant, research techniques, editing, and submission procedures. Emphasis on nonfiction.	Prerequisites: None.	ENG235 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
ENG295	2010 Fall	Teaching Composition in the Two-Year College		Overview of the theoretical and pedagogical strategies of teaching composition in the community college.	Prerequisites: Bachelor's degree and permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
ENG296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with		Acad	LAB 1.0 5.0 0.0	Z

					permission of the Instructor.				
ENG296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z
ENG296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
ENG296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and	Prerequisites: Completion of at least		Acad	LAB 4.0	Z

				employers to accomplish an outcome related to the career objectives of the students.	twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.			20.0 0.0	
ENG298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
ENG298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
ENG298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an	Prerequisites: Permission of		Acad	LAB 3.0	Z

				atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			3.0 0.0	
ENH110	2003 Spring	Introduction to Literature		Introduction to international literature through various forms of literary expression; e.g., poetry, drama, essay, biography, autobiography, short story, and novel. Provides a global overview of literature with special emphasis on diverse cultural contributions of women, African Americans, Asian Americans, Hispanic Americans, and Native Americans	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH111	2002 Fall	Literature and the American Experience		Introduction to the foundations and diversity of American culture through a survey of its literature, including minority and women writers. Exploration of various facets of American culture including frontier, regional, rural, and urban life; ethnic, racial, and immigrant experience; and political and social philosophies	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ENH112	1997 Fall	Chicano Literature		Introduction to the works of Mexican-American writers of the Southwest. Samples poetry, fiction, and essays viewed in their relationship to American cultural heritage and to contemporary culture	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation:	Acad	LEC 3.0 3.0 3.0	S

						n: Humanities, Arts and Design - [HU]			
ENH113	2023 Fall	Writers/Directors and Current Issues		In-depth analysis of literary texts by contemporary writers/directors throughout the world, including essayists, journalists, playwrights, novelists, directors, short story writers, and/or poets. Examines perspectives representing a variety of cultures. Critical responses to current issues of worldwide interest examined, including topics as environment, technology, medicine, economics, politics, education, human rights, law and order.	Prerequisites: None.	ENH113 may be repeated for a total of six (6) credit hours. Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH114	2011 Spring	African-American Literature		Survey of major African-American writers from Colonial period through the present; analysis of trends and movements within African-American literary history; analysis of literary types and selected works	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH117	2002 Fall	Rap Literature: The Oral Tradition		Survey of selected rap poetry looking at the oral tradition of Africa, the Caribbean, and the United States as precursors to East Coast, West Coast, Southern, North Central, and	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

				International development of the genre. Investigation of cultural environments, historical events, competitions (the "battles"), artists' biographies, and parallel art forms as they relate to the analysis of the genre and its themes					
ENH120	2008 Fall	The Literature of Science Fiction		Surveys the last one hundred and fifty years of Science Fiction literature. Investigates the similarities between Science Fiction and other imaginative literatures Examines the Science Fiction genre, sub genres, and themes from a variety of perspectives, as well as social issues	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ENH130	2009 Spring	Mystery Fiction from the Nineteenth Century to the Present		A study of mystery fiction as a literary genre and as a reflection of culture through the writings of significant authors	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ENH140	2019 Fall	Representations of Society in Literature and Film		Explores how a particular field of endeavor is and has been represented in narrative literature and film, using examples from a range of U.S. media. Investigates the ways in which narrative representation engages changing cultural and historical contexts, and shapes of how fields of human endeavor are perceived. Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement test score and eligibility for ENG101 as indicated by appropriate writing placement test score.		Acad	LEC 3.0 3.0 3.0	S
ENH140AA	2020 Spring	Sports in Literature and Film		Explores how sports are and have been represented in narrative literature and film, using examples from a range of U.S. media. Investigates the ways in which narrative representation engages changing cultural and historical contexts, and shapes of how fields of human endeavor are perceived. Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement test score and eligibility for ENG101 as indicated by appropriate writing placement test score.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts	Acad	LEC 3.0 3.0 3.0	S

						and Design - [HU] Common Competency Course			
ENH140AB	2019 Fall	Business in Literature and Film		Explores how business is and has been represented in narrative literature and film, using examples from a range of U.S. media. Investigates the ways in which narrative representation engages changing cultural and historical contexts, and shapes of how fields of human endeavor are perceived. Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement test score and eligibility for ENG101 as indicated by appropriate writing placement test score.		Acad	LEC 3.0 3.0 3.0	S
ENH140AC	2019 Fall	Science in Literature and Film		Explores how science is and has been represented in narrative literature and film, using examples from a range of U.S. media. Investigates the ways in which narrative representation engages changing cultural and historical contexts, and shapes of how fields of human endeavor are perceived. Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement test score and eligibility for ENG101 as indicated by appropriate writing placement test score.		Acad	LEC 3.0 3.0 3.0	S
ENH140AD	2019 Fall	Art in Literature and Film		Explores how art is and has been represented in narrative literature and film, using examples from a range of U.S. media. Investigates the ways in which narrative representation engages changing cultural and historical contexts, and shapes of how fields of human endeavor are perceived. Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement test score and eligibility for ENG101 as indicated by appropriate writing placement test score.		Acad	LEC 3.0 3.0 3.0	S
ENH140AE	2019 Fall	Education in Literature and Film		Explores how education is and has been represented in narrative literature and film, using examples from a range of U.S. media. Investigates the ways in which	Prerequisites: Appropriate reading placement test score and eligibility for ENG101 as indicated		Acad	LEC 3.0 3.0 3.0	S

				narrative representation engages changing cultural and historical contexts, and shapes of how fields of human endeavor are perceived. Focus on analysis of narratives' form and content, and the construction of meaning.	by appropriate writing placement test score.				
ENH140AF	2019 Fall	Law in Literature and Film		Explores how law is and has been represented in narrative literature and film, using examples from a range of U.S. media. Investigates the ways in which narrative representation engages changing cultural and historical contexts, and shapes of how fields of human endeavor are perceived. Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement test score and eligibility for ENG101 as indicated by appropriate writing placement test score.		Acad	LEC 3.0 3.0 3.0	S
ENH140AG	2019 Fall	Medicine in Literature and Film		Explores how medicine is and has been represented in narrative literature and film, using examples from a range of U.S. media. Investigates the ways in which narrative representation engages changing cultural and historical contexts, and shapes of how fields of human endeavor are perceived. Focus on analysis of narratives' form and content, and the construction of meaning.	Prerequisites: Appropriate reading placement test score and eligibility for ENG101 as indicated by appropriate writing placement test score.		Acad	LEC 3.0 3.0 3.0	S
ENH190	2011 Spring	Introduction to US Ethnic Literature		Introduction to the US ethnic literatures of African Americans, Arab Americans, Asian Americans, Latinas/os, Native Americans, Mixed Race, and other emerging ethnic groups through various expressions. Examines the interconnections of the various experiences of racialized groups living in the US. Provides ethnic US literature a global context through study of the interconnections with the literatures of Africa, Asia, Latin America, and Oceania. Focus on literary production of at least four specific US ethnic groups and relevant international literatures.	Prerequisites or Corequisites: ENG101 or ENG107.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Historical Awareness - [H] General	Acad	LEC 3.0 3.0 3.0	S

						Education Designation: Humanities, Arts and Design - [HU]			
ENH201	2007 Fall	World Literature Through the Renaissance		Examines a selection of the world's literary masterpieces within their cultural contexts from ancient times through the Renaissance. Analyzes the influences of major literary philosophies, themes, genre, and styles. Assesses the contributions of major writers. Introduces the terminology of literary analysis	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH202	2009 Summer I	World Literature After the Renaissance		Includes a selection of the world's literary masterpieces from the Renaissance to modern times	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Humanities	Acad	LEC 3.0 3.0 3.0	S

						s, Arts and Design - [HU]			
ENH204	2007 Fall	Introduction to Contemporary Literature		Examines the work of major writers in poetry, fiction and drama from 1945 to the present. Examines important movements that have developed within these genre since 1945	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH206	2000 Fall	Nature and Environmental Literature		Investigates major themes in nature and environmental writing. Explores relationship between humanity and the environment as expressed through fiction, non-fiction, and poetry. Examines how literature drives attitudes and policies	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH214	1995 Fall	Poetry Study		Involves reading, discussing, and analyzing poetry of various forms and from selected periods	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH220	2023 Spring	Gender, Media, and Culture		Introduction to gender and its intersections with race, ethnicity, class, sexuality, nationality, ability, and country of origin in media. Examines film, television, popular culture, advertising, gaming, print and digital media, music and other forms of media.	Prerequisites: A grade of C or better in ENG101 or ENG107.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General	Acad	LEC 3.0 3.0 3.0	S

						Education Designation: Humanities, Arts and Design - [HU]			
ENH221	2005 Fall	Survey of English Literature Before 1800		Emphasizes the social and political backgrounds as well as the form and content of English literature from Anglo-Saxon times to the end of the eighteenth century.	Prerequisites: A grade of C or better in (ENG101 or ENG107) or equivalent.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH222	2005 Fall	Survey of English Literature After 1800		Emphasizes the social and political backgrounds as well as the form and content of English literature in the nineteenth and twentieth centuries	Prerequisites: A grade of C or better in (ENG101 or ENG107) or equivalent.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH230	1995 Fall	Introduction To Shakespeare		Introduces Shakespeare the playwright, the sonneteer, the linguist, and the citizen of the 17th century. Considers the major tragedies, comedies, histories, and sonnets; focuses on the use of language; and connects the writer to the time. Some emphasis on Shakespeare's influence through the centuries, noting parallels	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and	Acad	LEC 3.0 3.0 3.0	S

				between the late 16th century and the late 20th century		Design - [HU]			
ENH231	2006 Fall	Introduction to Shakespeare: The Early Plays		Introduces Shakespeare, the playwright and linguist, and the late 16th century. Considers representative comedies, histories, and tragedies from Shakespeare's early period, from 1590-1599. Focuses on the use of language and connects the writer to his historical era. Also considers Shakespeare's relevance to the present time .	Prerequisites: None.	Student may receive credit for only one of the following: ENH230 or ENH231. Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH232	2006 Fall	Introduction to Shakespeare: The Late Plays		Introduces Shakespeare, the playwright and linguist, and the early 17th century. Considers representative comedies, histories, tragedies, and romances from Shakespeare's late period, 1600-1611. Focuses on the use of language and connects the writer to his historical era. Also considers Shakespeare's relevance to the present time.	Prerequisites: None.	Student may receive credit for only one of the following: ENH230 or ENH232. Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH235	2006 Fall	Survey of Gothic Literature		A study of the origins, common elements and characteristics, and	Prerequisites: None.	Course Attribute(s)	Acad	LEC 3.0	S

				historical development of Gothic literature with an exploration of the literary techniques and psychological aspects of the genre): General Education Designation: Humanities, Arts and Design - [HU]		3.0 3.0	
ENH241	2018 Fall	American Literature Before 1860		Includes literature written prior to 1860 in the United States.	Prerequisites: A grade of C or better in ENG101.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Cultural Diversity - [C] General Education Designation: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
ENH242	1994 Fall	American Literature After 1860		Includes literature written after 1860 in the United States	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S

ENH245	2013 Spring	J.R.R. Tolkien and C.S. Lewis: Battling Modernism		Focuses on the writings, language, themes, influences and vision of J.R.R. Tolkien and C.S. Lewis in contrast to the ideas and literature of the Modernist movement.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH251	1999 Spring	Mythology		Deals with the myths and legends of civilizations with the greatest influence upon the development of the literature and culture of the English speaking people, and compares those myths with myths from other cultures	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH253	2021 Fall	Contemporary Global Literature and Film		Characteristics of literary and cinematic mediums. Challenges of adapting literature to film. Global examination of historical, religious, socio-economic, political, and colonial/post colonial themes depicted in Western and non-Western literature and film (e. g., Africa, Asia, and Latin America) outside the United States. Use of narrative in each medium and how it translates various global/international perspectives and cultural assumptions. Specific genres present in literature and film. Cultural metaphors and symbols used in literature and film	Prerequisites: A grade of C or better in ENG101.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU] General	Acad	LEC 3.0 3.0 3.0	S

						Education Designation: Literacy and Critical Inquiry - [L]			
ENH254	2001 Spring	Literature and Film		Presents works of literature and their film versions and analyzes distinguishing techniques of each medium	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
ENH255	2001 Spring	Contemporary U.S. Literature and Film		Strengths and weaknesses of literature and film. Challenges of adapting literature to film. Addressing racial, ethnic, gender, class and religious differences between cultures and mediums. Use of narrative in each medium and how it translates various cultural values and assumptions. Specific genres present in literature and film. Cultural metaphors and symbols used in literature and film	Prerequisites: A grade of C or better in ENG101.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU] General Education Designation	Acad	LEC 3.0 3.0 3.0	S

						n: Literacy and Critical Inquiry - [L]			
ENH256	1999 Fall	Shakespeare on Film		Presents cinematic versions of Shakespeare's plays and explains and analyzes how the dramatist's major tragedies, comedies, histories and romances have been presented on film	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH259	1999 Fall	American Indian Literature		Contemporary American Indian forms of literary expression. Selected oral traditions of American Indians. Trends and movements within American Indian literary history	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH260	1996 Fall	Literature of the Southwest		Investigates major themes in Southwestern American literature including the Western myth, minority roles in the region's literature, control of nature versus primacy of nature, and growth. Both prose and poetry are examined with an emphasis on contemporary Southwestern writing	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities	Acad	LEC 3.0 3.0 3.0	S

						s, Arts and Design - [HU]			
ENH261	2024 Fall	Indigenous Women's Literature of the Americas	AIS/WST261	Explores contemporary voices of Indigenous women authors and artists in the Americas as expressed in poetry, fiction, nonfiction, drama, and oral traditions. Focuses on themes relevant to Indigenous women and examines the trends and movements within Indigenous peoples and women's literary history. Examines themes relevant to Indigenous women such as racial and gender oppression, reservation life, acculturation, and their sociopolitical activism in the Americas.	Prerequisites: A grade of C or better in ENG101 or ENG107.		Acad	LEC 3.0 3.0 3.0	S
ENH275	1994 Summer I	Modern Fiction		Includes novels and short stories of modern writers which reflect significant themes of our time	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH277	2014 Summer	Narrative Genres		Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 suggested but not required.		Acad	LEC 3.0 3.0 3.0	S
ENH277AA	2014 Summer	Dark Futures: Dystopian Narrative		Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 suggested but not required.		Acad	LEC 3.0 3.0 3.0	S

				how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.					
ENH277AB	2014 Summer	Whodunnits: Mystery Narrative		Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 or ENG107. ENH110 or ENG200 suggested but not required.		Acad	LEC 3.0 3.0 3.0	S
ENH277AC	2014 Summer	Happily Ever: Children's Narrative		Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 and ENG107. ENH110 or ENG200 suggested but not required.		Acad	LEC 3.0 3.0 3.0	S
ENH277AD	2014 Summer	Stuff Blows Up: Action Narrative		Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 and ENG107. ENH110 or ENG200 suggested but not required.		Acad	LEC 3.0 3.0 3.0	S
ENH277AE	2019 Fall	Tour of Duty: War Narrative		Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative	Prerequisites: A grade of C or better in ENG101 and ENG107. ENH110 or ENG200 suggested but not required.	Course Attribute(s): General Education Designation: Global Awareness - [G]	Acad	LEC 3.0 3.0 3.0	S

				production and reception. Focus on analysis of key texts and their contexts.		General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Literacy and Critical Inquiry - [L]			
ENH277AF	2014 Summer	Heroic Quests: Fantasy Narrative		Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 and ENG107. ENH110 or ENG200 suggested but not required.		Acad	LEC 3.0 3.0 3.0	S
ENH277AG	2021 Fall	Out There: Science Fiction Narrative		Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 and ENG107. ENH110 or ENG200 suggested but not required.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Historical Awareness - [H] General Education Designation:	Acad	LEC 3.0 3.0 3.0	S

						n: Literacy and Critical Inquiry - [L]			
ENH277AH	2014 Summer	Facing Fear: Horror Narrative		Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 and ENG107. ENH110 or ENG200 suggested but not required.		Acad	LEC 3.0 3.0 3.0	S
ENH277AI	2014 Summer	Make 'Em Laugh: Comedy Narrative		Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 and ENG107. ENH110 or ENG200 suggested but not required.		Acad	LEC 3.0 3.0 3.0	S
ENH277AJ	2014 Summer	Love and Passion: Romance Narrative		Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative production and reception. Focus on analysis of key texts and their contexts.	Prerequisites: A grade of C or better in ENG101 and ENG107. ENH110 or ENG200 suggested but not required.		Acad	LEC 3.0 3.0 3.0	S
ENH277AK	2014 Summer	The Wild Frontier: Western Narrative		Explores how narrative shapes culture and culture shapes narrative through the international study of a particular genre in multiple media (e.g. literature, film, television, computer games, etc.). Investigates how a genre evolves, and how genre conventions influence narrative	Prerequisites: A grade of C or better in ENG101 and ENG107. ENH110 or ENG200 suggested but not required.		Acad	LEC 3.0 3.0 3.0	S

				production and reception. Focus on analysis of key texts and their contexts.					
ENH280	2008 Spring	Topics in American Literature		Exploration of selected topic(s) in American Literature. Focuses on a theme, genre, era, technique, or critical approach. Includes reading and interpretation of literature from a variety of cultures within the United States.	Prerequisites: A grade of C or better in (ENG101 or ENG107) or permission of Instructor.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU] ENH280 may be repeated for a total of nine (9) credit hours.	Acad	LEC 3.0 3.0 3.0	S
ENH284	1995 Fall	19th Century Women Writers	WST284	Investigates major themes in literature by women writing in the 19th century including the nature of women's lives in the family, in work situations, and in society. Poetry, prose, essays and drama are examined with an emphasis on common themes	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH285	1995 Fall	Contemporary Women Writers	WST285	Explores twentieth century literature (short stories, essays, plays, and	Prerequisites: None.	Course Attribute(s)	Acad	LEC 3.0	S

				poetry) written by women and about women. Focus on themes relevant to women's lives regardless of age, creed, or ethnic background) : General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]		3.0 3.0	
ENH291	2023 Fall	Children's Literature	EDU291	Review of folk and modern literature from a variety of world cultures, including application of literary criteria to folk and modern literature for children	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH292	1988 Fall	Literature for Adolescents		Reviews selected literature written for adolescents. Develops and applies literary criteria for the evaluation of adolescent literature	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ENH294	2001 Fall	Multicultural Folktales	EDU294 STO294	Study of multicultural folktales, exploring the impact of the oral tradition in American society and showing classroom applications	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and	Acad	LEC 3.0 3.0 3.0	S

						Design - [HU]			
ENH295	2010 Fall	Banned Books and Censorship		History, motivations, and effects of censorship in a democratic society. Censorship and book banning as a method of silencing diverse voices. Critical analysis of banned or challenged literature for children and adults.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
ENH296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
ENH296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain		Acad	LAB 2.0 10.0 0.0	Z

					a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
ENH296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
ENH296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job		Acad	LAB 4.0 20.0 0.0	Z

					may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
ENH298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
ENH298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
ENH298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

				combined to maximize student development.					
ENV101	2023 Fall	Introduction to Environmental Science		Introduces the interconnected nature of environmental science and solutions to environmental issues.	Prerequisites: None.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
ENV119	2023 Fall	Introduction to Geospatial Technology for Environmental Science		Introduction to geospatial technology concepts and applications including map reading, aerial photography interpretation, and remote sensing. Hands-on experience investigating the local environment with an air photo browser, remote imaging viewer, and a geographic information system.	Prerequisites: None.		Acad	L+L 4.0 4.0 4.0	T
ENV219	2023 Fall	Geospatial Technology for Environmental Sciences I		Hands-on experience using Geographic Information Systems (GIS), Remote Sensing (RS), and Global Positioning Systems (GPS) with applications using local environmental data.	Prerequisites: A grade of C or better in ENV119 or Corequisites: ENV119, or permission of Instructor.		Acad	L+L 4.0 4.0 4.0	T
ENV225	2025 Fall	Our Changing Planet		Evaluates biogeochemical cycles and energy flows supporting life on Earth using the scientific method. Integrates core concepts of atmospheric science, geology, hydrology, ecology, and soil science to provide a foundational understanding of the critical zone and its relationship to environmental issues. Examines the influences of human activity on the functioning of the critical zone with consideration of management best practices and restoration actions for long-term sustainability. Emphasizes the communication of scientific information.	Prerequisites: None.		Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
ENV273	2023 Fall	Geospatial Technology for		Advanced geospatial techniques including Geographic Information System (GIS) data integration,	Prerequisites: A grade of C or better in ENV219 or		Acad	L+L 4.0	T

		Environmental Sciences II		surface creation and analysis, 3D displays, and animation using local environmental data	permission of Instructor.			4.0 4.0	
ENV295	2023 Fall	Geospatial Technology for Environmental Sciences Projects		Completion of a self-paced geospatial technology project.	Prerequisites: A grade of C or better in ENV273 or permission of Instructor.	ENV295 must be completed before a student takes the Spatial Technology And Remote Sensing (STARS) exam for certification in geospatial technology.	Acad	L+L 4.0 4.0 4.0	T
EPD205	2013 Fall	Science, Technology, Engineering, and Mathematics (STEM) Education		A basic introduction to Science, Technology, Engineering, and Mathematics (STEM) education in the United States. Emphasis on the understanding of state and national educational acad standards, the importance of the role of higher education in closing the achievement gap and effective strategies for improving teaching in the STEM disciplines. Includes examples of successful school programs along with practical applications for teachers in the classroom and the involvement of community colleges in the STEM Education landscape.	Prerequisites: Must hold a Career and Technical Education (CTE), provisional or standard elementary, secondary or special education certificate, or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
EPD212AA	2014 Spring	Elementary Art Methods and Curriculum Development		Overview and practical application of teaching elementary art. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Must hold a Career and Technical Education (CTE) provisional or standard elementary, secondary, or special education teaching certificate, or permission of	EPD212A A requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S

					Department or Division.				
EPD212AB	2014 Spring	Secondary Art Methods and Curriculum Development		Overview and practical application of teaching secondary art. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Must hold a Career and Technical Education (CTE) provisional or standard elementary, secondary, or special education teaching certificate, or permission of Department or Division.	EPD212A B requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EPD216AA	2014 Spring	Elementary Physical Education Methods and Curriculum Development		Overview and practical application of teaching elementary physical education. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards	Prerequisites: Must hold a Career and Technical Education (CTE) provisional or standard elementary, secondary, or special education teaching certificate, or permission of Department or Division.	EPD216A A requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EPD216AB	2014 Spring	Secondary Physical Education Methods and Curriculum Development		Overview and practical application of teaching secondary physical education. Covers teaching strategies, learning environments, teaching resources, and use of technology. Emphasis on State Board of Education Professional Teaching Standards.	Prerequisites: Must hold a Career and Technical Education (CTE) provisional or standard elementary, secondary, or special education teaching certificate, or permission of Department or Division.	EPD216A B requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EPD225	2023 Fall	Foundations of Gifted Education and Identification of Gifted Learners		Students explore definitions of giftedness, ways of identifying gifted and talented students, and types of programs and services developed for this population. Students address issues in educating gifted and talented students.	Prerequisites: Must hold a provisional or standard early childhood, elementary, secondary or special education teaching certificate.		Acad	LEC 3.0 3.0 3.0	S
EPD226	2023 Fall	Social and Emotional Needs		Students explore the intellectual, social, emotional, developmental, and	Prerequisites: Must hold a provisional or standard early		Acad	LEC 3.0	S

		of Gifted and Talented Students		educational characteristics of gifted and talented students.	childhood, elementary, secondary or special education teaching certificate and a grade of C or better in EPD225 or (permission of Department or Division chairperson).			3.0 3.0	
EPD227	2023 Fall	Methods and Models for Differentiating Curriculum for Gifted Learners		Students explore the theory and practice of teaching methods and differentiating curriculum and instruction for gifted learners.	Prerequisites: Must hold a provisional or standard early childhood, elementary, secondary or special education teaching certificate and a grade of C or better in EPD225 (or permission of Department or Division chairperson).		Acad	LEC 3.0 3.0 3.0	S
EPD228	2023 Fall	Creativity and Critical Thinking Skills in Gifted Education		Students explore the concept of creativity, including theories and characteristics. Brain research on critical thinking and implications for gifted education is examined.	Prerequisites: Must hold a provisional or standard early childhood, elementary, secondary or special education teaching certificate and a grade of C or better in EPD225 (or permission of Department or Division chairperson).		Acad	LEC 3.0 3.0 3.0	S
EPD250	2023 Fall	Teaching Elementary Number Sense and Operations Grades K-8		Focus on knowledge and skills for number sense and operations grades K-8. Covers learning environments, teaching resources, and use of technology in the presentation of numeration, number theory and computation. Emphasis on State Academic Math and Common Core Standards. Includes practical application of teaching strategies for	Prerequisites: Must hold a Career and Technical Education (CTE) provisional or standard elementary, secondary, or special education teaching certificate, or permission of	EPD250 requires an approved field experience.	Acad	LEC 6.0 6.0 6.0	S

				elementary students as well as teachers of mathematics.	Department or Division.				
EPD251	2023 Fall	Teaching Geometry and Measurement Grades K-8		Focus on knowledge and skills for geometry and measurement concepts for grades K-8. Covers geometric properties, transformation of shapes, coordinate geometry and measurement. Emphasis on State Academic Math and Common Core Standards. Includes practical application of teaching strategies for elementary students as well as teachers of mathematics.	Prerequisites: A grade of C or better in EPD250.	EPD251 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EPD252	2023 Fall	Teaching Patterns, Algebra and Functions Grades K-8		Focus on knowledge and skills for patterns, algebra and functions grades K-8. Covers learning environments, teaching resources, and use of technology in the presentation of algebraic notation, properties, relations and functions, equations and inequalities. Emphasis on State Academic Math and Common Core Standards. Includes practical application of teaching strategies for elementary students as well as teachers of mathematics.	Prerequisites: A grade of C or better in EPD250.	EPD252 requires an approved field experience.	Acad	LEC 6.0 6.0 6.0	S
EPD253	2023 Fall	Teaching Data Analysis, Probability and Discrete Mathematics Grades K-8		Focus on knowledge and skills for data analysis, probability and discrete mathematics concepts for grades K-8. Covers statistics, sampling, systemic listing and counting, and vertex edge graphs. Emphasis on State Academic Math and Common Core Standards. Includes practical application of teaching strategies for elementary students as well as teachers of mathematics.	Prerequisites: A grade of C or better in EPD250.	EPD253 requires an approved field experience.	Acad	LEC 3.0 3.0 3.0	S
EPD254	2023 Fall	Mathematics Classroom Assessment		A thorough examination of techniques and strategies for assessment in the mathematics classroom. Focus on formative and summative assessments.	Prerequisites: A grade of C or better in EPD250, EPD251, EPD252, and EPD253.		Acad	LEC 3.0 3.0 3.0	S
EPD255	2023 Fall	Research-Based Practices, Pedagogy, and Instructional		Designed to provide strategies that may be used when assuming leadership roles in mathematics. Focus on examining research-based	Prerequisites: A grade of C or better in EPD250, EPD251,		Acad	LEC 3.0 3.0 3.0	S

		Leadership in Mathematics		practices, pedagogy, and techniques of instructional leadership in mathematics. Examination of academic math standards and common core standards.	EPD252, EPD253, and EPD254.				
EPD256	2013 Fall	Science, Technology, Engineering, and Mathematics (STEM) Education and Technology		Overview of the current status of Science, Technology, Engineering, and Mathematics (STEM) education and technology in the United States and The Standards for Technological Literacy developed by the International Technology Education Association (ITEA). Emphasis on the impact of technology and its interdependence with the other STEM fields in engineering, science, and mathematics. Topics include: technology systems, processes and concepts, energy and power, communication, biotechnology, manufacturing, construction, and transportation technologies. Strategies for practical application in the classroom along with lesson plan development also covered.	Prerequisites: A grade of C or better in EPD205.		Acad	LEC 3.0 3.0 3.0	S
EPD257	2013 Fall	Science, Technology, Engineering, and Mathematics (STEM) Education and Science		Overview of the current status of Science, Technology, Engineering, and Mathematics (STEM) education and science in the United States and the National Science Education standards. Emphasis on techniques associated with the scientific inquiry-based approach to teaching and learning science, models-based science teaching, and STEM science student research. Topics include the scientific 'process' skills, project-based learning, the 5E instructional model, and the interdisciplinary connection of science to other STEM fields. Strategies for practical application in the classroom along with lesson plan development also covered.	Prerequisites: A grade of C or better in EPD205.		Acad	LEC 3.0 3.0 3.0	S

EPD258	2013 Fall	Science, Technology, Engineering, and Mathematics (STEM) Education and Engineering		Overview of the current status of Science, Technology, Engineering, and Mathematics (STEM) education and engineering in the United States. Emphasis on the underlying principles of engineering education and project-based learning. Topics include a brief history of engineering and its disciplines, technical communication skills, problem solving and teamwork, ethics, and engineering systems with modeling and design elements. Strategies for practical application in the classroom along with lesson plan development also covered.	Prerequisites: A grade of C or better in EPD205.	EPD258 requires three (3) hours of field experience.	Acad	LEC 3.0 3.0 3.0	S
EPD259	2013 Fall	Science, Technology, Engineering, and Mathematics (STEM) Education and Mathematics		Overview of the current status of Science, Technology, Engineering, and Mathematics (STEM) education and mathematics in the United States and the Mathematics Common Core Standards. Emphasis on techniques associated with the inquiry-based approach to teaching and learning mathematics, project-based learning, and the interdisciplinary connection of mathematics to other STEM fields. Strategies for practical application in the classroom along with lesson plan development also covered.	Prerequisites: A grade of C or better in EPD205.		Acad	LEC 3.0 3.0 3.0	S
EPD270	2018 Fall	Theoretical and Research Foundations of Language and Literacy		Focus on scientifically-based research as the foundation for classroom reading instruction. Emphasis on the five major areas of reading: phonemic awareness, phonics, fluency, vocabulary, and comprehension. Application of techniques for organizing and implementing explicit, systematic instruction in each of these areas, and methods of regularly assessing children's performance in reading and language arts.	Prerequisites: Must hold a provisional or standard elementary, secondary, or special education teaching certificate.		Acad	L+L 3.0 3.0 3.0	T
EPD271AA	2018 Fall	Essential Elements of Elementary Reading and		Overview of the interrelated critical components of reading and writing instruction. Focus on developmental stages, benchmarks, and research-	Prerequisites: Must hold a provisional or standard elementary, secondary, or special		Acad	L+L 3.0 3.0 3.0	T

		Writing Instruction K-8		based instructional strategies to effectively teach literacy in the elementary grades.	education teaching certificate.				
EPD271AB	2018 Fall	Essential Elements of Adolescent Reading and Writing Instruction 6-12		Focus on the theories, methods, and models of the essential elements needed to develop and improve reading and writing skills of adolescents.	Prerequisites: Must hold a provisional or standard elementary, secondary or special education teaching certificate.		Acad	L+L 3.0 3.0 3.0	T
EPD272AA	2018 Fall	Elements of Elementary Content Area Reading and Writing K-8		Focus on practical and effective methods and strategies for the teaching of reading and writing in the elementary content area based on research-based principles and theories.	Prerequisites: A grade of C or better in EPD270, EPD271AA and must hold a provisional or standard elementary, secondary, or special education teaching certificate.		Acad	L+L 3.0 3.0 3.0	T
EPD272AB	2018 Fall	Elements of Adolescent Content Area Reading and Writing 6-12		Focus on practical and effective methods and strategies for the teaching of reading and writing in the adolescent content area based on research-based principles and theories.	Prerequisites: A grade of C or better in EPD270, EPD271AB and must hold a provisional or standard elementary, secondary or special education teaching certificate.		Acad	L+L 3.0 3.0 3.0	T
EPD274	2018 Fall	Reading Assessment		Focus on Assessment Practices and Systems including administering assessments, data collection and analysis, diagnosing reading difficulties, developing student growth plans, and utilizing data to provide appropriate effective instruction to increase literacy success for all students.	Prerequisites: A grade of C or better in EPD270 and (EPD271AA or EPD271AB) and (EPD272AA or EPD272AB) and must hold a provisional or standard elementary, secondary, or special education teaching certificate.		Acad	L+L 6.0 6.0 6.0	T
EPD276	2018 Fall	The Teacher Leader		Focus on K-12 teachers' skills as recognized teacher leaders. Includes reading, summarizing, and analyzing current educational research and theory about the teacher leader. Examination of the effect of informal	Prerequisites: Must hold a provisional or standard elementary, secondary, or special education teaching certificate.		Acad	L+L 3.0 3.0 3.0	T

				and formal roles of the teacher leader in the schools. Also covers discovery of personal philosophies of leadership and plans for enacting leadership within participant's own school sites.					
EPD277AA	2018 Fall	Reading Field Experience K-8		Focus on the practical application of current philosophical theories, methods, and models of assessment and instruction for remediation of reading.	Prerequisites: A grade of C or better in EPD270, EPD271AA, EPD272AA, EPD274, EPD276 and must hold a provisional or standard elementary, secondary, or special education teaching certificate.		Acad	L+L 3.0 3.0 3.0	T
EPD277AB	2018 Fall	Reading Field Experience 6-12		Focus on the practical application of current philosophical theories, methods, and models of assessment and instruction for remediation of reading.	Prerequisites: A grade of C or better in EPD270, EPD271AB, EPD272AB, EPD274, EPD276 and must hold a provisional or standard elementary, secondary, or special education teaching certificate.		Acad	L+L 3.0 3.0 3.0	T
EPD279	2023 Fall	Reading Practicum K-12		Focus on the practical application of current philosophical theories, methods, and models of assessment and instruction for remediation of reading.	Prerequisites: A grade of C or better in EDU270AB and must hold a provisional or standard elementary, secondary or special education teaching certificate.		Acad	L+L 3.0 4.5 4.5	T
EPD287	2013 Fall	Science, Technology, Engineering, and Mathematics Education (STEM) Education Capstone Project		Organized and tailored around completed coursework in Science, Technology, Engineering, and Mathematics (STEM) education. Structured to provide a capstone experience by providing opportunities for individualized research and study guided by professional expertise. Allows for best opportunities of independent study and individualized	Prerequisites: A grade of C or better in EPD256, EPD257, EPD258, and EPD259.		Acad	LEC 3.0 3.0 3.0	S

				learning to maximize teacher development and knowledge in the STEM fields. Final project required. Includes a development plan for immediate classroom use with appropriate grade level lesson plans and activities, teaching strategies, and techniques in a STEM field.					
EPS150	2013 Summer I	Introduction to Entrepreneurship		Overview of entrepreneurship. Includes the entrepreneurial process and the skills required to be successful, including starting, planning, financing, marketing, and managing a business.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
EPS151	2016 Spring	Project-Based Entrepreneurship: Community Solutions		Practical experience in applying core entrepreneurial skills and knowledge in a real-world context including innovation and creativity exercises. Application of knowledge and skills from earlier coursework to develop and present solutions to real-world situations currently faced by Entrepreneurs, Community-Based Organizations, Civic or Government Organizations, or College Departments.	Prerequisites: A grade of C or better in EPS150 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
EPS160	2013 Summer I	New Venture Creation		Process of starting a new venture including evaluating specific business opportunities identifying financing alternatives, and defining start-up issues.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
EPS161	2013 Spring	New Venture Law and Finance		Introduction to the principles of legalization and capitalization of a new business venture. Includes the processes required to organize, register, finance, launch and protect a business.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
EPS162	2017 Spring	Introduction to Social Entrepreneurship		Introduction to the history, theory, and emerging activities of social entrepreneurship. Includes management skills for social entrepreneurial organizations, scaling of social impact, and social performance measurement. Emphasis on social capital,	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				microfinance, and evaluation of social entrepreneurial opportunities.					
EPS165	2013 Spring	New Venture Feasibility Analysis		Introduction to the industry's market and competitive structure. Includes the technical skills to develop a competitive strategy for entry into the business segment. Covers the market potential evaluation, niche identification, analysis of competition, and development of customer profiles. Also involves development of a marketing strategy and sales projections for new business ventures.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
EPS180	2014 Summer	Technology Business Planning		Fundamentals of identifying new technologies and innovations for profitable commercial feasibility. Determination of capabilities, resources, and interests of the entrepreneur. Evaluation and selection of technology opportunities. Creation of business concept and plan. Customer development and business models. Finances, venture capital and accounting. Marketing and sales. Legal formation and intellectual property. Operations and resource management. Growth, harvest and success.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
EPS195	2013 Summer I	Business Start-Up and Planning		Development of a feasibility approach to strategic decision making concerning new venture start-up. Includes development of a business feasibility study and a preliminary business plan.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
EQS105	2024 Fall	Principles of Equine Science		Breeds, colors and markings; horse selection; basic conformation; structures of the hoof; footfall sequences; vision, managed health program; nutrition principles; management practices, Arizona issues and history and evolution of the horse.	Prerequisites: Permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
EQS120	2021 Fall	Equine Anatomy and Physiology		Study of structure and function of the equine. Includes cell structure, anatomy and physiology of major	Prerequisites: A grade of C or better in EQS105 or		Occ	L+L 4.0	T

				systems with emphasis on skeletal, muscular, and digestive systems. Incorporates detailed discussion and identification of various anatomical parts.	permission of Department or Division.			5.0 5.0	
EQS130	2024 Fall	Equine Business and Law		Practices and records used in the equine business. Includes record keeping systems and basic accounting principles; taxes; personnel management practices; computer programs for record keeping and operations management. Addresses legal aspects and laws unique to equine businesses.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
EQS140	2011 Fall	Equine Behavior		Equine behavior modification using the horse's natural behavior patterns. Emphasis on intelligence level, vision, emotions, hearing, and attention span of the horse.	Prerequisites: A grade of C or better in EQS105 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
EQS145	2018 Fall	Basic Horsemanship		Rudimentary knowledge concerning horse handling safety, basic riding equipment, grooming techniques, saddling, bridling, mounting, dismounting, and basic control of the horse at the walk and trot. English or western equipment used. Emphasis on position of rider as it relates to basic control of the horse	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
EQS160	2018 Fall	English Horsemanship I		Basic ground work and safety procedures; control of the horse at the walk, trot, and canter; rider position and use of fundamental aids	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
EQS162	2024 Fall	Equine and Stable Management I		Focus on daily stable operations in the care and management of horses. Practical experience in basic horse husbandry, horsemanship, and stable management. Development of ground handling skills and use of lunge line and round penning techniques. Topics include feeding, watering, stable sanitation, grooming, bathing, vaccines, parasite control, safety, horse behavior, health, wounds and their treatments, and record keeping.	Prerequisites: A grade of C or better in EQS105 or permission of Department or Division.		Occ	L+L 3.0 4.0 4.0	T

EQS162VT	2019 Summer	Equine Management for the Veterinary Technician		A hands-on introduction to daily stable operations in the care and management of horses. Practical experience with various assigned horses in basic horse husbandry, horsemanship, and stable management. Development of ground handling skills during various activities related to the care of horses. Effective use of lunge line and round penning techniques. Topics include feeding, watering, stable sanitation, grooming, bathing, lameness exams, vaccines, blood draws, parasite control, safety, horse behavior, health, wounds and their treatments, veterinary forms and recordkeeping.	Prerequisites: Veterinary Technician student currently enrolled in Mesa Community College (MCC) Veterinary Technology Program or student currently enrolled in Scottsdale Community College (SCC) Equine Science Program on track with Mesa Community College (MCC) Veterinary Technology Program upon graduation from SCC.		Occ	L+L 2.0 4.0 4.0	T
EQS165	2018 Fall	Western Horsemanship I		Basic ground work and safety procedures; control of the horse at the walk, jog, and lope; rider position and use of fundamental aids	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
EQS180	2018 Fall	English Horsemanship II		Increase control, balance, form and finesse in the balanced seat style of English riding. Emphasis on developing the rider's ability to apply precise, prompt, smooth aids, and attain harmony with the horse through use of "body language."	Prerequisites: A grade of C or better in EQS160 or permission of Department or Division.		Occ	L+L 3.0 3.0 3.0	T
EQS185	2018 Fall	Western Horsemanship II		Refinement of basic riding skills; weight, leg, and rein aids; gathering and checking; two-track; trail obstacles; simple change of lead; elements of a Western riding pattern.	Prerequisites: A grade of C or better in EQS165 or permission of Department or Division.		Occ	L+L 3.0 3.0 3.0	T
EQS195	2024 Fall	Equine Therapies I		Designed to acquaint students with equine therapies for major muscle groups, the skeletal system and the hoof of the horse. The relationship that exists between the listed systems, equine locomotion and lameness problems will be discussed. Discussion, demonstration, and/or practical hands-on opportunities of equine therapy techniques will be focus of the class.	Prerequisites: A grade of C or better in EQS120 and EQS264, or permission of Department or Division.	EQS195 is not designed to train or certify individuals to massage horses on a	Occ	L+L 3.0 6.0 6.0	T

						profession al basis.			
EQS200	2024 Fall	Principles of Equine Nutrition		Basic principles of equine nutrition and digestion. Proper selection, evaluation and utilization of feeds as well as the feeding and care of the equine in various stages of production, growth and performance. Emphasis on nutrient content and ration evaluation, general health and feed management. Identifies specific nutritional needs of each class of equine and formulates feeding programs based on these specific needs.	Prerequisites: A grade of C or better in EQS120 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
EQS205	1988 Fall	Equine Genetics, Selection, Development		Introduction to genetics as applied to selection of breeding animals. Emphasis on phenotypic selection and foal development	Prerequisites: A grade of C or better in EQS120 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
EQS215	2004 Fall	Feeding Programs for Production and Performance		Explores the feeding and care of the equine in various stages of production, growth and performance. Identifies specific nutritional needs of each class of equine and formulates feeding programs based on these specific needs	Prerequisites: A grade of C or better in EQS200 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
EQS220	2024 Fall	Equine Reproduction		Reproductive anatomy and physiology; care and management of the breeding stallion; breeding procedures and artificial insemination. Care of pregnant mare; foaling procedures.	Prerequisites: A grade of C or better in EQS120 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
EQS225	2024 Fall	Equine Health and Disease Management		Aspects of equine health and disease prevention. Emphasis on preventive maintenance. Preventive medicine and necessary managerial practices needed to keep the equine athlete, broodmare, or family horse in good health.	Prerequisites: A grade of C or better in EQS120 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
EQS235	2018 Fall	English Horsemanship and Training		Riding skills and training techniques for the English horse. Includes review of basic horsemanship skills, lateral bend and vertical flexion, halt, rein back, leg yield, counter canter, simple	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T

				and flying change of leads, mental preparation for shows and the judging criteria for various performances					
EQS245	2018 Fall	Western Horsemanship and Training		Riding skills and training techniques for the western horse. Includes review of basic horsemanship skills, stopping, backing, two track, simple and flying lead changes, turns on the forehand and hindquarters, rating speed collection, western riding patterns and horse show preparation	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
EQS250	2024 Fall	Equine Evaluation		Fundamental relationship between good conformation and ability of the horse to remain sound and useful. Includes basic skeletal structure, common deviations in range of motion and evidence of lamenesses. Breed conformation standards and performance events for the more common breeds.	Prerequisites: A grade of C or better in EQS120 or permission of Department or Division.		Occ	L+L 3.0 4.0 4.0	T
EQS264	2024 Fall	Equine and Stable Management II		Advanced practical experience in horse and stable management. Practical and supervisory experience in daily stable operations that increase skill and knowledge level in the care and management of horses. Topics include nutrition, diseases and their prevention, environmental issues parasite, pests and rodent control, safety, horse handling, wounds and their treatments, injury and treatments, inventory control, record keeping, and industry-standard operating procedures.	Prerequisites: A grade of C or better in EQS162, or permission of Department or Division.		Occ	L+L 3.0 4.0 4.0	T
EQS270	2018 Fall	Teaching Techniques in Horsemanship		Theory and principles in teaching horsemanship and developing a public lesson program. Emphasis on developing a lesson plan, communication and public relations skills; horse and rider problem analysis; and methods of group control	Prerequisites: A grade of C or better in EQS105 and EQS145 and (EQS160 or EQS165) or permission of Department or Division.		Occ	L+L 3.0 4.0 4.0	T
EQS275	2024 Fall	Equine Lameness		A continuing study of equine skeletal anatomy with emphasis on the normal function of front and hind legs and the hoof. Covers methods of evaluating	Prerequisites: A grade of C or better in EQS250, or permission of		Occ	L+L 4.0 4.0 4.0	T

				various deviations that present as lameness in horses; how conformation, gait, and lameness relate to performance, physical and behavior issues; the protocol of equine gait assessments on actual horses; and how to diagram the footfalls of the horse. Topics include the body's response to injury, forms of therapy, types of conditioning, and rehabilitative techniques for returning horses to usefulness and performance.	Department or Division.				
EQS280	2024 Fall	Equine Science Internship		Equine industry work experience at faculty approved site. Focus of internship is immersion in an area of interest in or related to equine industry.	Prerequisites: A grade of C or better in EQS264 or permission of Department or Division.	EQS280 requires a minimum of 250 contact hours. Students can choose to participate in EQS285 Equine Science Practicum or EQS280.	Occ	LAB 3.0 15.0 0.0	C
EQS283	2018 Fall	Special Event Internship		Hands-on career track experience before, during and after a major equine event. Emphasis on event coordination and management issues.	Prerequisites: A grade of C or better in EQS105 or permission of Department or Division.	EQS283 requires a minimum of 30 contact hours. EQS283 may be repeated for a total of four (4) credit hours with permission of Departme	Occ	LAB 1.0 2.0 0.0	C

						nt or Division.			
EQS284	2003 Spring	Teaching Techniques Internship		Short term in-depth participation assisting with the organization and methods of instruction for an Equine Science horsemanship class.	Prerequisites: A grade of C or better in EQS270 plus an assessment of horsemanship skills.	EQS284 may be repeated for a total of four (4) credits with department permission.	Occ	LAB 1.0 5.0 0.0	C
EQS285	2024 Fall	Equine Science Practicum		Equine industry work experience at faculty approved site.	Prerequisites: A grade of C or better in EQS264 or permission of Department or Division.	EQS285 requires a minimum of 160 contact hours. Students can choose to participate in EQS280 Equine Science Internship or EQS285. May be repeated for a total of four (4) credit hours. Repeats 2.0 4.0	Occ	LAB 2.0 10.0 0.0	C
EQS294	2018 Fall	Special Topics in Equine Science		Exploration of special topics related to Equine Science and Equine Management with an emphasis on current issues.	Prerequisites: None.	EQS294 may be repeated for credit.	Occ	L+L 3.0 4.0 4.0	T
EQS294AA	2018 Fall	Special Topics in Equine Science		Exploration of special topics related to Equine Science and Equine Management with an emphasis on current issues.	Prerequisites: None.	EQS294A A may be repeated for credit.	Occ	LEC 2.0 2.0 2.0	S

EQS294AB	2018 Fall	Special Topics in Equine Science		Exploration of special topics related to Equine Science and Equine Management with an emphasis on current issues.	Prerequisites: None.	EQS294A B may be repeated for credit.	Occ	LEC 1.0 1.0 1.0	S
EQS294AC	2018 Fall	Special Topics in Equine Science		Exploration of special topics related to Equine Science and Equine Management with an emphasis on current issues.	Prerequisites: None.	EQS294A C may be repeated for credit.	Occ	LEC 0.5 0.5 0.5	S
EQS295	2024 Spring	Equine Therapies II		Designed to train students with advanced equine therapy methods to relieve common conditions and pathologies for the musculoskeletal system. Identifying biomechanics, variations and abnormalities, muscle tension, joint stress, common injuries and lameness. Identifying and assessing the relationship between conformational flaws, range of motion and lameness as they align with the performance of specific disciplines. Discussion and demonstration with practical hands-on training of advanced equine therapy methods. Designed to train students to work in the field as an Equine Massage Practitioner with the ability to evaluate common conditions, and carry out a treatment plan, that will relieve muscle tension and pain, increasing circulation, flexibility and range of motion in the horse.	Prerequisites: A grade of B or better in EQS175 or permission of Department or Division. Students must pass an entrance test before permission to enroll will be given.		Occ	L+L 3.0 6.0 6.0	T
EQS296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled		Occ	LAB 1.0 5.0 0.0	Z

					in at least one class which is related to students major or career interest or with permission of Instructor.				
EQS296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
EQS296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with		Occ	LAB 3.0 15.0 0.0	Z

					permission of Instructor.				
EQS296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
EQS298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
EQS298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				combined to maximize student development.					
EQS298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
ESL002	2017 Fall	Basic English as a Second Language II		Listening, speaking, reading, and writing in English at a high beginning level. Focus on survival skills related to life in the United States. Continuing development of grammatical patterns.	Prerequisites: A grade of C or better in ESL001 or permission of Instructor.	ESL002 may be repeated for a total of twelve (12) credit hours.	Acad	LEC 6.0 6.0 6.0	S
ESL010	2002 Fall	English as a Second Language I: Grammar		First level of English as a Second Language (ESL). Emphasis on basic conversational skills, pronunciation, vocabulary building and grammar. Some reading and sentence level writing.	Prerequisites: Appropriate ESL placement test score.	ESL010 may be repeated for a total of six (6) credit hours. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog.	Acad	LEC 3.0 3.0 3.0	S
ESL011	2003 Fall	English as a Second Language I: Listening and Speaking		Emphasis on listening and speaking skills involving survival skills. Asking and answering questions related to work, shopping, and personal safety.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL002.	ESL011 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S

ESL012	2001 Fall	ESL I-Writing with Oral Practice		Emphasis on basic conventions of writing in English. Includes introduction to the alphabet, capitalization, punctuation, and simple sentence structure.	Prerequisites: Appropriate ESL placement test score or permission of Instructor.	ESL012 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
ESL013	2013 Spring	Vocabulary for ESL I		Emphasis on the acquisition of basic English vocabulary including identifying and pronouncing words related to people, medical/dental care, occupations and other activities.	Prerequisites: Appropriate ESL placement test score or permission of Instructor.	ESL013 may be repeated for a total of two (2) credit hours.	Acad	L+L 1.0 1.0 0.0	Z
ESL016	2023 Fall	Reading English as a Second Language I		Designed for students who are learning English as a second language. Skills needed to become proficient readers in English. Sound symbol relationships of the English alphabet. Essential vocabulary for daily communication both in isolation and context. Development of reading comprehension skills.	Prerequisites: Appropriate ESL placement test score.		Acad	LEC 3.0 3.0 3.0	S
ESL020	2017 Fall	English as a Second Language II: Grammar		Second level of English as a Second Language (ESL). Continued emphasis on conversational skills, pronunciation, vocabulary building and grammar with some reading and sentence level writing.	Prerequisites: Appropriate ESL placement test score or a grade of P or C or better in ESL010.	ESL020 may be repeated for a total of six (6) credit hours. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog.	Acad	LEC 3.0 3.0 3.0	S
ESL021	2003 Fall	English as a Second Language II: Listening and Speaking		Emphasis on listening and speaking skills involving social exchange. Asking and answering questions, using tag questions. Practice with	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL010 or	ESL021 may be repeated for a total of six (6)	Acad	LEC 3.0 3.0 3.0	S

				question and answer patterns. Polite questions and responses.	ESL011 or ESL012 or RDG010.	credit hours.			
ESL022	2006 Spring	ESL II-Writing with Oral Practice		Emphasis on basic writing skills, accompanied by recitation of short writings. Sentence patterns and introduction of paragraph writing.	Prerequisites: Appropriate ESL course placement score or a grade of C or better in ESL012 or permission of Instructor.	ESL022 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
ESL023	2013 Spring	Vocabulary for ESL II		Emphasis on the acquisition of basic English vocabulary including identifying and pronouncing words related to people, medical/dental care, occupations and other activities.	Prerequisites: Appropriate ESL placement test score or permission of Instructor.	ESL023 may be repeated for a total of two (2) credit hours.	Acad	L+L 1.0 1.0 0.0	Z
ESL026	2023 Fall	Reading English as a Second Language II		Designed for students who are learning English as a second language. Continued development of vocabulary and reading comprehension skills.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL016 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
ESL030	2017 Fall	English as a Second Language III: Grammar		Third level of English as a Second Language (ESL). Emphasis on sentence structure and paragraph building. Extensive grammar study and writing practice.	Prerequisites: Appropriate ESL placement test score or a grade of P or C or better in ESL020.	ESL030 may be repeated for a total of six (6) credit hours. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog.	Acad	LEC 3.0 3.0 3.0	S
ESL031	2023 Fall	English as a Second Language III: Listening and Speaking		Emphasis on listening and speaking skills related primarily to the academic environment. Asking questions, working in small groups, using college resources, informal oral presentation.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL020 or	ESL031 may be repeated for a total of six (6)	Acad	LEC 3.0 3.0 3.0	S

					ESL021 or ESL022 or ESL026.	credit hours.			
ESL032	2006 Spring	ESL III-Writing with Oral Practice		Emphasis on complex sentence patterns in writing and speech. Introduction to the prewriting and writing process in a college setting.	Prerequisites: Appropriate ESL course placement score or a grade of C or better in ESL022 or permission of Instructor.	ESL032 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
ESL033	2013 Spring	Vocabulary for ESL III		Emphasis on the acquisition of basic English vocabulary including identifying and pronouncing words related to people, medical/dental care, occupations and other activities.	Prerequisites: Appropriate ESL placement test score or permission of Instructor.	ESL033 may be repeated for a total of two (2) credit hours.	Acad	L+L 1.0 1.0 0.0	Z
ESL036	2023 Fall	Reading English as a Second Language III		Designed for students who are learning English as a second language. Instruction for more advanced vocabulary and reading comprehension skills.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL026 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
ESL040	2017 Fall	English as a Second Language IV: Grammar		Fourth-level of English as a Second Language (ESL). Continued emphasis on sentence structure and paragraph building. Extensive grammar study and writing practice.	Prerequisites: Appropriate ESL placement test score or a grade of P or C or better in ESL030.	ESL040 may be repeated for a total of six (6) credit hours. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog.	Acad	LEC 3.0 3.0 3.0	S
ESL041	2023 Fall	English as a Second Language IV: Listening and Speaking		Emphasis on academic skills. Listening to lectures, notetaking, peer interaction, accessing and using media resources, formal oral presentations.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL030 or	ESL041 may be repeated for a total of six (6)	Acad	LEC 3.0 3.0 3.0	S

					ESL031 or ESL032 or ESL036.	credit hours.			
ESL042	2006 Spring	ESL IV-Writing with Oral Practice		Emphasis on paragraph writing and oral recitation of complex sentences and paragraphs. Introduction to the prewriting and writing process for short essays.	Prerequisites: Appropriate ESL course placement score or a grade of C or better in ESL032 or permission of Instructor.	ESL042 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
ESL046	2023 Fall	Reading English as a Second Language IV		Developed for students of English as a second language. Development of advanced vocabulary, comprehension skills, and culture awareness.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL036 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
ESL049	2017 Fall	General Vocational English as a Second Language		General English speaking, listening, reading, and writing skills needed for use at work.	Prerequisites: Appropriate ESL placement test score, or a grade of "C" or better in ESL010, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
ESL050	2006 Spring	Review Grammar For ESL		Review of grammatical concepts for ESL (English as a Second Language) students who have some previous experience in reading and writing English. Appropriate for students who want to practice sentence skills in English.	Prerequisites: Appropriate ESL course placement score or a grade of C or better in ESL040 or permission of Instructor.	ESL050 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
ESL050AA	2017 Fall	Basic Review Grammar for ESL		Review of the use of English verbs and word placement in sentences for ESL (English as a Second Language) students who have some previous experience in reading and writing English. Appropriate for students who want to practice sentence skills in English.	Prerequisites: Appropriate ESL placement test score, or a grade of C or better in ESL010 or permission of Instructor.	ESL050A A may be repeated for a total of two (2) credit hours.	Acad	L+L 1.0 1.0 0.0	Z
ESL050AB	2017 Fall	Intermediate Review Grammar for ESL		Review of auxiliary verbs and the comparative and superlative for ESL (English as a Second Language) students who have some previous experience in reading and writing English. Appropriate for students who want to practice sentence skills in English.	Prerequisites: Appropriate ESL placement test score, or a grade of "C" or better in ESL020, or permission of Instructor.	ESL050A B may be repeated for a total of two (2) credit hours.	Acad	L+L 1.0 1.0 0.0	Z

ESL050AC	2017 Fall	Advanced Review Grammar for ESL		Review of verbals and gerunds for ESL (English as a Second Language) students who have some previous experience in reading and writing English. Appropriate for students who want to practice sentence skills in English.	Prerequisites: Appropriate ESL placement test score, or a grade of "C" or better in ESL030, or permission of Instructor.	ESL050A C may be repeated for a total of two (2) credit hours.	Acad	L+L 1.0 1.0 0.0	Z
ESL051	2023 Fall	Pronunciation Improvement for ESL Speakers		Individualized pronunciation practice and drills for English as a second language (ESL) speakers.	Prerequisites: Appropriate ESL course placement score, or a grade of C or better in (ESL020 or ESL021 or ESL022 or ESL026) or permission of Instructor.	ESL051 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
ESL053	2024 Spring	Phonics		Designed for students who are learning English as a second language. Includes the study of the speech sounds used in English as represented by the written symbols of the alphabet; recognition of spelling patterns; resulting pronunciation; and spelling.	Prerequisites: Appropriate ESL course placement score, or a grade of C or better in (ESL020, or ESL021, or ESL022, or ESL026), or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
ESL054	2023 Fall	American Culture		Reading and writing about American culture including history, institutions and sports, and entertainment.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL040 or ESL046 or permission of Instructor.	ESL054 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
ESL054AA	2023 Fall	American Culture: History		Reading and writing about American history.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL040 or ESL046 or permission of Instructor.	ESL054A A may be repeated for a total of two (2) credit hours.	Acad	L+L 1.0 1.0 0.0	Z
ESL054AB	2023 Fall	American Culture: Institutions and Customs		Reading and writing about American cultural institutions and customs.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL040 or	ESL054A B may be repeated for a total of two (2)	Acad	L+L 1.0 1.0 0.0	Z

					ESL046 or permission of Instructor.	credit hours.			
ESL054AC	2023 Fall	American Culture: Sports and Entertainment		Reading and writing about American sports and entertainment.	Prerequisites: Appropriate ESL placement test score or a grade of C or better in ESL040 or ESL046 or permission of Instructor.	ESL054A C may be repeated for a total of two (2) credit hours.	Acad	L+L 1.0 1.0 0.0	Z
ESL061	2002 Fall	Informal Conversational and Written English for Non-native Speakers		Practice speaking and writing English in informal settings. Emphasis on friendly conversational techniques and effective use of the computer and the Internet to communicate in a friendly, relaxed manner.	Prerequisites: Appropriate ESL placement test score or a grade of P or C or better in ESL020 or ESL021 or ESL022 or RDG020.		Acad	LEC 3.0 3.0 3.0	S
ESL071	2006 Spring	Advanced Pronunciation and Oral Reading for ESL		Pronunciation practice and review, spelling of English sounds, and oral reading for stress and intonation patterns in English.	Prerequisites: A grade of C or better in ESL051 or permission of Instructor.	ESL071 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
ESL077	2016 Spring	Preparatory Academic Writing I for ESL		Emphasizes preparation for college level composition and related reading tasks with a focus on communicating through complete, grammatically correct writing, organized to communicate a central idea.	Prerequisites: Appropriate writing placement test score or permission of Department or Division.		Acad	LEC 3.0 3.0 3.0	S
ESL087	2024 Spring	Preparatory Academic Writing II for ESL		Emphasizes preparation for college-level composition and related reading tasks with a focus on critical writing, reading, and thinking skills and processes.	Prerequisites: A grade of C or better in (ESL040, ESL041, ESL042, and ESL046) or permission of Department or Division Chair.		Acad	LEC 3.0 3.0 3.0	S
ESL097	2024 Spring	Preparatory Academic Writing III for ESL		Emphasizes preparation for first year composition with a focus on critical writing, reading, and thinking skills and processes at an increased level of academic complexity.	Prerequisites: A grade of C or better in ENG081, or ESL087, or permission of Department or Division Chair.		Acad	LEC 3.0 3.0 3.0	S

ESL101	2023 Fall	English as a Second Language I		Beginning language skills for English language learners to develop reading, writing, listening, and speaking skills. Emphasizes integrated reading and writing skills.	Prerequisites: Appropriate ESL placement score or permission of Instructor.	ESL101 content aligns with common European Framework of Reference for languages (CEFR) A2 guidelines .	Acad	LEC 6.0 6.0 6.0	S
ESL101AA	2023 Fall	English as a Second Language IA		Beginning language skills for English language learners to develop reading, writing, listening, and speaking skills. Emphasizes integrated reading and writing skills.	Prerequisites: Appropriate ESL placement score or permission of Instructor.	ESL101A A content aligns with common European Framework of Reference for languages (CEFR) A2 guidelines .	Acad	LEC 3.0 3.0 3.0	S
ESL101AB	2023 Fall	English as a Second Language IB		Beginning language skills for English language learners to develop reading, writing, listening, and speaking skills. Emphasizes integrated reading and writing skills.	Prerequisites: A grade of C or better in ESL101AA, or appropriate ESL placement score, or permission of Instructor.	ESL101A B content aligns with common European Framework of Reference for languages (CEFR) A2 guidelines .	Acad	LEC 3.0 3.0 3.0	S
ESL102	2023 Fall	English as a Second Language II		Low-intermediate language skills for English language learners to develop reading, writing, listening, and	Prerequisites: A grade of C or better in ESL101, or (ESL101AA and		Acad	LEC 6.0 6.0 6.0	S

				speaking skills. Emphasizes integrated reading and writing skills.	ESL101AB), or appropriate placement score, or permission of Instructor.				
ESL102AA	2023 Fall	English as a Second Language IIA		Language skills for English language learners to develop reading, writing, listening, and speaking skills. Emphasizes integrated reading and writing skills.	Prerequisites: A grade of C or better in ESL101, or (ESL101AA and ESL101AB), or appropriate placement score, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
ESL102AB	2023 Fall	English as a Second Language IIB		Language skills for English language learners to develop reading, writing, listening, and speaking skills. Emphasizes integrated reading and writing skills.	Prerequisites: A grade of C or better in ESL102AA, or appropriate placement score, or permission of Instructor.	ESL102A B content aligns with common European Framework of Reference for Languages (CEFR) A2 guidelines.	Acad	LEC 3.0 3.0 3.0	S
ESL110	2023 Fall	Beginning to Low-Intermediate English Listening and Speaking		Beginning to low-intermediate English language listening and speaking skills on familiar topics. Focus on the development of an appropriate degree of accuracy, fluency, and spontaneity to allow for interactions appropriate to this level.	Prerequisites: Appropriate ESL placement score or permission of Instructor.	ESL110 may be repeated for a total of six (6) credit hours. ESL110 content aligns with common European Framework of Reference for languages (CEFR)	Acad	LEC 3.0 3.0 3.0	S

						A1 and A2 guidelines			
ESL140	2023 Fall	Beginning to Low-Intermediate English Grammar		Beginning to low-intermediate grammar for English language learners. Emphasis on use of language in familiar contexts.	Prerequisites: Appropriate ESL placement score or permission of Instructor.	ESL140 may be repeated for a total of six (6) credit hours. ESL140 content aligns with common European Framework of Reference for languages (CEFR) A1 and A2 guidelines	Acad	LEC 3.0 3.0 3.0	S
ESL201	2023 Fall	English as a Second Language III		High-intermediate language instruction for English language learners to build proficiency in academic and professional listening, speaking, reading, and writing. Focuses on integrated reading and writing skills.	Prerequisites: A grade of C or better in ESL102, or (ESL102AA and ESL102AB), or appropriate ESL placement score, or permission of Instructor.		Acad	LEC 6.0 6.0 6.0	S
ESL201AA	2023 Fall	English as a Second Language IIIA		High-intermediate language instruction for English language learners to build proficiency in academic and professional listening, speaking, reading, and writing. Focuses on integrated reading and writing skills.	Prerequisites: A grade of C or better in ESL102, or (ESL102AA and ESL102AB), or appropriate ESL placement score, or permission of Instructor.	ESL201A A content aligns with common European Framework of Reference for languages (CEFR) B1	Acad	LEC 3.0 3.0 3.0	S

						guidelines			
ESL201AB	2023 Fall	English as a Second Language IIIB		High-intermediate language instruction for English language learners to build proficiency in academic and professional listening, speaking, reading, and writing. Focuses on integrated reading and writing skills.	Prerequisites: A grade of C or better in ESL201AA, or appropriate ESL placement score, or permission of Instructor.	ESL201A B content aligns with common European Framework of Reference for languages (CEFR) B1 guidelines	Acad	LEC 3.0 3.0 3.0	S
ESL202	2023 Fall	English as a Second Language IV		Advanced language instruction for English language learners to further develop proficiency in academic and professional listening, speaking, reading, and writing with an introduction to information literacy. Emphasizes integrated reading and writing skills for use in research and presentation.	Prerequisites: A grade of C or better in ESL201, or (ESL201AA and ESL201AB), or appropriate ESL placement score, or permission of Instructor.	ESL202 content aligns with common European Framework of Reference for languages (CEFR) B1 guidelines	Acad	LEC 6.0 6.0 6.0	S
ESL202AA	2023 Fall	English as a Second Language IVA		Advanced language instruction for English language learners to further develop proficiency in academic and professional listening, speaking, reading, and writing with an introduction to information literacy. Emphasizes integrated reading and writing skills for use in research and presentation.	Prerequisites: A grade of C or better in ESL201, or (ESL201AA and ESL201AB), or appropriate ESL placement score, or permission of Instructor.	ESL202A A content aligns with common European Framework of Reference for languages (CEFR) B1 guidelines	Acad	LEC 3.0 3.0 3.0	S

ESL202AB	2023 Fall	English as a Second Language IVB		High-intermediate language instruction for English language learners to build proficiency in academic and professional listening, speaking, reading, and writing. Focuses on integrated reading and writing skills.	Prerequisites: A grade of C or better in ESL202AA, or appropriate ESL placement score, or permission of Instructor.	ESL202A B content aligns with common European Framework of Reference for languages (CEFR) B1 guidelines .	Acad	LEC 3.0 3.0 3.0	S
ESL210	2025 Spring	High-Intermediate to Advanced English Listening and Speaking		High-Intermediate to advanced English language listening and speaking skills on academic, professional, and socio-cultural topics. Focus on the development of accuracy, fluency, and spontaneity to allow for constructive interactions.	Prerequisites: A grade of C or better in ESL102, or appropriate ESL placement score, or permission of Instructor.	ESL210 may be repeated for a total of six (6) credit hours. ESL210 content aligns with common European Framework of Reference for languages (CEFR) B1 and B2 guidelines .	Acad	LEC 3.0 3.0 3.0	S
ESL240	2025 Spring	High-Intermediate to Advanced English Grammar		High-intermediate to advanced grammar for English language learners. Emphasis on use of language for different situations.	Prerequisites: A grade of C or better in ESL102, or appropriate ESL placement score, or permission of Instructor.	ESL240 may be repeated for a total of six (6) credit hours. ESL240 content aligns with common	Acad	LEC 3.0 3.0 3.0	S

						European Framework of Reference for languages (CEFR) B1 and B2 guidelines			
ESL250	2024 Fall	Vocational English		Overview of job-related vocabulary, language skills, and intercultural competence for English language learners to use in pursuing, attaining, and maintaining employment.	Prerequisites: A grade of C or better in ESL102, or (ESL102AA and ESL102AB), or appropriate ESL placement score, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
ESL298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
ESL298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
ESL298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an	Prerequisites: Permission of		Acad	LAB 3.0	Z

				atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			3.0 0.0	
ESP180	2022 Fall	College and Career Readiness		This college and career readiness course is designed to prepare students for the rigors and expectations of post-secondary education. Students will learn essential professional skills required for success in the workplace, as well as learn vital academic skills required for success in the classroom. Students will be introduced to educational pathways for career exploration, learn how to write a professional resume, cover letter, conduct mock interviews, and gain a better understanding of post-secondary funding options.	Prerequisites: Admission into the Emergency Medical Technology program. Successful completion of RDG100 or higher or appropriate reading placement into CRE101.		CLK	40	
EST102	2024 Fall	Aesthetics Essentials		As students begin their training in Aesthetics, they will begin to develop and demonstrate proficiencies in effective client communication, interpersonal skills, and will learn how to deliver an effective skin care facial treatment and client pre and post consultations. Topics will also include sanitation, Arizona laws, client care, and facial care.	Prerequisites: Admission to the Aesthetics program, or Program Manager's approval.		CLK	200	
EST110	2024 Fall	Advanced Aesthetics		Theory and application of advanced skin care modalities, resurfacing, and cosmetic chemistry. Hair removal techniques, makeup application, and an introduction to body treatments are also included. Application of theory and skills through treatment services provided to the public. Focus on communication and documentation to create customized treatment plans and product recommendations for	Prerequisites: EST102 with a grade of 80% or better, or Program Manager's approval.		CLK	200	

				clients that follow all safety and infection control procedures in compliance with the Arizona Barbering and Cosmetology Board (BCB).					
EST115	2024 Fall	Aesthetics Mastery		Focus on theories and performance of comprehensive professional aesthetics treatments for the public including communication and documentation to create customized treatment plans and product recommendations for clients that follow all safety and infection control procedures in compliance with the Arizona Barbering and Cosmetology Board (BCB). Overview of business planning and employment in the field including marketing, job search strategies, professional development, and self promotion. BCB licensure examination preparation.	Prerequisites: EST110 with a grade of 80% or better, or Program Manager's approval.		CLK	200	
ETH210	2025 Fall	Multicultural Representation in the History of STEM	AFR/AIS/C CS210	Aims to fill a gap by exploring the perspectives, experiences, and contributions of individuals from various cultural backgrounds in the study of science, technology, engineering, and mathematics (STEM). Analyzes and synthesizes how different cultures have shaped scientific knowledge, examining the impact of diversity on innovation and problem-solving, and addressing barriers faced by underrepresented groups in STEM fields.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ETL220	2018 Spring	Online Teaching and Learning I		Application of and experience using an online teaching and learning environment from a student's perspective to inform the design and support of an online course environment. Application and evaluation of online learning principles and tools for teaching and learning. Identification and development of online facilitation knowledge and skills. Introduction to	Prerequisites: Permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S

				the best practices in content building, course design and delivery.					
ETL221	2018 Spring	Online Teaching and Learning II		Experience with creating an online or hybrid duplicative course module structure in an online teaching and learning environment using evidence-based practices in course design. Develop learning objectives and module map based on curricular principles. Using instructional design techniques develop and align materials, activities, assignments and assessments to learning objectives. Discuss and develop active learning strategies for presenting content, facilitating discussions, creating assignments and administering assessments in the online environment.	Prerequisites: A grade of C or better in ETL220 or permission or Instructor.		Acad	LEC 3.0 3.0 3.0	S
EUT103	2020 Fall	Introduction to Rigging		Basic fundamentals of overhead rigging. Topics covered include elements of safe rigging, rope, knots and knot tying, use of a handline, and use of blocks and tackle. Exploration of variety approaches to basic rigging tasks.	Prerequisites: [A grade of B or better in (MAT055, MAT056, and MAT057), or a grade of B or better in MAT09+, or appropriate district placement into MAT122], and a grade of C or better in ENG091, or ESL097, or appropriate district placement into ENG101.		Occ	LEC 2.0 2.0 2.0	S
EUT104	2018 Fall	Equipment Safety and Operation		Operation and maintenance of equipment used in the utility industry. Identification and inspection of the major mechanical operations of equipment, as well as performance of pre-trip inspections on utility equipment. Emphasis on safety operations.	Prerequisites: None.		Occ	L+L 2.0 2.0 2.0	T
EUT105	2018 Fall	Introduction to Pole Climbing		Proper climbing techniques for new climbers. Inspection and maintenance of pole climbing equipment, the	Prerequisites: None.		Occ	LAB 1.0 1.0 1.0	T

				equipment used in pole climbing, and how to maintain it.					
EUT110	2008 Fall	Line Work I		Overview of line work industry including its history, technological developments and current practices. Examines industry equipment and tools. Focuses on safety practices and procedures used in utility line work industry	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
EUT112	2018 Fall	Basic Electricity: AC and DC		Reviews the basic principles of Alternating Current (AC) and Direct Current (DC) electricity. Examines the structure and function of AC and DC circuits including series, parallel and series-parallel circuits. Includes an overview of electric systems and their applications in the utility industry.	Prerequisites: A grade of C or better in or EUT110 and (EUT115 or CAD101) or Corequisites: EUT110 and (EUT115 or CAD101).		Occ	L+L 4.0 4.0 4.0	T
EUT115	2018 Fall	Training I		Practice in the basics of climbing and working on utility poles. Focuses on apparatus and equipment, using ropes and rigging equipment, installations of single and double cross arms, pole framing and setting, use of hand line and building single-phase lines.	Prerequisites: A grade of C or better in EUT110 and EUT112 or Corequisites: EUT110 and EUT112.		Occ	L+L 4.0 12.0 12.0	T
EUT210	2003 Spring	Line Work II		Overview of line work industry including its history, technological developments and current practices. Examines industry equipment and tools. Focuses on hot sticking, tag out and lock out procedures with emphasis on industry safety practices and procedures	Prerequisites: A grade of C or better in EUT110.		Occ	LEC 2.0 2.0 2.0	S
EUT211	2018 Fall	Electrical Apparatus		Overview of transformers and how they operate. Reviews single and three-phase theory. Focuses on construction and hook-up of single-phase, three- phase, open Y and Delta transformer connections. Presents an overview of surge arresters, including applications and installation.	Prerequisites: A grade of C or better in EUT110, EUT112 and (EUT115 OR CAD101). Corequisites: EUT215 or CAD164.		Occ	L+L 4.0 4.0 4.0	T
EUT215	2018 Fall	Training II		Practice in the installation of electrical lines including transformers, reclosers, and service loops. Teaches rubber gloving, hot sticking	Prerequisites: A grade of C or better in EUT110, EUT112, and EUT115.		Occ	L+L 4.0 12.0 12.0	T

				techniques, and trenching of underground lines. Practice in the safe set-up and operation of equipment used in the line industry with a focus on the development of entry-level skills as drivers and operators. Includes procedures and practice in pole-top and bucket-truck rescues.	Corequisites: EUT211.				
EXS101	2019 Fall	Introduction to Exercise Science		Introductory course that will provide the student with a general overview of the key theories and concepts, professions, and research areas associated with the field of Exercise Science. Educational pathways and career options will also be examined.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
EXS123	2018 Fall	Active for Life		Uses a variety of behavior change strategies to help fit physical activity into a busy schedule. Addresses the root causes of physical inactivity and focuses on the skills needed to establish a lifelong habit of physical activity	Prerequisites: None.		Acad	L+L 2.0 4.0 4.0	T
EXS125	2019 Spring	Introduction to Exercise Physiology		Principles of exercise science applied to fitness instruction. Major factors related to the function of the human body will be examined/introduced with an emphasis on exercise physiology and functional anatomy.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
EXS138	2009 Spring	Starting Your Own Personal Training Business		Overview of the personal training business in the fitness industry. Skills for becoming a successful and effective personal training business owner	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
EXS146	2022 Fall	Introduction to Exercise Testing		Introductory course in exercise testing, to include health appraisal, risk stratification, and the selection and administration of common evidence-based assessments for apparently healthy populations.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor. Prior completion of or concurrent enrollment		Acad	L+L 1.0 2.0 2.0	T

					in EXS125 is recommended.				
EXS215	2022 Fall	Resistance Training and Recovery Techniques		Fundamental methods for safe and effective instruction of resistance, functional, and athletic conditioning exercises. Application of foundational principles of physiology and kinesiology. Overview of warm-up, cooldown, and recovery techniques.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.		Acad	L+L 3.0 4.0 4.0	T
EXS217	2022 Fall	Cardiorespiratory and Flexibility Training		Fundamental methods for safe and effective instruction of cardiorespiratory and flexibility training exercises. Application of foundational principles of physiology and kinesiology.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: EXS101 or permission of Instructor.		Acad	L+L 3.0 4.0 4.0	T
EXS220	2018 Fall	Personal Trainer Practicum		Integration of knowledge, skills and abilities developed in the prerequisite classes to develop best practices as a fitness professional. Assessment of clients' baseline fitness; development and implementation of a safe and appropriate exercise program. This capstone classroom experience is for students in the personal training certificate program prior to internship.	Prerequisites: A grade of C or better in EXS112, EXS125, EXS130, and FON105.		Acad	L+L 3.0 3.0 3.0	T
EXS246	2022 Fall	Advanced Exercise Testing		Advanced course in exercise testing, to include health appraisal, risk stratification, and the selection and administration of evidence-based assessments for apparently healthy and athletic populations. Pharmacology, special populations, and environmental conditions are also examined.	Prerequisites: A grade of C or better in EXS146 or permission of Instructor.		Acad	L+L 2.0 3.0 3.0	T
EXS250	2018 Fall	Applied Kinesiology		Anatomical and physiological fundamentals and applications of human movement. Emphasizes the relationship between anatomical structure and function of the musculoskeletal system. Examines neuromuscular aspects of human motion and fundamental stabilization and movement of the extremities and	Prerequisites: A grade of C or better in (BIO160 or BIO201) and EXS125 and (EXS130 or EXS216).		Acad	LEC 4.0 4.0 4.0 LAB 0.0 2.0 2.0	T

				spine. Analyzes kinesiological aspects of functional movement in the human body, and identifies normal and abnormal human movement patterns.					
EXS255	2022 Fall	Program Design: Muscular Fitness and Performance		Advanced principles of muscular fitness, sports performance, and recovery techniques including needs analysis, interpretation of assessment outcomes, and evidence-based program design for healthy and athletic populations. Considerations for special populations and environments also examined.	Prerequisites: A grade of C or better in (EXS125 and EXS146) or permission of Instructor.		Acad	L+L 3.0 4.0 4.0	T
EXS257	2022 Fall	Program Design: Cardiorespiratory Fitness		Advanced principles of cardiorespiratory fitness and weight management including needs analysis, interpretation of assessment outcomes, and evidence-based program design for healthy and athletic populations. Considerations for special populations and environments are also examined.	Prerequisites: A grade of C or better in (EXS125 and EXS146) or permission of Instructor.		Acad	L+L 3.0 4.0 4.0	T
EXS270	2022 Fall	Exercise Science Internship		A capstone experience in a fitness or health related facility. Eighty (80) hours of designated work per credit.	Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card, and permission of Department/Division Chair and/or the Program Director.	CPR and AED certifications must be current through the duration of the internship. EXS270 may be repeated for a maximum of six (6) credits.	Acad	LAB 3.0 3.0 0.0	C
EXS270AA	2022 Fall	Exercise Science Internship		A capstone experience in a fitness or health related facility. Eighty (80) hours of designated work per credit.	Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card,	CPR certification must be current through the	Acad	LAB 1.0 1.0 0.0	C

					and permission of Department/Division Chair and/or the Program Director.	duration of the internship. EXS270A A may be repeated for a maximum of six (6) credits.			
EXS270AB	2022 Fall	Exercise Science Internship		A capstone experience in a fitness or health related facility. 160 hours of designated work per credit.	Prerequisites: Completion of nine (9) credits of EXS courses with a grade of C or better, current CPR and AED card, and permission of Department/Division Chair and/or the Program Director.	CPR and AED certifications must be current through the duration of the internship. EXS270A B may be repeated for a maximum of six (6) credits. Repeats 3.0 6.0	Acad	LAB 2.0 2.0 0.0	C
EXS275	2022 Fall	Sport Science Internship		A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialists (CSCS) professional. Eighty (80) hours of designated work per credit.	Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division.	EXS275 may be repeated for a maximum of six (6) credits.	Acad	L+L 3.0 3.0 0.0	C
EXS275AA	2022 Fall	Sport Science Internship		A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength	Prerequisites: Completion of a grade of C or better in nine (9) credits of	EXS275A A may be repeated for a	Acad	L+L 1.0 1.0 0.0	C

				and Conditioning Specialists (CSCS) professional. Eighty (80) hours of designated work per credit.	EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division.	maximum of six (6) credits.			
EXS275AB	2022 Fall	Sport Science Internship		A capstone experience in a fitness or health related facility supervised by a National Strength and Conditioning Association (NSCA) Certified Strength and Conditioning Specialists (CSCS) professional. Eighty (80) hours of designated work per credit.	Prerequisites: Completion of a grade of C or better in nine (9) credits of EXS courses, approved by the Department Chair and/or Director, current CPR and AED card, and permission of Department or Division.	EXS275A B may be repeated for a maximum of six (6) credits.	Acad	L+L 2.0 2.0 0.0	C
EXS280	2024 Fall	Special Topics in Exercise Science		Conceptual and research basis of current topics in exercise science.	Prerequisites: None.	EXS280 may be repeated for credit. Repeats 99.0 99.0	Acad	LEC 2.0 2.0 2.0	S
EXS280AA	2024 Fall	Special Topics in Exercise Science		Conceptual and research basis of current topics in exercise science.	Prerequisites: None.	EXS280A A may be repeated for credit. Repeats 99.0 99.0	Acad	LEC 0.5 0.5 0.5	S
EXS280AB	2024 Fall	Special Topics in Exercise Science		Conceptual and research basis of current topics in exercise science.	Prerequisites: None.	EXS280A B may be repeated for credit. Repeats 99.0 99.0	Acad	LEC 1.0 1.0 1.0	S
EXS282AA	2012 Fall	Service-Learning Experience in Exercise Science		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	EXS282A A may be repeated for a total of six (6) credit	Acad	LAB 1.0 1.0 0.0	L

						hours. Standard grading available according to procedures outlined in catalog.			
EXS282AC	2012 Fall	Service-Learning Experience in Exercise Science		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	EXS282AC may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
EXS290	2023 Fall	Introduction to Evidence-Based Practice		Introduction to best practices in the acquisition, analysis, synthesis, and potential application of research in the discipline of exercise science. Specific emphasis on the application of research-based evidence for applied problem solving in exercise science.	Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Instructor. EXS101 recommended.		Acad	LEC 3.0 3.0 3.0	S
EXS298AA	2009 Spring	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
EXS298AB	2009 Spring	Special Projects		Organized and tailored around the interests and needs of the individual	Prerequisites: Permission of		Acad	LAB 2.0	Z

				student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			2.0 0.0	
EXS298AC	2009 Spring	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
FAC101	2021 Fall	HVAC for Residential Systems I	HVA101	Introduction to major components and functions of residential heating, ventilation, and air conditioning (HVAC) systems, to include heat flow and basic electrical concepts.	Prerequisites: None.		Occ	L+L 4.0 5.0 5.0	T
FAC115	2024 Fall	Motors, Controls and Wiring Diagrams	ELC115	Principles of three-phase motors. Wye and delta wiring. Calculation of motor current draw. Sequence of operation, wiring diagram and electrical components associated with industrial equipment. Procedures for evaluating electrical problems. Safety stressed.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FAC115LL	2024 Fall	Motors, Controls and Wiring Diagrams Lab		Drawing wiring diagrams, wiring systems and checking electrical circuits. Troubleshooting electrical problems of three-phase motors and controls. Safety stressed.	Prerequisites: None.		Occ	LAB 1.0 3.0 3.0	T
FAC186	2021 Fall	Electro- Mechanical Devices		Concepts, principles, maintenance, and troubleshooting of mechanical and electro-mechanical devices. Mechanical alignment of shafts, pillow blocks, gears, and couplers on mechanical equipment. Bearings	Prerequisites: A grade of C or better in HVA130 or permission of Department.		Occ	L+L 3.0 5.0 5.0	T

				removal and installation. Installation and troubleshooting of pump seals. Vernier calipers, micrometers, tachometers. Use and operation of air flow hoods for air balancing. Belt drive systems and set up and operation of variable frequency drives. Cooling tower water treatment controls and chemical additives.					
FAC210	2021 Fall	Facilities Air Conditioning Systems	HVA210	Fundamental principles of air conditioning including all-air, all-water (hydronic) and air-water combination systems. Overview of the physical principles, including air distribution systems and heating and cooling load calculation. System components and application theory for boilers, chillers, pumps, fans, and cooling towers. Theory and application of central air conditioning systems, air cleaning and humidification devices, pressure boosting, heat storage, expansion and pressurization equipment. Properties of water, pressure distribution in hydronic systems, flow in pipes, pressure drop/head loss, pump applications and pressurization of open and closed hydronic systems. Fundamentals of low and high temperature water systems.	Prerequisites: A grade of C or better in HVA130 or permission of Department.		Occ	L+L 4.0 6.0 6.0	T
FAC220	2021 Fall	Controls and Instrumentation		Control theory and terminology, pneumatics, electrical, and electronic control devices, flow control devices, elementary and advanced control systems. Electric and electronic control systems, programmable logic controls, and facilities management systems. Process and terms used in instrumentation, methods of heat transfer, calculations for heat temperature, and heat transfer. Measuring and calculating pressure, fluid flow, measuring humidity, control action, and instrumentation symbols.	Prerequisites: A grade of C or better in FAC/HVA210 or permission of Department.		Occ	L+L 4.0 6.0 6.0	T
FAC231	2021 Fall	Codes	HVA231	Local codes, Federal Housing Administration and Urban	Prerequisites: None.		Occ	L+L 3.0	T

				Development standards. Acceptable building practices based on the Uniform Building Code, National Electric Code, Uniform Mechanical Code, and the Uniform Plumbing Code. Impact of American with Disabilities Act (ADA) on new and existing facilities.				5.0 5.0	
FAC235	2021 Fall	Commercial Air and Water Test and Balance		Specific types of duct distribution systems, fans, coil types and applications. Characteristics of Heating Ventilation and Air Conditioning (HVAC) piping systems. Specific types of pumps and applications. Air and water flow measuring and control devices. Collection and analysis of data specific to air handling systems. Principles of fluid dynamics, thermal loading factors, system design, and component performance. Test and balance plans for air and water systems.	Prerequisites: A grade of C or better in HVA210.		Occ	L+L 4.0 6.0 6.0	T
FAC240	2020 Fall	Fire Protection Systems	OSH240	Building occupant safety requirements including industry standards, regulations, building codes, fire codes and life safety codes. Fundamentals of fire protection system operation, inspection and maintenance. Principles of life safety systems including fire door and walls, smoke control systems, and exit components.	Prerequisites: A grade of C or better in OSH106AC.		Occ	LEC 3.0 3.0 3.0	S
FAC298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

FAC298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
FAC298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
FCS110	2025 Fall	Influences on Young Children's Development		Overview of the influences on young children's development. Covers the principles, patterns, and assessment of child growth and development and a survey of the influences on development including routines, curriculum, environments, guidance, and child centered learning strategies to accommodate individual differences.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FCS120	2025 Fall	Developmentally Appropriate Environments for Young Children		Overview of policies, practices and procedures, legal, and regulatory standards of the Arizona Department of Health and Childcare licensing. Covers program planning and evaluation methods to ensure environments are developmentally appropriate for children zero to age eight and for continuous improvement efforts. Emphasis on health and safety practices, human resource and	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				risk management policies, and physical facility requirements.					
FCS130	2025 Fall	Supporting Young Children and Their Families		Explores communication, collaboration, advocacy, ethics, and leadership needed to support young children and their families. Covers strategies designed to nurture these concepts utilizing technology, professional development, quality indicators, and mutually beneficial connections.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FCS250	2023 Fall	Portfolio Development and Professional Writing		Techniques of portfolio development to document prior learning gained through experience, training, and/or previous education. Includes study of learning styles and levels, analysis of personal and vocational experiences, synthesis of these with competencies for specific courses, and integration of the above with other material to create a portfolio to be introduced for evaluation for credit.	Prerequisite: A grade of C or better in 12 credit hours of CFS and/or FCS coursework or permission of Program Director.		Occ	LEC 3.0 3.0 0.0	C
FCS260	2023 Fall	Family and Consumer Science Internship		Work experience in community-based, family-focused service and/or educational organizations. 80 hours of designated work per credit.	Prerequisites: Permission of Instructor.	FSC260 may be repeated for a total of six (6) credit hours.	Occ	LEC 1.0 1.0 0.0	C
FLA240	2013 Spring	Foreign Language Teaching Methods		Introduction to methods and techniques for second-language teaching. Principles and procedures for building language proficiency, including the assessment of practical experience through mini-teaching situations	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
FLA282AA	2014 Summer	Service-Learning Experience in Foreign Languages		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	FLA282A A may be repeated for a total of six (6) credit hours. Standard grading available	Acad	LAB 1.0 1.0 0.0	L

						according to procedures outlined in catalog.			
FLA282AB	2014 Summer	Service-Learning Experience in Foreign Languages		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	FLA282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L
FLA282AC	2014 Summer	Service-Learning Experience in Foreign Languages		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	FLA282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
FMP104	2020 Fall	Scriptwriting		Overview of the script writing process including developing objectives, writing research agendas, designing content outlines, as well as writing a treatment, training script, marketing script, and dramatic training script. Emphasis on the dramatic motion picture screenplay format, the dramatic curve, believable character creation, and dialogue within the first ten pages of a screenplay.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

FMP105	2020 Fall	Studio Production		Multiple camera studio production for corporate, film, cable, and broadcast applications. Basic single and multi-camera production techniques, talent and camera blocking, set design, scriptwriting; shooting; lighting, audio and video recording; production crew team member experience, pre-production planning and budgeting and decision-making.	Prerequisites: None.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
FMP108	2023 Spring	Video Production		Foundations of media production, including single camera shooting, audio recording, lighting, and editing.	Prerequisites: None.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
FMP111	2023 Spring	Screenwriting I		Provides a foundation in screenwriting for film and television, including introduction to story theory, character development, and screenplay format.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FMP111AA	2023 Spring	Scripting for the Media		Provides an overview of screenwriting for short documentaries, podcasts, training films, commercials and public service announcements (PSAs).	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FMP114	2020 Fall	Audio Production		Focus on audio in the production of media projects. Emphasis on location-based, studio and sound room for corporate, cable and broadcast applications. Concepts covered include: microphones and audio recording equipment; audio production techniques using shotgun microphones or lavaliers while in the field; audio recording in the sound room, multi-track recording, and mixdown; audio editing using a non-linear computer program; music libraries; sound effects; and editing in audio post-production.	Prerequisites: A grade of C or better in FMP105 or FMP108.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
FMP115	2020 Fall	Introduction to Editing for Media		Introduction to editing for media on a nonlinear editing system.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T

FMP117	2020 Fall	Introduction to Cinematography	FMT117	Introductory workshop focusing on basic film and video camera operation and lighting. Emphasis on the role of the cinematographer, basic camera operation and lens selection, introduction to cinematic storytelling to include interpreting the script, basic lighting techniques, exposure meters, film stocks, and planning for the editing style.	Prerequisites: A grade of C or better in FMP108, or FMT136, or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
FMP125	2023 Spring	Podcasting		Overview of evolution and key elements of podcasting. Focuses on development and creation of original podcasts, including pre-production, post-production, and peer review techniques.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
FMP134	2020 Fall	Pre-Production for Film and Media		Introduction to elements of pre-production for film, television, and commercial productions. Focuses on aesthetics, writing, budgeting, and selecting cast and crew. Features pre-production meetings to establish style, location, production design, shot list/storyboard, sound design, and shooting schedule. Pre-production of one narrative or collaborative commercial project required. Working as crew on one class shoot required.	Prerequisites: A grade of C or better in FMT100, or FMP108, or permission of Department or Division.		Occ	L+L 3.0 4.0 4.0	T
FMP151	2020 Fall	TV and New Media Production	FMT151	Introduction to multi-camera television production in studio and on location. Emphasizes teamwork and group production through a variety of program types.	Prerequisites: A grade of C or better in FMP105, or FMT100, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
FMP170	2023 Fall	Introduction to Documentary Filmmaking		An in-depth study into the art, ethics and process of documentary filmmaking.	Prerequisites: None. ENG101 or ENG107 strongly recommended.	FMP170 is a writing intensive course. Students who have not completed at least one semester	Occ	LEC 3.0 3.0 3.0	S

						of college-level English composition are encouraged to speak to the instructor or program director about their preparation.			
FMP202	2020 Fall	Directing		Techniques for directing and blocking talent. Techniques for working with location and studio crews. Field and studio multi-camera production equipment usage. Advanced single and multi-camera shooting styles for corporate, cable and broadcast productions. Advanced post-production techniques for audio, video special effects for editing. The role of the director/producer in pre-production planning for the shoot. Advanced scriptwriting, script breakdowns, production forms, budgeting, and developing positive client relationships.	Prerequisites: A grade of C or better in FMP105.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
FMP204	2023 Spring	Advanced Video Production		Advanced techniques of digital video production from concept to delivery with an emphasis on production in the field.	Prerequisites: A grade of C or better in FMP108.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
FMP206	2020 Fall	Production Design	FMT206	Intermediate workshop on Film Production Design focusing on areas such as script breakdowns for design elements, theories for symbolic and iconic visual content, color and lighting theory, miniatures and model	Prerequisites: A grade of C or better in (FMP108 and [FMP134 or FMT134]), or FMT136, or		Occ	LEC 3.0 3.0 3.0	S

				construction and other aspects of production design.	permission of Instructor.				
FMP208	2020 Fall	Production Company Management		The coordination and supervision of the personnel involved in the production team; preparation of charge-back system; facility budgets in equipment, personnel, and operation; interaction with senior management.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FMP211	2023 Spring	Screenwriting II		Advanced workshop in screenwriting for feature films and television.	Prerequisites: A grade of C or better in FMP111 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
FMP213AA	2020 Fall	Motion Picture Workshop: On-Location Shooting		Practical work and classes in film production. Features on location shooting.	Prerequisites: A grade of C or better in FMT136 or permission of Instructor.		Occ	L+L 4.0 4.0 4.0	T
FMP214AA	2023 Spring	Video Production Internship		Video production work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Instructor.	FMP214A A may be repeated for a total of six (6) credit hours.	Occ	L+L 1.0 1.0 0.0	C
FMP214AB	2023 Spring	Video Production Internship		Video production work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Instructor.	FMP214A B may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 2.0 0.0	C
FMP214AC	2023 Spring	Video Production Internship		Video production work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Instructor.	FMP214A C may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 3.0 0.0	C
FMP215	2023 Fall	Digital Video Effects		Basics of video-production including the use of colors, textures, and shapes in the preparation of graphics for video production. Graphics design using the rules of good design and techniques for interaction with	Prerequisites: A grade of C or better in FMP108 or FMP115 or permission of Instructor. FMP115		Occ	LEC 3.0 2.0 2.0 LAB 0.0	T

				Producer/Directors. Story boarding and animation techniques, character generation. Video special effects creation and design, logo and photo import into video productions.	strongly recommended for students in AAS/3570 Film and Media Production. AVC/MMT184 strongly recommended.			3.0 3.0	
FMP216	2020 Fall	Screenwriting III		Advanced workshop in narrative screenwriting for film and television.	Prerequisites: A grade of C or better in FMP211.		Occ	L+L 3.0 7.0 7.0	T
FMP260	2020 Fall	Film and Media Producing and Financing		Guides the independent film/video producer through basic business aspects of production. Examines methods of setting up a production company, strategies for financing and distribution, and approaches to packaging a film/video project. Includes development of a prospectus on a specific film/video project.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
FMP270	2020 Fall	Documentaries for Social Change	FMT270	Study of and practical application in social documentary film production. Focuses on diverse voices and styles of social documentaries, philosophical issues faced by the filmmaker, technical considerations, and business elements required for financial and commercial success of the social documentary.	Prerequisites: A grade of C or better in (FMP108 and FMP115), or FMT136, or permission of Instructor.	FMP/FMT 270 may be repeated for a total of twelve (12) credits.	Occ	L+L 4.0 6.0 6.0	T
FMP275	2020 Fall	Advanced Portfolio Production		Advanced workshop in portfolio development for Producers, Directors, Cinematographers, Production Designers, Editors, and Screenwriters.	Prerequisites: Permission of Instructor.	All students must submit an application. FMP275 may be repeated for a total of twelve (12) credits.	Occ	L+L 4.0 7.0 7.0	T
FMP294AA	2020 Fall	Special Topics in Motion Picture, Television,	FMT294AA	Exploration of current topics, issues and aspects of motion picture,	Prerequisites: A grade of C or better in (FMP108 and	FMP/FMT 294AA may be	Occ	LEC 1.0	S

		Documentary, and New Media Production		television, documentary, and new media production.	FMP115) or FMT136, or permission of Instructor.	repeated for a total of three (3) credit hours.		1.0 1.0	
FMP294AB	2020 Fall	Special Topics in Motion Picture, Television, Documentary, and New Media Production	FMT294AB	Exploration of current topics, issues and aspects of motion picture, television, documentary, and new media production.	Prerequisites: A grade of C or better in (FMP108 and FMP115) or FMT136, or permission of Instructor.	FMP/FMT 294AB may be repeated for a total of six (6) credit hours.	Occ	LEC 2.0 2.0 2.0	S
FMP294AC	2020 Fall	Special Topics in Motion Picture, Television, Documentary, and New Media Production	FMT294AC	Exploration of current topics, issues and aspects of motion picture, television, documentary, and new media production.	Prerequisites: A grade of C or better in (FMP108 and FMP115) or FMT136, or permission of Instructor.	FMP/FMT 294AC may be repeated for a total of nine (9) credit hours.	Occ	LEC 3.0 3.0 3.0	S
FMP298AA	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
FMP298AB	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

FMP298AC	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
FMT100	2020 Fall	Introduction to Production		Introduction to the major production components of a multimedia project.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
FMT107	2020 Fall	Career Pathways in the Media		Emphasis on theories of broadcasting, how the media functions in our society, the business structure of the U.S. media environment, the cultural import and potential impact of the programming and films, and the growth of new communications technologies.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Occ	LEC 3.0 3.0 3.0	S
FMT117	2020 Fall	Introduction to Cinematography	FMP117	Introductory workshop focusing on basic film and video camera operation and lighting. Emphasis on the role of the cinematographer, basic camera operation and lens selection, introduction to cinematic storytelling to include interpreting the script, basic lighting techniques, exposure meters, film stocks, and planning for the editing style.	Prerequisites: A grade of C or better in FMP108, or FMT136, or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
FMT118	2020 Fall	Lighting for Film, TV, and Media		Introductory workshop focusing on lighting for video and film productions. Emphasis on the role of the cinematographer in developing a look and mood for a production and to tell a story through the use of light and color.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T

FMT120	2023 Fall	Introduction to Sound Design for Film and Video	MUC120	Basic principles of recording and mixing sound for film and video. Includes voice-over, automatic dialog replacement (ADR), foley, ambience, special effects and music. Emphasis on analog and digital recording techniques in the field as well as in a controlled environment.	Prerequisites: A grade of C or better in (FMT100 and FMT136) or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
FMT121	2020 Fall	Story Theory for Film, Television and Media		Introduction to story theory and structure as it applies to screenwriting for feature films, television programs (one-hour dramas and sitcoms) and related media.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FMT123	2020 Fall	Feature Screenwriting: First Draft		Intermediate workshop focused in writing initial draft of a narrative feature film screenplay.	Prerequisites: A grade of C or better in FMT121.		Occ	L+L 3.0 6.0 6.0	T
FMT124	2020 Fall	Television Screenwriting: Writers Room		Intermediate workshop focused on understanding the collaborative nature of series/television (TV) story development (i.e., writers room) and writing initial draft of a spec script for an existing TV one-hour drama or half-hour sitcom.	Prerequisites: A grade of C or better in FMT121.		Occ	L+L 3.0 6.0 6.0	T
FMT134	2021 Spring	16mm Film Workshop: Pre- Production		Introduction to elements of pre-production for motion picture and television. Focuses on aesthetics, scriptwriting, budgeting, and selecting cast and crew. Features pre-production meetings to establish style, location, art design, shot sheet/storyboard, sound design, shooting schedule and film stock/video tapes. Pre-production of one film project and one video project required. Working as crew on one class shoot required.	Prerequisites: A grade of C or better in FMP105, or FMT100, or permission of Department or Division.		Occ	L+L 3.0 4.0 4.0	T
FMT135	2021 Spring	16mm Film Workshop: Production		Introduction to elements of production for motion picture and television. Focuses on directing, crew responsibilities, camera operation, lenses, lighting and sound recording. Production of one film shoot and one video shoot required.	Prerequisites: A grade of C or better in FMT134, or permission of Department or Division.		Occ	L+L 3.0 3.0 3.0	T

FMT136	2021 Spring	16mm Film Workshop: Post-Production		Introduction to elements of post-production for motion picture and television. Focuses on editing, titles, sound design and marketing strategies. Post-production and marketing of one film and one video required.	Prerequisites: A grade of C or better in FMT135 or permission of Department or Division.		Occ	L+L 3.0 3.0 3.0	T
FMT151	2020 Fall	TV and New Media Production	FMP151	Introduction to multi-camera television production in studio and on location. Emphasizes teamwork and group production through a variety of program types.	Prerequisites: A grade of C or better in FMP105, or FMT100, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
FMT206	2020 Fall	Production Design	FMP206	Intermediate workshop on Film Production Design focusing on areas such as script breakdowns for design elements, theories for symbolic and iconic visual content, color and lighting theory, miniatures and model construction and other aspects of production design.	Prerequisites: A grade of C or better in (FMP108 and [FMP134 or FMT134]), or FMT136, or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
FMT217	2020 Fall	Advanced Cinematography		Advanced workshop focusing on film and video camera operation and lighting. Emphasis on the role of the cinematographer and camera department, in-depth camera operation and lens selection, advanced cinematic storytelling to include interpreting the script, advanced lighting techniques, exposure meters, film stocks, and planning for the editing style. In-depth analysis of on-set communication and collaboration between the Cinematographer and other key crew members.	Prerequisites: A grade of C or better in FMP/FMT117 and (FMP204 or FMT241), or permission of Instructor.	FMT217 may be repeated for a total of six (6) credit hours. Repeats 2.0 6.0	Occ	L+L 3.0 5.0 5.0	T
FMT220	2023 Fall	Advanced Sound Design for Film and Video	MUC220	Explores techniques and advanced applications used in designing sound using original student footage on a non-linear editing system.	Prerequisites: A grade of C or better in FMT/MUC120 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0	T

FMT223	2020 Fall	Feature Screenwriting: The Rewrite		Advanced workshop focused in rewriting narrative feature film screenplay, developing an individual writing voice and understanding the professional feature writing landscape.	Prerequisites: A grade of C or better in FMT123.		Occ	L+L 3.0 6.0 6.0	T
FMT224	2020 Fall	Television Screenwriting: Original TV Pilot		Advanced workshop focused on creating an original television series concept, writing an original pilot script for the series, developing an individual writing voice and understanding the professional television writing landscape.	Prerequisites: A grade of C or better in FMT121.		Occ	L+L 3.0 6.0 6.0	T
FMT230	2023 Fall	Motion Picture Directing		Theory and practice in directing the motion picture. Includes overview of the roles and responsibilities of the film director, examples of film directing, and practice sessions in analyzing a script, creating a scene, working with actors, conducting rehearsals, planning the camera movements and overseeing elements of a production.	Prerequisites: A grade of C or better in (FMT117, FMT/MUC120, FMT121, and FMT241) or permission of Instructor.	FMT230 may be repeated for a total of eight (8) credit hours.	Occ	L+L 4.0 4.0 4.0	T
FMT241	2020 Fall	AVID Media Composer Editing		Editing on a Media Composer non-linear editing system, including timeline editing, trimming, dialog and action editing, refining audio, basic multi-layer motion, and 3D effects; also covers basic and intermediate color correction, intermediate and three-dimension titling, working with tape and file based media, and media management.	Prerequisites: A grade of C or better in FMT136 or permission of Instructor.		Occ	L+L 4.0 6.0 6.0	T
FMT242	2020 Fall	Professional Portfolio for Film, TV, and Media		Explores techniques and applications used in editing an individual project on an editing system.	Prerequisites: A grade of C or better in FMT241 or permission of Instructor.	Students must have previously created production footage from other course work or independent work for use in the class	Occ	L+L 2.0 4.0 4.0	T

						projects. FMT242 may be repeated for a total of six (6) credit hours.			
FMT242AA	2020 Fall	Professional Portfolio in Screenwriting		Explores techniques and applications used in screenwriting for an individual project.	Prerequisites: A grade of C or better in FMT223 or FMT224.	FMT242A A may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 4.0 4.0	T
FMT243	2020 Fall	Introduction to Video Compositing and Title Animation		Introduction to computer-based video compositing and title animation.	Prerequisites: A grade of C or better in FMT241 or permission of Instructor.		Occ	L+L 4.0 6.0 6.0	T
FMT244	2020 Fall	Film Finishing		Introduction to editing system and applications.	Prerequisites: A grade of C or better in FMT241 or permission of Instructor.		Occ	L+L 4.0 6.0 6.0	T
FMT248	2023 Fall	Advanced Film Production Techniques		Advanced workshop in the techniques of film production. Emphasizes real world simulation of production departments.	Prerequisites: A grade of C or better in (FMP/FMT117 and FMT/MUC120) or permission of Instructor.		Occ	L+L 4.0 6.0 6.0	T
FMT251	2020 Fall	Advanced Studio Production		Advanced video production within a studio environment.	Prerequisites: A grade of C or better in (FMP/FMT117, FMT121, FMT151, and FMT241) or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
FMT260	2020 Fall	Motion Picture Producing and Production Management		Introduction to functions specific to producing, production management, and business affairs for film, television, and new media productions.	Prerequisites: A grade of C or better in FMT136.		Occ	L+L 3.0 3.0 3.0	T
FMT263	2020 Fall	Film Style, Theory and Analysis		Survey of the development of the art and theory of motion pictures, including study and criticism of	Prerequisites: A grade of C or better in FMT136 or		Occ	LEC 4.0	S

				stylistic elements. Tailored toward teaching different approaches and techniques of filmmaking as demonstrated in a variety of historic film movements. Designed for students focusing on filmmaking.	permission of Instructor.			4.0 4.0	
FMT270	2020 Fall	Documentaries for Social Change	FMP270	Study of and practical application in social documentary film production. Focuses on diverse voices and styles of social documentaries, philosophical issues faced by the filmmaker, technical considerations, and business elements required for financial and commercial success of the social documentary.	Prerequisites: A grade of C or better in (FMP108 and FMP115), or FMT136, or permission of Instructor.	FMP/FMT 270 may be repeated for a total of twelve (12) credits.	Occ	L+L 4.0 6.0 6.0	T
FMT280	2020 Fall	The Art of Editing		A lab intensive post-production course. Emphasizes the art of editing movie and television media and the development of editing skills. Editing products, including demo reels, from instructor provided or student provided quality raw footage.	Prerequisites: A grade of C or better in FMT241 or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
FMT283	2020 Fall	Advanced Non-Linear Editing Techniques		Explores techniques and advanced applications used in creating and editing an advanced project on a non-linear editing system.	Prerequisites: A grade of C or better in FMT241 or permission of Instructor.		Occ	L+L 4.0 6.0 6.0	T
FMT283AA	2020 Fall	Advanced Non-Linear Editing Techniques: AVID		Explores techniques and advanced applications used in creating and editing an advanced project on a non-linear editing system.	Prerequisites: A grade of C or better in FMT241 or permission of Instructor.		Occ	L+L 4.0 6.0 6.0	T
FMT294AA	2020 Fall	Special Topics in Motion Picture, Television, Documentary, and New Media Production	FMP294AA	Exploration of current topics, issues and aspects of motion picture, television, documentary, and new media production.	Prerequisites: A grade of C or better in (FMP108 and FMP115) or FMT136, or permission of Instructor.	FMP/FMT 294AA may be repeated for a total of three (3) credit hours.	Occ	LEC 1.0 1.0 1.0	S
FMT294AB	2020 Fall	Special Topics in Motion Picture, Television, Documentary, and New Media Production	FMP294AB	Exploration of current topics, issues and aspects of motion picture, television, documentary, and new media production.	Prerequisites: A grade of C or better in (FMP108 and FMP115) or FMT136, or permission of Instructor.	FMP/FMT 294AB may be repeated for a total of six (6)	Occ	LEC 2.0 2.0 2.0	S

						credit hours.			
FMT294AC	2020 Fall	Special Topics in Motion Picture, Television, Documentary, and New Media Production	FMP294AC	Exploration of current topics, issues and aspects of motion picture, television, documentary, and new media production.	Prerequisites: A grade of C or better in (FMP108 and FMP115) or FMT136, or permission of Instructor.	FMP/FMT 294AC may be repeated for a total of nine (9) credit hours.	Occ	LEC 3.0 3.0 3.0	S
FMT296WA	2020 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Occ	LAB 1.0 5.0 0.0	Z
FMT296WB	2020 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least		Occ	LAB 2.0 10.0 0.0	Z

					one class which is related to student's major or career interest or with permission of the Instructor.				
FMT296WC	2020 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Occ	LAB 3.0 15.0 0.0	Z
FMT296WD	2020 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with		Occ	LAB 4.0 20.0 0.0	Z

					permission of the Instructor.				
FMT298AA	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
FMT298AB	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
FMT298AC	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
FON100	2012 Spring	Introductory Nutrition		Introduction to the science of food and human nutrition. Current sustainable dietary recommendations and applications for maximizing well-being and minimizing risk of chronic disease throughout the life cycle. An overview of the nutrients, emphasizing the importance of	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				energy and fluid balance, and optimal functioning of the digestive system. Understanding factors that influence food intake in different cultures. Methods for evaluating credibility of nutrition claims, a focus on modern food safety and technology practices, and a worldview of nutrition are included. Emphasis is on personal dietary behavior change for a holistic life of wellness.					
FON100LL	2019 Spring	Introductory Nutrition Laboratory		Introduction to nutrition using anthropometric, biochemical, clinical, and dietary analysis. Includes the use of qualitative and quantitative methodology to determine nutritional status and evaluate methodological applications. Emphasis on relationship between energy balance and weight regulation and health.	Prerequisites: None.	Self-evaluative laboratory experience to complement FON100.	Occ	LAB 1.0 3.0 3.0	T
FON101	2020 Spring	Critical Food Studies		Introduction to foundational methodologies and concepts central to the interdisciplinary field of critical food studies. Basic concepts related to food governance, food security, food and social justice, and sustainability. Exploration of questions related to the food system including food production and distribution, access to food, and ecological consequences of agricultural practices. Issues of sustainability and equity are evaluated throughout the agri-food system from farm to fork.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FON104	2018 Fall	Certification in Food Service Safety and Sanitation		Preparation for and certification in a national food sanitation and safety program. Emphasis on food from purchasing, receiving, and storing to preparation, holding, and serving. Focuses on safe and sanitary food service facilities and equipment, employee habits and personal hygiene, and role of management in safety and sanitation. Includes time-temperature principles, foodborne	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S

				illnesses, pest control, accident prevention, standards for cleaning and sanitizing, and regional regulations and standards.					
FON125	2017 Fall	Introduction to Professions in Food, Nutrition, and Dietetics		Overview and discussion of career opportunities in the fields of food, nutrition, and dietetics. Includes information about history, ethics, standards of practice, communication and counseling skills. Emphasis on how to become a Registered Dietitian Nutritionist or a Dietetic Technician Registered.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
FON135	2022 Fall	Sustainable Cooking		Basic cooking techniques for healthful and enjoyable eating. Emphasis on strategies for maximizing the use of whole, local, and nutrient-dense food while focusing on applying the dietary recommendations for optimal health to food choices. Opportunities to learn about sustainable food living and identifying resources that enable people to be more in control of their food supply. Covers issues of diversity as related to sustainable food systems and equitable access to food.	Prerequisites: None.	Laboratory component involves hands-on experience in the college teaching or commercial kitchen and garden (or similar teaching or commercial food operation). Students employed in a farm-to-table or similar operation may complete their hands-on portion under their	Occ	L+L 3.0 4.0 4.0	T

						employer's supervision.			
FON142AB	2018 Fall	Science of Food		Exploration and Application of Scientific Principles of Food; experiences with ingredient functionality and application in cooking techniques.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
FON143	2019 Summer	Food and Culture		Understanding diet in the context of culture. Historical, religious, and sociocultural influences on the development of cuisine, meal patterns, eating customs, cooking methods, and nutritional status of various ethnic groups. Traditional and contemporary food habits. Health and social impact of changes in diet. Preparation and serving of foods from many cultures.	Prerequisites: None.	FON143 may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 3.0 3.0	T
FON161	2019 Summer	Sustainable Food Production Systems		Overview of the global food system. Covers historical events impacting current food production model and the effects food systems have on the environment, health, and communities. Also covers conventional agriculture and food safety concerns. Emphasis on the movement towards sustainable food systems.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FON163	2022 Fall	Sustainable Kitchen Practices		Overview of sustainable kitchen practices. Covers energy efficient appliances and equipment, as well as electricity and water conservation practices. Includes environmentally friendly kitchen products and methods for disposal of waste. Researching food sources, purchasing locally, and building relationships, and promoting local food equity are also covered. Emphasis in preparing organic, seasonal, and local foods, and developing sustainable menus.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
FON165	2022 Fall	Sustainable Food Entrepreneurship		Overview of the process for starting a small food business. Covers stages for introducing a variety of food	Prerequisites: None.		Occ	LEC 3.0	S

				products into the market, food safety, and sanitation requirements. Includes business and marketing strategies, processing, labeling, and distribution requirements for different food product types such as dairy, meat, poultry, and fish. Covers the importance of diversity, equity, and inclusion for the sustainable food entrepreneur. Also covers available resources for small food business support.				3.0 3.0	
FON207	2023 Fall	Introduction to Nutrition Services Management		Principles, knowledge, and techniques required for effective nutrition services management. Includes nutrition service issues in relation to health care trends, leadership skills, management theories and styles, food service manager responsibilities, and laws which pertain to nutrition service operations.	Prerequisites: A grade of C or better in (MAT055, MAT056, and MAT057), or (MAT090, or MAT091, or MAT092), or satisfactory mathematics placement.		Occ	LEC 3.0 3.0 3.0	S
FON210	2013 Spring	Sports Nutrition and Supplements for Physical Activity		Principles of nutrition applied to fitness, exercise, and sports. Dietary fundamentals as applied to body fuels, hydration, and other unique needs for exercise and sports. Includes dietary guidelines for weight or endurance training, glycogen loading, the pre-game meal, and glycogen recovery. Emphasis on maximizing fitness, performance, and safety. Discussion of supplements and their effects on metabolic enhancement. Discussion of anabolic, catabolic, and energy-producing agents. Addresses current supplements on the market.	Prerequisites: A grade of C or better in FON100 or FON241.		Occ	LEC 3.0 3.0 3.0	S
FON225	2021 Fall	Research in Complementary and Alternative Nutrition Therapies		Introduction to basic research methods and statistics as applied to complementary and alternative nutrition therapies. Emphasis on the analysis and interpretation of health-related research.	Prerequisites: A grade of C or better in MAT092 or equivalent or satisfactory score on district placement exam.	Course Attribute(s): General Education Designation: Literacy and	Occ	LEC 3.0 3.0 3.0	S

						Critical Inquiry - [L]			
FON230	2018 Fall	Nutrition for Special Populations		Nutritional changes and appropriate management across the lifespan to maximize health and longevity. Addresses needs of those individuals with particular dietary restrictions, requirements or deficiencies. Includes special dietary needs of those diagnosed with common pathologies such as heart disease, diabetes.	Prerequisites: A grade of C or better in FON100, or FON241, or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
FON241	2023 Fall	Principles of Human Nutrition		Scientific principles of human nutrition. Emphasis on scientific literacy and the study of nutrients for disease prevention. Includes macronutrients and micronutrients, human nutrient metabolism and nutrition's role in the health of the human body throughout the life cycle. Addresses nutrition principles for prevention of nutrition-related health conditions.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FON241LL	2023 Fall	Principles of Human Nutrition Laboratory		Self-evaluative laboratory experience to complement FON241, Principles of Human Nutrition using anthropometric, biochemical, clinical, and dietary analysis. Includes the use of qualitative and quantitative methodology to determine nutritional status and evaluate methodological applications.	Prerequisites: A grade of C or better in FON241 or Corequisites: FON241.		Occ	LAB 1.0 3.0 3.0	T
FON242	2020 Fall	Introduction to Medical Nutrition Therapy		Introduction to fundamental principles of medical nutrition therapy. Introduces the study of nutritional therapy of disease and evidence-based practice in prevention and nutritional management of diseases. Nutrition care planning for chronic diseases is taught via a variety of methods including case studies. This course applies foundational skills in the application of the Nutrition Care Process (NCP) for diet therapy implementation and documentation. Includes strategies to promote dietary	Prerequisites: A grade of C or better in BIO160 and FON241.		Occ	LEC 3.0 3.0 3.0	S

				adherence and the development of educational programs for a diverse adult population.					
FON244AA	2023 Fall	Food Service Management Practicum		Classroom preparation and training, under the instruction and supervision of a registered dietitian. Application of principles, knowledge, and skills required in the delivery of nutrition services for food service management including food service operations, quantity food production, procurement, organizing and management principles, facility design and equipment, financial management, food safety and sanitation, menu planning, and marketing.	Prerequisites: A grade of C or better in (FON125, FON142AB, FON207, and FON242) and permission of Program Director. Corequisites: FON244AB.	FON244A A students must be in compliance with the Maricopa Community Colleges Allied Health Program Student Policies.	Occ	LEC 2.0 2.0 2.0	S
FON244AB	2023 Fall	Food Service Management Practicum Laboratory		Practicum experience under the supervision of a registered dietitian. Application of principles, knowledge, and skills required in the delivery of nutrition services for food service management including food service operations, quantity food production, procurement, organizing and management principles, facility design and equipment, financial management, food safety and sanitation, menu planning, and marketing.	Prerequisites: A grade of C or better in (FON125, FON142AB, FON207, and FON242) and permission of Program Director. Corequisites: FON244AA.	FON244A B students must be in compliance with the Maricopa Community Colleges Allied Health Program Student Policies.	Occ	LAB 2.5 10.0 0.0	C
FON245AA	2020 Fall	Medical Nutrition Therapy Practicum		Classroom preparation and training, under the instruction and supervision of a registered dietitian. Understanding of principles, knowledge, and skills required for the delivery of medical nutrition therapy. Comprehension of nutritional screening, assessment, monitoring, and evaluation for common and complex medical conditions, medical documentation, patient interviewing and counseling, and education in health promotion and disease prevention.	Prerequisites: A grade of C or better in (FON125, FON242, and HCC145AA) and (MAT092, or equivalent, or satisfactory score on district placement exam) and permission of Program Director. Corequisites: FON245AB.	FON245A A students must be in compliance with the Maricopa Community Colleges Allied Health Program Student Policies.	Occ	LEC 2.0 2.0 2.0	S
FON245AB	2020 Fall	Medical Nutrition Therapy		Practicum experience under the supervision of a registered dietitian.	Prerequisites: A grade of C or better	FON245A B students	Occ	LAB 2.5	C

		Practicum Laboratory		Application of principles, knowledge, and skills required for the delivery of medical nutrition therapy. Perform nutritional screening, assessment, monitoring, and evaluation for common and complex medical conditions, medical documentation, patient interviewing and counseling, and education in health promotion and disease prevention.	in (FON125, FON242, and HCC145AA) and (MAT092, or equivalent, or satisfactory score on district placement exam) and permission of Program Director. Corequisites: FON245AA.	must be in compliance with the Maricopa Community Colleges Allied Health Program Student Policies.		10.0 0.0	
FON246AA	2020 Fall	Community Nutrition Practicum		Classroom preparation and training, under the instruction of a registered dietitian. Understanding of principles, knowledge and skills required in the delivery of nutrition services in community-based agencies, outpatient health care settings, and social service agencies. Includes knowledge and understanding of nutrition intervention and wellness promotion for individuals and groups across the lifespan, i.e. infants through geriatrics with a diversity of cultural, religious and social backgrounds.	Prerequisites: A grade of C or better in (FON125 and FON242) and permission of Program Director. Corequisites: FON246AB.	FON246A A students must be in compliance with the Maricopa Community Colleges Allied Health Program Student Policies.	Occ	LEC 2.0 2.0 2.0	S
FON246AB	2020 Fall	Community Nutrition Practicum Laboratory		Practicum experience under the supervision of a registered dietitian. Application of principles, knowledge and skills required in the delivery of nutrition services in community-based agencies, outpatient health care settings, and social service agencies. Includes nutrition intervention and wellness promotion for individuals and groups across the lifespan, i.e. infants through geriatrics with a diversity of cultural, religious and social backgrounds.	Prerequisites: A grade of C or better in (FON125 and FON242) and permission of Program Director. Corequisites: FON246AA.	FON246A B students must be in compliance with the Maricopa Community Colleges Allied Health Program Student Policies. Competencies in the lecture (FON246AA) met prior to	Occ	LAB 2.0 10.0 0.0	C

						their application in supervised practice settings during the practicum lab (FON246 AB).			
FON247	2016 Fall	Weight Management Science		The comprehensive study of obesity as a disease of modern society due to multiple determinants. Use of evidence-based data and methods to assess and manage weight in various settings. Use of client-centered counseling strategies, including behavior change theories. Focus on discovering successful healthful long-term weight management strategies.	Prerequisites: A grade of C or better in FON100 or FON241 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
FON250	2023 Fall	Nutrition and Dietetic Exam Review		This course is intended to prepare dietetic students for the national exam for the nutrition and dietetic technician, registered (NDTR) credential. An emphasis in food service and medical nutrition therapy will be reviewed to prepare students for national exam content. In addition, nutrition science principles and community nutrition will be covered. The current NDTR study guide will be used to guide exam preparation.	Prerequisites: Permission of Program Director.	FON250 may be repeated for a total of three (3) credit hours. Completion of 2 or more nutrition practicums recommended. FON250 should be taken the semester of graduation.	Occ	LEC 1.0 1.0 0.0	Z
FON270AA	2022 Fall	Applied Nutrition Experience for		Applied nutrition course customized around the interests and needs of the individual student enrolled in the	Prerequisites: Completion of six (6) credits of FON	FON270A A may be repeated	Occ	L+L 1.0	C

		Personal Trainers and Coaches		Nutrition Certificate for Personal Trainers and Coaches. Eighty (80) hours of designated work per credit.	courses with a grade of C or better, and permission of Department/Division Chair and/or the Program Director.	for a total of three (3) credit hours.		1.8 0.0	
FON298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
FON298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
FON298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
FOR105	2018 Fall	Forensic Science: Physical Evidence		Scientific analysis and examination of physical evidence for forensic purposes. Covers fingerprints, shoe prints, tool marks, glass, soil and	Prerequisites: None.	Course Attribute(s)): General Education	Occ	LEC 4.0 3.0 3.0	T

				mineral evidence, firearms identification, paint chips, and arson and explosive evidence. Includes the history of forensic science, functions of the crime lab and criminalist career specialties		Designation: Natural Sciences (Quantitative) - [SQ]		LAB 0.0 3.0 3.0	
FOR106	2018 Fall	Forensic Science: Biological Evidence		Scientific analysis and examination of biological evidence for forensic purposes. Covers blood, bloodstains, other biological fluids and stains, hair, DNA, toxicological evidence, controlled substances and alcohol. Includes the history of forensic science, functions of the crime lab, and criminalist career specialties	Prerequisites: None.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Occ	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
FOR286	2023 Fall	Principles of Forensic Science		This course examines the diverse disciplines and techniques used by forensic scientists in the major sections recognized by the American Academy of Forensic Sciences (AAFS), which include anthropology, criminalistics, digital and multimedia services, general, engineering and applied sciences, jurisprudence, odontology, pathology/biology, psychiatry, and behavioral science, questioned documents and toxicology. Students will participate in laboratory activities that demonstrate best practices and applications in these disciplines, including ethical practices and experiences in case reporting and providing expert testimony.	Prerequisites: A grade of C or better in (BIO181 or BIO181XT) and [(CHM150 or CHM151) and CHM151LL], or CHM150AA, or CHM151AA, or permission of the Instructor, or Department or Division Chair.		Occ	LEC 4.0 4.0 4.0 LAB 0.0 3.0 3.0	T
FRE085AA	2001 Fall	Speedy French I		Basic vocabulary and grammar to develop conversational skills in French	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
FRE085AB	2014 Fall	Speedy French II		Intermediate vocabulary and grammar to develop conversational skills in French	Prerequisites: A grade of C or better in FRE085AA. Completion of prerequisites within the last three years is required.		Acad	LEC 1.0 1.0 1.0	S

FRE085AC	2014 Fall	Speedy French III		Advanced vocabulary and grammar to develop conversational skills in French.	Prerequisites: A grade of C or better in FRE085AB. Completion of prerequisites within the last three years is required.		Acad	LEC 1.0 1.0 1.0	S
FRE101	2014 Fall	Elementary French I		Basic grammar, pronunciation and vocabulary of the French language. Includes the study of French culture, practice of listening, speaking, reading and writing skills.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN#: FRE 1101	Acad	LEC 4.0 4.0 4.0	S
FRE101AA	2018 Fall	Elementary French I		Basic grammar, pronunciation and vocabulary of the French language. Includes the study of French culture, practice of listening, speaking, reading and writing skills.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G]	Acad	L+L 4.0 5.0 5.0	T
FRE102	2014 Fall	Elementary French II		Continued study of grammar and vocabulary of the French language along with the study of French culture. Emphasis on speaking, listening, reading and writing skills.	Prerequisites: A grade of C or better in FRE101 or FRE101AA or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN#: FRE 1102	Acad	LEC 4.0 4.0 4.0	S
FRE102AA	2018 Fall	Elementary French II		Continued study of grammar and vocabulary of the French language along with the study of French culture.	Prerequisites: A grade of C or better in FRE101 or	Course Attribute(s): General	Acad	L+L 4.0	T

				Emphasis on speaking, listening, reading and writing skills.	FRE101AA or permission of Department or Division. Completion of prerequisites within the last three years is required.	Education Designation: Global Awareness - [G]		5.0 5.0	
FRE115	1994 Fall	Beginning French Conversation I		Conversational French. Basic sentence structure, pronunciation and vocabulary necessary to develop speaking ability in French. Designed for students seeking speaking and listening abilities with little emphasis on grammar	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
FRE116	2014 Fall	Beginning French Conversation II		Continued development of speaking and listening skills for effective communication in French.	Prerequisites: A grade of C or better in FRE115 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
FRE201	2014 Fall	Intermediate French I		Review of essential grammar of the French language and study of French culture. Continued practice and development of reading, writing, and speaking skills.	Prerequisites: (FRE102 or FRE102AA with a grade of C or better) or two years of high school French with an average of C or better or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN#: FRE 2201	Acad	LEC 4.0 4.0 4.0	S
FRE202	2014 Fall	Intermediate French II		Review of grammar, continued development of French language skills, and continued study of the French culture.	Prerequisites: A grade of C or better in FRE201 or three years of high school French with an average of C or better. Completion of prerequisites within	Course Attribute(s): General Education Designation: Global Awareness - [G] Arizona	Acad	LEC 4.0 4.0 4.0	S

					the last three years is required.	Shared Unique Number SUN#: FRE 2202			
FRE225	2014 Fall	Intermediate French Conversation I		Continued development of skills in conversational French for business or travel.	Prerequisites: A grade of C or better in FRE116 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
FRE226	2014 Fall	Intermediate French Conversation II		Development of intermediate level skills in conversational French for business and travel.	Prerequisites: A grade of C or better in FRE225 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
FRE265	2014 Fall	Advanced French I		In-depth exploration of a selected theme related to French culture. Involves reading selections from French literature, writing reports, and discussions in French. Emphasis on enhancing reading, writing and speaking skills.	Prerequisites: A grade of C or better in FRE202 or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
FRE266	2014 Fall	Advanced French II		Continuation of FRE265, Reading selections from French literature, written reports, and discussions in French designed to further develop reading, writing and speaking skills.	Prerequisites: A grade of C or better in FRE265 or permission of Department or Division. Completion		Acad	LEC 3.0 3.0 3.0	S

					of prerequisites within the last three years is required.				
FRE296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
FRE296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z

FRE296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
FRE296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z
FRE298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z

				and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
FRE298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
FRE298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
FSC101	2020 Fall	Introduction to Fire Service Selection and Entry		Overview of the application and selection processes used by various fire departments and fire service organizations. Focus on the skills and abilities required for entry-level positions in the fire department, including oral and written communication skills, mathematical and mechanical skills, problem-solving skills, and physical agility and stamina. Elements of fire service culture and their effects on personal growth and interpersonal relationships. Major components of	Prerequisites: None.		Occ	L+L 4.0 5.0 5.0	T

				written application processes, requirements, preparation of resumes and their effect on employment prospects. Preparation for the interview to include communications skills, mental preparation techniques, behaviors, and the importance of the interview in the pre-employment process.					
FSC102	2021 Spring	Fire Department Operations		Introductory fire science course primarily designed for the fire department recruit. Includes firefighting skills, equipment, and administrative policies, fire department operations, personnel policies, and International Fire Service Accreditation Congress Practical Skills Testing. Satisfies minimum standards for certification testing set forth by the current Arizona State Training and Certifying Authority.	Prerequisites: A grade of C or better in FSC105, FSC130, and permission of Instructor. Corequisites: (FSC134 or FSC234) and FSC174.		Occ	L+L 11.0 19.6 19.6	T
FSC103	2018 Fall	Advanced Firefighter		Comprehensive review of Fire Department Standard Operating Procedures, Evaluation of Fitness and Conditioning as they relate to fire ground skills. Emphasis on physical development and hands on activities providing participants with skills necessary to safely operate on the fire ground and at emergency scenes	Successful completion of the Fire Operations Academy Certified Firefighter I and II through Arizona Fire Marshal and current PASS on Candidate Physical Ability Test (CPAT).		Occ	L+L 7.0 10.6 10.6	T
FSC105	2020 Fall	Hazardous Materials Awareness and Operations		Basic methods of recognition and identification based upon the chemical and physical properties of hazardous materials; basic safety procedures when utilizing specific types of protective clothing and equipment; basic tactical information relating to scene management. Satisfies minimum standards for certification testing set forth by the current ProBoard and/or Arizona State Training and Certifying Authority.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
FSC106	1995 Fall	Introduction to Fire Protection		History and evaluation of fire department organization. Role of the	Prerequisites: None.		Occ	LEC 3.0	S

				fire service in the community. Responsibilities of the fire administrator including organization, departmental functions, interdepartmental relationships, management of buildings and equipment; techniques of fire-fighting. Also includes emergency medical services and fire prevention				3.0 3.0	
FSC108	1995 Fall	Fundamentals of Fire Prevention		Fundamentals of fire prevention. Includes techniques, procedures, regulations, and enforcement. Also includes discussion of hazards in ordinary and special occupancies. Field trips and lectures from industry also included	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FSC109	2018 Fall	Emergency Response Team for Industry		Common industrial hazards related to chemicals, gases, fire, energy sources, and spills. Emergency response procedures to control and conclude hazardous incidents	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0 LAB 0.0 2.6 2.6	T
FSC110	2020 Fall	Wildland Firefighter		Basic-level course for individuals with little or no experience in the wildland environment. Preparation for performing as a beginning-level wildland firefighter with an organized fire department engine or hand crew. Satisfies minimum standards for certification testing set forth by the National Wildland Coordinating Group (NWCG).	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
FSC111	1998 Spring	Emergency Vehicle Driver Operator		Emergency vehicle operators training including the problems facing operators; the personal qualities of emergency vehicle operator candidates; legal responsibilities of operators; and physical forces involved in driving an emergency vehicle. Includes hands-on training in an emergency response vehicle	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
FSC112PS	2018 Fall	Public Safety Emergency		In-depth coverage of established techniques and procedures for handling routine and emergency	Prerequisites: None.		Occ	L+L 3.0	T

		Telecommunications		public safety telephone calls and radio (contact) communications. Nationally recognized procedures for processing 9-1-1 emergency calls, field unit safety, injury scenarios, and demonstrating positive public relations. Fundamental skills and responsibilities for fire, emergency medical, and law enforcement complaint report processing as well as federal laws regarding proper processing, retention, and dissemination of security information. Definitions of terms unique to fire suppression, emergency medical, and law enforcement situations common within the public safety sector.				3.0 3.0	
FSC113	2020 Fall	Introduction to Fire Suppression		Introduction to the characteristics and behavior of fire, fire hazard properties of ordinary materials, extinguishing agents, firefighter safety, fire suppression organization and equipment, and basic fire fighting tactics.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0 LAB 0.0 1.0 1.0	T
FSC114	1991 Fall	Hazardous Materials First on the Scene/Awareness Level		Designed to assist first responders involved in potential hazardous materials incident. Provides an overview of capabilities and limitations of first responders in the recognition and detection of hazardous materials, safety considerations, and pre-emergency planning	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
FSC115	2020 Fall	Community Emergency Response Team (CERT): Level I	AJS115	Basic skills, including instruction in teamwork and disaster simulations, needed to help oneself, family, and neighbors in the event of a community disaster in accordance with the Federal Emergency Management Agency (FEMA) guidelines.	Prerequisites: None.		Occ	LEC 1.5 1.5 1.5	S
FSC117	1998 Fall	Fire Apparatus		Principles of care, maintenance and operation of fire apparatus and pumps. Includes pump construction and accessories, pumping techniques, power development, and	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				transmission. Driving, troubleshooting and producing effective fire streams					
FSC118	1998 Fall	Fire Hydraulics		Review of basic mathematics. Hydraulic laws and formulas as applied to the fire service. Application of formulas and mental calculations to hydraulic problems, water supply variables, and discharge requirements for pumpers	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FSC119	2000 Spring	Introduction Fire Service Ethics		Ethical issues, standards, and philosophical consideration of moral problems encountered in fire service. Ethical responsibility of fire service personnel and those they serve	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FSC125	1989 Fall	Hazardous Materials Emergency Scene Management		Emphasis on detection and identification of dangers associated with the release of hazardous materials. Step-by-step guide to the management of response resources for the purpose of mitigating a hazardous materials incident	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
FSC126	2018 Fall	Refresher Training for Hazardous Materials First Responder Operational		Review of fundamentals of containment, prevention, and knowledge of basic hazard and risk assessment techniques. Topics include protective clothing, containing and controlling specific hazards, vapor suppression, and cooling of tanks. Meets the requirements of Department of Labor Part III; Occupational Safety and Health Act 29; Code of Federal Regulations Part 1910; Hazardous Waste Operational and Emergency Response; Final Rule March 6, 1989 governing Refresher Training.	Prerequisites: A grade of C or better in FSC105.		Occ	L+L 1.0 1.0 1.0	T
FSC127	1994 Summer II	Codes/Regulations and Contingency Planning for Hazardous Materials Response		Multifaceted approach to the management of a hazardous materials accident at private public sector facility. Includes planning requirements and considerations, fixed-site pre-plan preparation. Overview of federal statutes and national codes used to establish safety, health, and environmental standards for chemical utilization.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S

				Highlights Occupational Safety and Health Administration, Department of Transportation, Environmental Protection Agency, Uniform Building Code, Uniform Fire Code, and National Fire Protection Association regulations. Application of laws, regulations, and rules by agencies enforcing legal mandates in chemical compliance, both public and private					
FSC128	1994 Summer II	Hazardous Materials Air Monitoring/Breath ing Protection		Fundamentals of emergency air monitoring and respiratory protection used in response to hazardous materials releases. Theory and practical application. Includes use of monitoring instruments in conjunction with respiratory protection systems for tactical and risk analysis work; respiratory protection devices and their physiological effects; all state and federal laws pertaining to respiratory protection	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
FSC129	1994 Summer II	Physical Properties of Hazardous Materials		Practical application of physical properties of hazardous materials for risk and hazard analysis. Working knowledge of chemicals, exposure, and physical property nomenclature for the selection of proper decontamination methods and proper personal protective clothing and equipment	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
FSC130	2020 Fall	Fitness for Firefighters/CPAT		Skills and abilities required for entry level position in the fire service including physical ability, and stamina. Opportunity to take the accredited International Association of Fire Fighters (IAFF) Candidate Physical Ability Test (CPAT) at the end of the course at a IAFF licensed agency.	Prerequisites: None.	FSC130 is offered as credit (P) or no credit (Z) basis. Standard grading available according to procedures outlined in catalog.	Occ	L+L 1.0 1.5 1.5	T

FSC131	2018 Fall	Introduction to Urban Technical Rescue		Practical application of safe rescue practices for urban technical rescue. Includes ropes and rope systems, trench rescue, confined-space rescue, swiftwater rescue, and rescue from collapsed structures	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
FSC132	1994 Summer II	Personal Protective Equipment for Emergency Spill Control at Hazardous Materials Incidents		Fundamentals of personal protective equipment and practical application of theoretical information. Includes the design, components, interface, use, application, and materials of chemical protective clothing; thermal limitations of chemical protective clothing in flammable and toxic atmospheres; physiological and psychological effects of wearing these types of garments. Fundamentals of basic emergency spill control, identification, response teams, safety, and decontamination	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
FSC134	2020 Fall	Fitness and Conditioning for Firefighters		Overview of all aspects of fitness for current and prospective firefighters. Includes physical and mental aspects of performance for optimal achievement on fire department agility tests and fire fighting tasks; individual conditioning strategies, nutritional guidelines, protective clothing concepts, and basic exercise principles. Pre-employment, evaluation, and lifelong fitness and conditioning.	Prerequisites: None.		Occ	L+L 3.0 4.6 4.6	T
FSC136	2018 Fall	Women Firefighter Preparation		Designed for women firefighter candidates. Includes firefighting techniques and procedure, physical/mental conditioning, health concerns, occupational opportunities, and mentorship programs.	Prerequisites: A grade of C or better in FSC134 or Corequisites: FSC134 or permission of Instructor.		Occ	L+L 2.0 2.87 2.87	T
FSC139	2020 Fall	Emergency Response to Terrorism	AJS139	Fundamentals of emergency response to suspected terrorist events. Historical perspective of terrorist activities and methods by which responders can identify and protect themselves and the public	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				from these threats. Coordination of responding agencies.					
FSC146	2021 Fall	Disaster Recovery Operations	AJS146	Specialized knowledge and skills for the emergency manager in developing programs and activities associated with disaster recovery assistance and mitigation actions that reduce losses from future disasters.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FSC147	2020 Fall	Emergency Preparedness	AJS147	Emergency preparedness related to natural and manmade disasters. Planning concepts and the planning process; awareness and education programs and strategies for the general community as well as business and industries.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FSC148	2020 Fall	Fundamentals of Emergency Management	AJS148	Emergency management systems including career opportunities, function, tasks and responsibilities of the emergency management program manager, role of the emergency manager in mitigation, preparedness, response, and recovery. Past civil defense and current emergency management systems since evolution from World War II.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FSC149	2020 Fall	Hazard Mitigation	AJS149	Knowledge and skills required to develop programs to reduce losses from future disasters, emergencies, and other extreme events caused by natural and man-made hazards.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FSC152	1996 Fall	Engine Company Officer		Overview of all aspects of engine company operations including the activities and responsibilities performed by the captain as well as mechanisms for developing a personal supervisory style. Designed for the aspiring company officer or anyone having the opportunity for the role of a company officer	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
FSC153	2018 Fall	Minimum Company Standards for Fire Fighters		Comprehensive review of Standard Operating Procedures as they relate to fire ground skills. Emphasis placed on hands on activities allowing participants to practice necessary skills to safely operate on the fire ground and vehicle accident scenes	Successful completion of the Fire Operations Academy and current Candidate Physical Ability Test (CPAT).		Occ	L+L 2.0 4.0 4.0	T

FSC158	2006 Summer I	Advanced Education for Probationary Firefighter		Preparation to advance skill level of the probationary firefighter. Includes preparation for ambulance operations, driver's training and safety issues, fire ground operations, and fire department organizational structure. Hands-on application of skills and concepts	Prerequisites: Permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
FSC159	2018 Fall	Ladder Operations		Comprehensive training for members of fire department ladder companies. Emphasis on safety, progressive skills, and equipment review.	Prerequisites: Permission of Instructor.		Occ	L+L 1.0 1.0 1.0	T
FSC160	2007 Spring	Advanced Driver Training Instructor Certification		Comprehensive instructor certification course based on information and resources from the National Fire Protection Association Standard for Driver Apparatus; the Arizona Department of Transportation Standards, Commercial Drivers License Requirements; General Motors Advanced Drivers Training; National Highway Traffic and Safety Administration; and the Occupational Health and Safety Administration. Covers compensation for inertia, defensive driving skills, and collision avoidance techniques. Differences between driving passenger vehicles top-heavy or high-profile vehicles. Focuses on competency of instructor in ability to teach principles and demonstrate skills necessary to operate fire department apparatus	Prerequisites: Permission of Instructor.		Occ	LEC 1.2 1.2 1.2	S
FSC161	2007 Spring	Advanced Driver Training Instructor Re-Certification		Comprehensive recertification for all previously certified Advanced Driver Training (ADT) instructors. Focuses on safety, review of driving skills, comprehension of course dialogue, and instructor presentation skills based on standards established by National Fire Protection Association (1002-Standard for Driver Apparatus); Arizona Department of Transportation, Commercial Drivers License (CDL); General Motors Advanced Driver Training; National	Prerequisites: Permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S

				Highway Traffic and Safety Administration; and the Occupational Health and Safety Administration					
FSC162	2007 Spring	Utility Truck Operation		Comprehensive review of skills, responsibilities, apparatus familiarization, mechanical and technical aptitudes, and fire department standard operating procedures specific to safe and effective operation of utility trucks. Focuses on practical application of classroom instruction to insure competency of engineers in performing all utility truck/scene support operator responsibilities	Prerequisites: Permission of Instructor.		Occ	LEC 1.0 1.0 1.0	S
FSC163	2007 Spring	Respiratory Protection Refresher		Use of respiratory protection, including regulations, hazard recognition, limitations of respirators, maintenance requirements, and importance of annual fit testing. Complies with 29CFR (Code of Federal Regulations) 1910.134 Occupational Safety and Health Administration (OSHA) Regulation for Respiratory Protection refresher training	Prerequisites: Permission of Instructor.		Occ	LEC 1.0 1.0 1.0	S
FSC167	2020 Fall	Fire Captain Academy		Roles and responsibilities of a company officer within the fire department system with emphasis on practical application and preparation for the role of company officer in a move-up or out-of-class status. Emphasis on customer service, safety, crew development, discipline, community involvement, and specific engine and ladder company officer functions. Includes fire and emergency medical simulations.	Prerequisites: Permission of Instructor.		Occ	LEC 6.0 3.0 3.0 LAB 0.0 3.0 3.0	T
FSC174	2020 Fall	Functions of Command		Basic functions of command in the fire service. Includes brief history and future trends of incident command. Analysis of recent local, national, and international tactical and strategic concerns. Utilizes a Command Training Center to provide real-time,	Prerequisites: Permission of Instructor. Corequisites: FSC102.		Occ	L+L 2.0 3.0 3.0	T

				computer- and prop-enhanced simulations.					
FSC175	2018 Fall	Fireground Survival		On-deck procedures, focusing on implementation, tasks and responsibilities, logistics, and their impact on tactics, strategy, and scene safety. Assignment of Rapid Intervention Company (RIC) responsibilities to the on-deck company. Fireground survival skills	Prerequisites: Permission of Instructor.		Occ	L+L 0.5 0.7 0.7	T
FSC200	2014 Spring	Fire Service Instructor- Level I		Designed to prepare students for Level I Training Officer as defined by the National Fire Protection Association (NFPA) 1041 standards. Includes methods of delivering instructional materials, preparation of lesson plans, instructional aids and evaluation instruments; techniques and strategies for organizing the learning environment and management of recordkeeping are also included.	Prerequisites: None.	FSC200 is intended for Firefighters seeking to become Instructors or Training Officers.	Occ	LEC 3.0 3.0 3.0	S
FSC201	2014 Spring	Fire Service Instructor- Level II		Designed to prepare students for Level II Training Officer as defined by the National Fire Protection Association (NFPA) 1041 standards. Continued knowledge and skills in methods of delivering instructional materials, preparation of lesson plans, instructional aids and evaluation instruments; techniques and strategies for organizing the learning environment and management of recordkeeping are also included.	Prerequisites: A grade of C or better in FSC200 or permission of Program Director or Instructor.	FSC201 is intended for Firefighters seeking to become Instructors or Training Officers.	Occ	LEC 3.0 3.0 3.0	S
FSC202	1998 Fall	Supervisory Training for Firefighters		Administrative methods applied to the fire service, departmental organization, and personnel management. Includes fire alarm signaling systems, fire service planning, and relationships with other city departments	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FSC204	2020 Fall	Firefighting Tactics and Strategy		Methods of coordinating personnel, equipment, and apparatus on the fireground. Practical methods of controlling and extinguishing	Prerequisites: A grade of C or better in FSC113 or permission of Instructor or current		Occ	LEC 3.0 3.0 3.0	S

				structural and other types of fires. Includes simulation exercises.	employment as a firefighter and/or Firefighter I and II Certification and/or related experience as determined by the Program Director.				
FSC205	1989 Fall	Command Strategies for Major Emergencies		Effective methods of managing major emergency incidents including multiple alarm structural fires, high rise fires, major brush fires, complex hazardous materials incidents and multi-casualty medical incidents. Includes incidents that require the commitment of resources based on a transitional situation and/or managing the effective interaction between numerous agencies to achieve control	Prerequisites: A grade of C or better in FSC204.		Occ	LEC 3.0 3.0 3.0	S
FSC208	2020 Fall	Firefighter Safety and Building Construction		Actions necessary to provide for the safety of firefighters operating on the fireground. Effects that fire and heat may have on various types of building construction resulting in the loss of structural integrity. Includes signs and symptoms of structural damage.	Prerequisites: A grade of C or better in FSC113 or permission of Instructor or current employment as a firefighter and/or Firefighter I and II Certification and/or related experience as determined by the Program Director.		Occ	LEC 3.0 3.0 3.0	S
FSC209	2011 Summer I	Fire Investigation I		Methods of determining point of fire origin, path of fire travel, and fire cause. Includes recognizing and preserving evidence; interviewing witnesses; arson laws and types of arson fires; and court testimony, reports, and records.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FSC209LL	2018 Fall	Fire Investigation I Lab		Practical application of fire investigation techniques. Includes use of the scientific method to investigate various types of fires as well as fire patterns, explosions and evidence documentation. Also covers scene management and examination procedures in addition to report writing and spoliation concerns.	Prerequisites: A grade of C or better in FSC209.		Occ	LAB 1.0 2.0 2.0	T

FSC210	2018 Fall	Fire Investigation II		Focus on practical skills for fire investigators. Emphasis on hands-on application with practice examining and recording the fire/arson scene. Includes class room and field exercises on each section.	Prerequisites: A grade of C or better in FSC209 or permission of Instructor.		Occ	L+L 3.0 3.0 3.0	T
FSC211	2018 Fall	Fire Investigation III		Focus on case building for fire investigators. Emphasis on hands-on application, practice examining and recording the fire/arson scene. Includes field exercises with arson task force to investigate a crime scene.	Prerequisites: A grade of C or better in FSC210 or permission of Instructor.		Occ	L+L 3.0 3.0 3.0	T
FSC212	2018 Fall	Fire Investigation IV		Skills and information for those responsible for fire investigation. Focus on courtroom and testimony. Includes continuing arson task force team assignment.	Prerequisites: A grade of C or better in FSC211 or permission of Instructor.		Occ	L+L 3.0 3.0 3.0	T
FSC213	1998 Fall	Hazard Categorization (HAZ CAT)		Fundamentals of basic chemical identification for field application. Includes demonstration of sampling techniques, safety, key charts, test descriptions and use, and flow charts for tactical application at hazardous materials incidents	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
FSC214	1998 Fall	Human Resource Management in Fire Service		Management of fire service personnel functions. Includes selection procedures, employee discipline, performance ratings, elements of supervision. Labor relations and related personnel responsibilities	Prerequisites: A grade of C or better in FSC202 or four years in the fire service.		Occ	LEC 3.0 3.0 3.0	S
FSC215	2000 Fall	Customer Service in the Public Sector		Examines the personal and practical skills needed to enhance customer service in the public sector with an emphasis on application, basic management requirements, and training	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FSC216	2011 Summer I	Fundamentals of Flammable Hazardous Materials		Fundamentals of chemistry used in fire service, chemistry of flammable hazardous materials, containers used to store and transport flammable hazardous materials, and equipment and materials used in controlling emergencies involving flammables. Also includes tactics for hazardous materials emergencies, and laws at	Prerequisites: A grade of C or better in FSC105.		Occ	LEC 3.0 3.0 3.0	S

				federal, state, and local levels pertaining to the use, storage, and transportation of hazardous materials and hazardous wastes.					
FSC217	2011 Summer I	Dangerous and Explosive Hazardous Materials		The chemistry of reactive and unstable hazardous materials, the toxicology of dangerous chemicals, and the measures taken to protect responders, the community, and the environment of chemical accidents. Also includes an introduction to field sampling of unknown substances.	Prerequisites: A grade of C or better in FSC216.		Occ	LEC 3.0 3.0 3.0	S
FSC220	2020 Fall	Fire Officer		Administrative methods applied to the fire service, departmental organization, and personnel management. Includes Incident Management System, fire service planning, and relationships with other agency departments.	Prerequisites: Full time Certified Fire Fighter I & II, or Fire Instructor I, or permission of Instructor.		Occ	L+L 5.0 6.0 6.0	T
FSC221	1998 Fall	Ladder Company Officer		Overview of all aspects of ladder company operations including activities, expectations, and responsibilities required of the ladder captain. Designed for the company officer who aspires to the role of ladder company officer	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
FSC224	2009 Spring	Incident Command Systems		Methods for managing emergency incidents including command, control and coordination of response to all types of incidents, including hazardous materials, natural hazards, fire and multiple causality incidents. Emphasis on stabilization and protecting life, property, and environment	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FSC225	2018 Fall	Hazard Zone Command		Provides the knowledge, skills and abilities for incident commanders to manage local, National Incident Management System (NIMS) Type 4 and 5 incidents. Prepares Fire Service Company and Command Officers to standardize local incident operations across their organization. The Hazard Zone Command course includes theory and simulation-based case studies. After successful	Prerequisites: Firefighter 1 and 2 certification and (a minimum of 5 years of fire service field experience or permission of Instructor).	80 hours of online and in person coursework is minimally required for this course.	Occ	L+L 5.0 6.0 6.0	T

				completion of the course, the student will receive Blue Card certification for a period of three (3) years.					
FSC226	2006 Spring	Incident Safety Officer		Comprehensive review of the critical factors that threaten the safety and well being of operating firefighting crews with an emphasis on the role an Incident Safety Officer has in recognizing, minimizing and mitigating threats. Focus on the Principles and types of construction, building dating, Smoke and Fire size-up, unique building types and standard company operations within Incident Management System providing the framework for effective Incident Safety Officer actions and overall impact on fire ground safety. Safety of Fire companies operating on every other type of incident in which a Command Structure is established, focus on the scope of an Incident Safety Officer	Rank of Fire Captain or Chief Officer.		Occ	LEC 3.0 3.0 3.0	S
FSC230	2010 Spring	Fire Officer Leadership II		Management techniques which develop leadership and leadership effectiveness. Written and verbal communication skills, fire service excellence goals, counseling and problem solving methods. Role-playing and case studies emphasized throughout	Prerequisites: Permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
FSC231	2018 Fall	Battalion Chief Academy		Examine the many roles and responsibilities required of a chief officer. Manage emergency incidents, explore personal and professional growth, view department issues more globally, manage personnel more effectively, manage conflict resolution for positive outcomes, and define leadership.	Prerequisites: None. FSC202 and FSC204 are suggested but not required.		Occ	L+L 3.0 5.0 5.0	T
FSC234	2020 Fall	Fitness and Wellness for Firefighter Candidates		Focus on fitness and wellness for firefighter candidates.	Prerequisites: Permission of Instructor.		Occ	L+L 3.0 4.6 4.6	T
FSC238	2004 Fall	Vehicular Extrication and	EMT238	Participative course designed for the Emergency Medical Technicians	Basic EMT certification current		Occ	LEC 2.0	S

		Patient Stabilization		(EMT). Incorporates new knowledge and skills necessary to access, extricate, and care for victims of crash incidents. Provides exposure to scene management, including size-up, disentanglement, victim stabilization for single and multi-victim situations, hazardous materials incidents, integration of local emergency medical services (EMS) for patient assessment and management, and standard operating procedures to selected victim scenarios	enrollment in an EMT-Basic program nurse with emergency department experience or law enforcement personnel or permission of Instructor.			2.0 2.0	
FSC240	2018 Fall	Incident Command Officer		Preparation of Incident Command officers in handling local community's emergency situations	Chief Officer or permission of Instructor.		Occ	L+L 3.0 3.0 3.0	T
FSC258	2023 Fall	Victimology and Crisis Management in Public Safety	AJS/EMT2 58	Victimology, the criminal justice system, techniques of crisis intervention and management, and the importance of a multicultural and global perspective. Includes violent crimes, sexual assault, family violence, post-traumatic stress disorder, the role of substance abuse, developing effective coping skills of victims and responders, appropriate community resources, and the cultural responsiveness of the justice system.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
FSC259	2018 Fall	Advanced Ladder Operations		Comprehensive training for members of fire department ladder companies. Emphasis on application of techniques, incorporating safety, progressive skills, and equipment review.	Prerequisites: Permission of Instructor.		Occ	L+L 8.0 8.5 8.5	T
FSC260	2018 Fall	Technical Rope Rescue (RR) 1, 2, 3		Concepts, techniques, and skills needed to support technical rope rescue. Meets Arizona Fire Marshal Office requirements for RR1, RR2, RR3 and National Fire Protection Association (NFPA) 1670 Operational Rope Rescue	Prerequisites: A grade of C or better in FSC131 or permission of Instructor.		Occ	L+L 3.0 3.6 3.6	T
FSC261	2018 Fall	National Fire Protection Agency Rope Technician		Advanced anchor construction, use of elevated anchor points on difficult edges, horizontal rope systems, and study of force multipliers commonly	Prerequisites: A grade of C or better in FSC260 or (the Office of the Arizona		Occ	L+L 3.0 3.6 3.6	T

				experienced during high angle rope rescue. Meets the certification requirements for the NFPA (National Fire Protection Agency) 1670 for Operational Rope Rescue and NFPA 1006 for Technical Rescue Rope Technician.	State Fire Marshalxxs Ropes 1 2 and 3 class) or permission of Instructor.				
FSC271	2012 Spring	Aircraft Rescue Fire Fighter (ARFF)-Basic		Basic level course for aircraft rescue firefighters. Preparation for performing standard aircraft rescue and firefighting procedures, including roles and responsibilities, basic airport configuration and design, aircraft types, hazardous cargo, safety precautions and use of materials.	Prerequisites: Permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
FSC272	2018 Fall	Aircraft Rescue Fire Fighter (ARFF) - Advanced		Advanced level course for certification of aircraft rescue firefighters. Integrating, performing and evaluation of standard firefighting skills for airport configuration and design, aircraft types, hazardous cargo, safety procedures and materials used.	Prerequisites: A grade of C or better in FSC271.		Occ	L+L 3.0 4.0 4.0	T
FSC273	2018 Fall	Aircraft Rescue Fire Fighter (ARFF)-Driver		Driver training course for aircraft rescue firefighters. Preparation for performing standard driving procedures for aircraft rescue and firefighting. Includes but not limited to proper handling of apparatus, equipment and tools used in aircraft rescues and communication with tower and other response units.	Prerequisites: A grade of C or better in (FSC272 or current employment as an airport firefighter) and permission of Instructor.	Current employment is in accordance with the national Fire Protection Association (NFPA) Standard 1003.	Occ	L+L 2.0 2.5 2.5	T
FSC274	2013 Summer I	Aircraft Rescue Fire Fighter (ARFF) - Incident Command		Incident command certification of aircraft rescue firefighter performing and evaluating standard firefighting skills for airport firefighters. Includes but not limited to aircraft types, hazardous cargo, and safety procedures and materials.	Prerequisites: A grade of C or better in FSC273 or permission of Program Director.		Occ	LEC 3.0 4.0 3.7	S
FSC275	2018 Fall	Aircraft Rescue Fire Fighter (ARFF) Certification Renewal		Designed to provide recertification for the performance of standard aircraft rescue and firefighting procedures and skills for airport firefighters. Includes but not limited to airport	Prerequisites: A grade of C or better in (FSC272 or current employment as an airport firefighter) and	Current employment is in accordance with the	Occ	L+L 3.0 4.0 4.0	T

				configuration and design, aircraft types, hazardous cargo, safety procedures and materials used.	permission of Instructor.	National Fire Protection Association (NFPA) Standard 1003.			
FSC276	2021 Summer	Terrorism Liaison	AJS276	Provides knowledge and skills required for the Terrorism Liaison Officer (TLO) role to coordinate and communicate with various fire, police, and military agencies in managing threat vulnerability and other emergency disasters.	Prerequisites: Permission of Program Director.	AJS/FSC276 is not open to the public.	Occ	L+L 4.0 4.0 4.0	T
FSC277	2021 Summer	Threat Vulnerability Assessment	AJS277	Provides a historical perspective of threats and the activities and methods used by first responders to identify and mitigate future threats. Introduces and examines threat vulnerability of critical infrastructure within jurisdictions. Provides assessment techniques for responding agencies.	Prerequisites: Permission of Program Director.	AJS/FSC277 is not open to the public.	Occ	L+L 1.0 1.0 1.0	T
FSC278	2021 Fall	Hostile Intent and Intervention Training	AJS278	Provides knowledge and skills required to detect and anticipate terrorist activities as a member of a Hostile Intent and Intervention Team (HIIT).	Prerequisites: Permission of Program Director.	AJS/FSC278 is not open to the public.	Occ	L+L 2.0 2.0 2.0	T
FSC279	2021 Fall	Field Intelligence Team Training	AJS279	Provides knowledge and skills required for situational awareness of suspicious activities and the deployment of first responders for mitigation and investigation for the Field Intelligence Team (FIT).	Prerequisites: Permission of Program Director.	AJS/FSC279 is not open to the public.	Occ	L+L 3.0 3.0 3.0	T
FSC280	2022 Spring	Terrorism Hazmat First Responder Training	AJS280	Provides knowledge and skills to understand the chemistry of reactive and unstable hazardous materials, the toxicology of dangerous chemicals, and the measures taken to protect the safety of responders, the community, and the environment of chemical accidents. Also includes an introduction to field sampling of unknown substances for the Field Intelligence Team (FIT) and the Hostile Intent and Intervention Team (HIIT).	Prerequisites: Permission of Program Director.	AJS/FSC280 is not open to the public.	Occ	L+L 4.0 4.0 4.0	T

FSC282AA	2014 Summer	Service-Learning Experience in Fire Science		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	FSC282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 1.0 1.0 0.0	L
FSC282AB	2014 Summer	Service-Learning Experience in Fire Science		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	FSC282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 2.0 2.0 0.0	L
FSC282AC	2014 Summer	Service-Learning Experience in Fire Science		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	FSC282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 3.0 3.0 0.0	L

FSC290AA	2009 Spring	Arson Investigation		Investigative techniques used in analyzing suspected arson scenes, motives, and collection of physical evidence	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
FSC296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
FSC296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z

FSC296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
FSC296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
FSC298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
FSC298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
FSC298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
FST175	2020 Fall	Food Science Product Development I		A study of food production with hands-on experience in all aspects of developing, producing, and marketing food products for food science majors.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
FST263	2020 Fall	Principles of Food Science		The study of scientific principles involved in the development, production, and evaluation of food.	Prerequisites: None.		Acad	L+L 4.0 4.0 4.0	T
FST264	2020 Fall	Protein Science		The study of natural and synthetic proteins in food science with a focus on meat.	Prerequisites: A grade of C or better in FST263.		Acad	L+L 4.0 4.0 4.0	T

FST265	2020 Fall	Microbiology of Foods		The study of microorganisms and their relationship to food development, production, processing, and preservation.	Prerequisites: A grade of C or better in (BIO156 or BIO156XT or BIO181 or BIO181XT or FST263) and (CHM130 or higher).		Acad	L+L 4.0 4.0 4.0	T
FST266	2023 Fall	Fermentation in Food Science		A study of the biochemical principles and processes of fermentation in food science.	Prerequisites: A grade of C or better in (BIO156 or BIO156XT or BIO181 or BIO181XT or FST263) and (CHM230 or CHM230AA or CHM235 or CHM235AA).		Acad	LEC 4.0 4.0 4.0	S
FST267	2020 Fall	Analysis of Food		A study of biochemical analysis of foods used in product development, evaluation, and quality control.	Prerequisites: A grade of C or better in (BIO156 or BIO156XT or BIO181 or BIO181XT or FST263) and (CHM130 or higher).		Acad	L+L 4.0 4.0 4.0	T
FST275	2020 Fall	Food Science Product Development II		Advanced study of food production and analysis of quality, safety, efficiency and cost through hands-on experience in developing, producing and marketing food products.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
FST298AA	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
FST298AB	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z

				expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
FST298AC	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
FYE101	2022 Fall	Introduction to College, Career and Personal Success		Focus on student success through exploration of academic, career and life skills. Includes study of goal-setting/success strategies, academic mindset and financial literacy. Develop an education/career plan utilizing career assessments and other college resources.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
FYE103	2022 Fall	Exploration of College, Career and Personal Success		Focus on student success through exploration of academic, career, and life skills. Includes study of goal-setting/success strategies, academic mindset, interpersonal skills, financial literacy, self-care strategies, diverse perspectives, and campus tools and resources. Develop an education/career plan utilizing career assessments and other college resources.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
GBS103	1995 Fall	Principles of Banking		History, characteristics and significance of American banking system, includes types of accounts, banking services and the relationship of commercial banks to their depositors	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

GBS109	2022 Spring	Introduction to Esports Management		Introduction to Esports will introduce the business, economics, operations and marketing of the Esports industry. Historical and cultural implications will be examined from the early days of competitive video gaming, to today's billion dollar industry. Global awareness and diverse cultural viewpoints and trends will be studied as they relate to the Esports industry. This course will introduce students to the numerous business opportunities to work and grow in the dynamic Esports industry.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
GBS110	1995 Fall	Human Relations in Business and Industry		Exploration of fundamental theories and concepts of human relations in business and industry. Particular emphasis is placed on developing effective interpersonal relationships and leadership skills within an organization	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
GBS120	2018 Fall	Workplace Communication Skills		Reviews planning, organization, development, and evaluation of written and oral communication in business settings, including informative and persuasive messages.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
GBS126	2023 Fall	Writing Resumes		Planning, organizing, and writing a professional resume. Focus on presentation skills including format and language	Prerequisites: None.		Occ	L+L 1.0 1.7 1.7	T
GBS131	1995 Fall	Business Calculations		Review of basic arithmetic and application of mathematics to business problems, includes percentage, interest, discount, and markups	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
GBS132	2023 Fall	Personal and Family Financial Security		Principles and practices of personal and family financial planning, includes savings, budgeting, credit, buying versus renting, and general principles of consumerism.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
GBS151	1991 Fall	Introduction to Business		Characteristics and activities of current local, national, and international business. An overview of economics, marketing, management and finance	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

GBS175	1993 Spring	Professional Development		Examines personal qualities and professional skills needed to find a good job. Explores techniques required to build a successful career	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
GBS205	2016 Summer	Legal, Ethical, and Regulatory Issues in Business		Legal theories, ethical issues and regulatory climate affecting business policies and decisions.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
GBS206	2007 Summer II	Business Law (UCC)		Legal and ethical aspects of contracts, sales, commercial paper, secured transactions, documents of title, letter of credit, bank deposits, and collections	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
GBS207	2007 Summer II	Business Law (General Corporate)		Legal and ethical aspects of agency, partnerships, corporations, bankruptcy, antitrust, securities, and other regulations of business	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
GBS211	2018 Fall	Legal, Ethical and Regulatory Issues of the Internet Studies		Legal, ethical and regulatory issues of the Internet environment, including personal, commercial and business electronic transactions in cyberspace.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
GBS220	2016 Summer	Quantitative Methods in Business		Business applications of quantitative optimization methods in operations management decisions.	Prerequisites: A grade of C or better in (MAT150 or MAT151 or MAT152) or satisfactory score on the District math placement test.		Occ	LEC 3.0 3.0 3.0	S
GBS221	2019 Summer	Business Statistics		Business applications of descriptive and inferential statistics, measurement of relationships, and statistical process management. Includes the use of spreadsheet software for business statistical analysis.	Prerequisites: A grade of C or better in GBS220 or MAT217 or MAT218.	Course Attribute(s)): General Education Designation: Computer/ Statistics/ Quantitative Applications - [CS] Arizona Shared Unique Number SUN#: BUS 2201	Occ	LEC 3.0 3.0 3.0	S

GBS233	1998 Fall	Business Communication		Internal and external business communications, including verbal and nonverbal techniques	Prerequisites: A grade of C or better in ENG101 or ENG107 with grade of C or better or permission of Department or Division.	Course Attribute(s): General Education Designation: Literacy and Critical Inquiry - [L]	Occ	LEC 3.0 3.0 3.0	S
GBS261	2021 Spring	Investments I		Evaluation of various investment forms including study of inflation, taxation, government securities, stocks and bonds, real estate and retirement plans. Securities industry knowledge and skills for individuals to prepare for careers in Financial Services. Includes capital markets, types of products and their risks, trading, customer accounts, prohibited activities, and regulatory agencies and their functions. Helps to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination required for entry-level positions in the security industry.	Prerequisites: None. Corequisites: Concurrent enrollment in GBS261LL recommended but not required.	Students interested in taking the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination should also enroll in the GBS261LL Securities Industry Essentials (SIE) Exam Prep course.	Occ	LEC 3.0 3.0 3.0	S
GBS261LL	2021 Spring	Securities Industry Essentials (SIE) Exam Prep		Helps to prepare students for the Financial Industry Regulatory Authority (FINRA) Securities Industry Essentials (SIE) Examination required for prospective securities industry professionals. Focuses on reviewing key concepts, practicing skills, and preparing to successfully demonstrate existing knowledge on the SIE certification exam. The course is	Prerequisites: None. Corequisites: Concurrent enrollment in GBS261 recommended but not required.	GBS261 is recommended for students who are not already employed in the	Occ	L+L 1.0 1.0 1.0	T

				designed to provide an overview of exam topics and study and test-taking strategies. It also will include structured study time, group discussions, and the use of practice exams to assess test readiness.		financial services industry and need more in-depth content related to the SIE exam.			
GBS270AA	1999 Spring	Business Internship		General business work experience in a business or industry. Eighty hours of designated work per credit per semester. Maximum of 3 credits allowed	Prerequisites: Permission of Department or Division.		Occ	LAB 1.0 1.0 0.0	C
GBS270AB	1999 Spring	Business Internship		General business work experience in a business or industry. Eighty hours of designated work per credit totaling 160 hours per semester. Maximum of 3 credits allowed	Prerequisites: Permission of Department or Division.		Occ	LAB 2.0 2.0 0.0	C
GBS270AC	2013 Spring	Business Internship		General business work experience in a business or industry. Eighty hours of designated work per credit.	Prerequisites: Permission of Department or Division.	GBS270A C may be repeated for a total of six (6) credits.	Occ	LAB 3.0 3.0 0.0	C
GBS282AA	2016 Summer	Volunteerism General Business: Service Learning Experience		Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: A grade of C or better in GBS151 and permission of Instructor.	GBS282A A may be repeated for a total of six (6) GBS282 credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 1.0 1.0 0.0	L
GBS294	2003 Fall	Consumer Credit		Consumer lending by financial institutions	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

GBS296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
GBS296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
GBS296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6		Occ	LAB 3.0 15.0 0.0	Z

				related to the career objectives of the students.	grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
GBS296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
GBS298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				aspects of independent study and individualized learning to be combined to maximize student development.					
GBS298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
GBS298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
GCU102	1997 Fall	Introduction to Human Geography		Systematic study of human use of the earth. Spatial organization of economic, social, political, and perceptual environments	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S

GCU113	2016 Fall	United States and Arizona Social Studies	POS113	Overview of government, history, and geography of the United States and Arizona. Includes the relationship of government to the United States economic system as well as the influences and developments that have shaped U.S. and Arizona history. Also covers geographical systems, regions, and study techniques.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
GCU120	1995 Fall	Arizona's Water Issues		History and development of Arizona's arid-land water use: sources, distribution, methods of use, floods, droughts, water law and environmental concerns	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
GCU121	2014 Spring	World Geography I: Eastern Hemisphere		Description and analysis of spatial variations in culture, social, economic, and political phenomena in major world regions. Emphasis on the major cultural realms of Europe, North Africa, and Asia.	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Global Awarenes s - [G] General Education Designatio n: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
GCU122	1995 Fall	World Geography II: Western Hemisphere		Description and analysis of variations in social, economic, and political phenomena in major world regions. Emphasis on Sub-Saharan Africa, Latin America, and Anglo America	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Global Awarenes s - [G] General Education Designatio n: Social and Behavioral	Acad	LEC 3.0 3.0 3.0	S

						Sciences - [SB]			
GCU141	1997 Fall	Introduction to Economic Geography		Production, distribution and consumption of various types of commodities of the world and relationships to the activities of man	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
GCU194	1999 Spring	Special Topics in Cultural Geography		Detailed study of specific regions, topics, or current issues in cultural geography. Topics may include origins, diffusion, and division of cultural areas. Examines cultural patterns and spatial organization which may include population, religion, economic, social and political characteristics. Studies interrelationships between humans and the physical environment (i.e. environmental ecosystems, physical processes and natural resources).	Prerequisites: None.	GCU194 may use field trips as a mandatory component.	Acad	LEC 3.0 3.0 3.0	S
GCU221	1999 Fall	Arizona Geography		The historical to modern development of Arizona. The interplay between the physical, cultural and economic factors affecting Arizona today	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Historical Awareness - [H]	Acad	LEC 3.0 3.0 3.0	S

						General Education Designation: Social and Behavioral Sciences - [SB]			
GCU223	2012 Summer I	Geography of Latin America		Spatial overview of the physical, historical, social, and economic characteristics of South, Middle, and Caribbean America.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
GCU282AA	2023 Fall	Service-Learning Experience in Cultural Geography		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	GCU282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
GCU282AB	2023 Fall	Service-Learning Experience in Cultural Geography		Unpaid Service-Learning (SL) experience completed with approved community partner.	Prerequisites: Permission of Instructor.	GCU282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L
GCU282AC	2023 Fall	Service-Learning Experience in Cultural Geography		Unpaid Service-Learning field experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	GCU282A C may be repeated for a total	Acad	LAB 3.0 3.0 0.0	L

						of six (6) credit hours. Standard grading available according to procedures outlined in catalog.			
GCU298AA	2005 Fall	Special Projects	GPH298AA	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
GCU298AB	2005 Fall	Special Projects	GPH298AB	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
GCU298AC	2005 Fall	Special Projects	GPH298A C	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

				combined to maximize student development.					
GER085AA	2005 Spring	Speedy German I		Basic grammar and vocabulary of the German language to practice listening and speaking skills	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
GER085AB	2014 Fall	Speedy German II		Intermediate vocabulary, German syntax and inflections to further develop conversational skills in German.	Prerequisites: A grade of C or better in GER085AA. Completion of prerequisites within the last three years is required.		Acad	LEC 1.0 1.0 1.0	S
GER085AC	2014 Fall	Speedy German III		Continued development of German speaking and listening skills to express opinions and thoughts on a variety of subjects.	Prerequisites: A grade of C or better in GER085AB. Completion of prerequisites within the last three years is required.		Acad	LEC 1.0 1.0 1.0	S
GER101	2015 Fall	Elementary German I		Basic grammar, pronunciation and vocabulary of the German language. Includes the study of German culture, practice of listening, speaking, reading and writing skills.	Prerequisites: None.	Field trips may be required. Course Attribute(s): General Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN#: GER1101	Acad	LEC 4.0 4.0 4.0	S
GER101AA	2018 Fall	Elementary German I		Basic grammar, pronunciation and vocabulary of the German language. Includes the study of German culture, practice of listening, speaking, reading and writing skills.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G]	Acad	L+L 4.0 5.0 5.0	T

GER102	2015 Fall	Elementary German II		Continued study of grammar and vocabulary of the German language along with the study of German culture. Emphasis on German language skills.	Prerequisites: A grade of C or better in GER101 or GER101AA or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN#: GER1102	Acad	LEC 4.0 4.0 4.0	S
GER102AA	2018 Fall	Elementary German II		Continued study of grammar and vocabulary of the German language along with the study of German culture. Emphasis on German language skills.	Prerequisites: A grade of C or better in GER101 or GER101AA or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Global Awareness - [G]	Acad	L+L 4.0 5.0 5.0	T
GER115	1994 Fall	Beginning German Conversation I		Conversational German. Basic sentence structure, pronunciation and vocabulary necessary to develop speaking ability in German. Designed for students seeking speaking and listening abilities with little emphasis on grammar	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
GER116	2014 Fall	Beginning German Conversation II		Continued development of speaking and listening skills for effective communication in German.	Prerequisites: A grade of C or better in GER115 or one year of high school German or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
GER201	2014 Fall	Intermediate German I		Review of essential grammar of the German language and study of the German culture. Continued practice	Prerequisites: A grade of C or better in GER102 or GER102AA or two	Course Attribute(s): General Education	Acad	LEC 4.0 4.0 4.0	S

				and development of reading, writing, and speaking skills.	years of high school German or permission of Department or Division. Completion of prerequisites within the last three years is required.	Designation: Global Awareness - [G] Arizona Shared Unique Number SUN#: GER2201			
GER202	2014 Fall	Intermediate German II		Continued development of German language skills and continued study of the German culture.	Prerequisites: A grade of C or better in GER201 or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN#: GER2202	Acad	LEC 4.0 4.0 4.0	S
GER226	2014 Fall	Intermediate German Conversation II		Further development of skills in conversational German.	Three semesters of high school German or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
GER296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be		Acad	LAB 1.0 5.0 0.0	Z

					concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
GER296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z
GER296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career		Acad	LAB 3.0 15.0 0.0	Z

					interest or with permission of the Instructor.				
GER296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z
GER298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
GER298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z

				combined to maximize student development.					
GER298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
GIS205	2024 Fall	Geographic Information Technologies		Introduces modern geographic information technologies, including cartography, Geographic Information System (GIS), remote sensing, global positioning systems, and statistical analyses.	Prerequisites: None.	Knowledge of computer navigation and software application is recommended.	Acad	LEC 3.0 3.0 3.0	S
GIS211	2020 Fall	Geographic Information Science I		Introduces students to digital map creation including vector and raster data, map elements, and design, symbology, and the geo database using Environmental Systems Research Institute (ESRI) desktop and online mapping environments.	Prerequisites: A grade of C or better in GIS205 or permission of Instructor.		Acad	L+L 4.0 4.0 4.0	T
GIS220	2017 Fall	Introduction to ArcPy Scripting		Students will learn how to automate geoprocessing tasks and apply scripting fundamentals using the ArcGIS Python-based scripting language ArcPy. The course emphasizes problem solving using geoprocessing analysis, identifying system integration and data management tasks, determining programming tools and order based upon workflow analysis.	Prerequisites: A grade of C or better in GIS211.		Acad	LEC 3.0 3.0 3.0	S
GIS222	2017 Fall	Geographic Information Science II		Geographic Information Science (GIS) as a basis for microcomputer spatial analysis and synthesis. Includes digitizing, database	Prerequisites: A grade of C or better in GIS211 or		Acad	LEC 3.0 3.0 3.0	S

				organization, spatial retrieval and graphics.	permission of Instructor.				
GIS223	2017 Fall	Introduction to Digital Image Processing		Uses and application of remote sensing and imagery in Geographic Information Systems (GIS). Uses and application of Global Positioning Systems to GIS and remote sensing.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
GLG101	2019 Summer	Introduction to Geology I - Physical Lecture		Introduction to Earth's materials, surface and internal geologic processes, plate tectonics and geologic time.	Prerequisites: None.	Students may receive credit for only one of the following: GLG101 or GLG101I N. Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: GLG103 Arizona Shared Unique Number SUN#: GLG 1101	Acad	LEC 3.0 3.0 3.0	S
GLG101IN	2019 Summer	Introduction to Geology I - Physical		Introduction to Earth's materials, surface and internal geologic processes, plate tectonics and geologic time. Includes practical experience in rock and mineral identification, topographic maps, and applied problems in geology.	Prerequisites: None.	Enrollment in both a GLG101I N lecture section and a GLG101I N laboratory section is	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T

						required. Students may receive credit for only one of the following: GLG101 and GLG103 or GLG1011 N. Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ] Arizona Shared Unique Number SUN# GLG1101			
GLG102	2019 Summer	Introduction to Geology II - Historical Lecture		The origin and history of the Earth, its dynamic geographic and climatic changes. Evolution and sequence of life recorded in the fossil record; tectonic evolution of major continents through time.	Prerequisites: None.	Students may receive credit for only one of the following: GLG102 or GLG1021 N. Course Attribute(s): General Education Designation: Historical Awareness	Acad	LEC 3.0 3.0 3.0	S

						s - [H] General Education Designatio n: Natural Sciences (General) - [SG] in combinati on with: GLG104			
GLG102IN	2019 Summer	Introduction to Geology II - Historical		The origin and history of the Earth, its dynamic geographic and climatic changes. Evolution and sequence of life recorded in the fossil record; tectonic evolution of major continents through time.	Prerequisites: None.	Enrollmen t in both a GLG102I N lecture section and a GLG102I N laboratory section is required. Students may receive credit for only one of the following: GLG102 and GLG104 or GLG102I N. Course Attribute(s): General Education Designatio n: Historical Awarenes s - [H] General Education Designatio	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T

						n: Natural Sciences (General) - [SG]			
GLG103	2019 Summer	Introduction to Geology I - Physical Lab		Includes practical experience in rock and mineral identification, topographic maps, and applied problems in geology.	Prerequisites: None.	GLG103 may accompany GLG101. Students may receive credit for only one of the following: GLG103 or GLG101 N. Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: GLG103 Arizona Shared Unique Number SUN#: GLG 1101	Acad	LAB 1.0 3.0 3.0	T
GLG104	2019 Summer	Introduction to Geology II - Historical Lab		The study of minerals, rocks, fossils, geologic maps and structures.	Prerequisites: None.	GLG104 may accompany GLG102. Students may receive	Acad	LAB 1.0 3.0 3.0	T

						credit for only one of the following: GLG104 or GLG102I N. Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Natural Sciences (General) - [SG] in combination with: GLG102			
GLG105	2018 Fall	Introduction to Planetary Science		A survey of solar system objects and their geologic evolution, surfaces, interiors, and atmospheres, and the methods used to study them; weekly laboratory for data analysis and experiments; possible weekend field trip	Prerequisites: None.	Course Attribute(s): General Education Designation: Natural Sciences (General) - [SG]	Acad	L+L 4.0 6.0 6.0	T
GLG106	2019 Spring	Life in the Universe	AST106	Introduction to the search for life in the universe for the non-science major. Earth's location in space and time, nature of life, light and the spectrum, origin and history of the universe, origin of life on Earth and the possibility of life on other planets.	Prerequisites: A grade of C or better in MAT090 or MAT091 or MAT092 or completion of higher level mathematics course, or satisfactory score on placement exam.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T

GLG107	2024 Fall	Life in the Universe Laboratory		Astronomy, Biology, and Planetary Science laboratory.	Prerequisites: A grade of C or better in AST/GLG106 and permission of Instructor or Department or Division.	AST/GLG 107 is a course intended for those students who have previously completed the corresponding lecture course. Current MCCC students should enroll in AST/GLG 106 only.	Acad	LAB 1.0 3.0 3.0	T
GLG110	2020 Fall	Geological Disasters and the Environment		Acquaints students with the use and importance of geological studies as they apply to the interactions between people and the earth. Includes geological processes and hazards such as earthquakes, volcanoes, floods and landslides. Examines environmental impact and use of mineral and energy resources.	Prerequisites: None.	Students may receive credit for only one of the following: GLG110 or GLG110I N. Course Attribute(s): General Education Designation: General Education Designation: Global Awareness - [G] General Education Designation: Natural	Acad	LEC 3.0 3.0 3.0	S

						Sciences (Quantitative) - [SQ] in combination with GLG111			
GLG110IN	2020 Fall	Geological Disasters and the Environment		Acquaints students with the use and importance of geological studies as they apply to the interactions between people and the Earth. Includes geological processes and hazards such as earthquakes, volcanoes, floods and landslides. Examines environmental impact and use of mineral and energy resources.	Prerequisites: None	Enrollment in both a GLG110IN lecture section and a GLG110IN laboratory section is required. Students may receive credit for only one of the following: GLG110 and GLG111 or GLG110IN. Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T

GLG111	2020 Fall	Geological Disasters and the Environment Lab		Introduction to geological processes and concepts. Application of basic geologic knowledge to evaluate, interpret and propose solutions for a variety of current and past geology-related environmental disasters and hazards.	Prerequisites: None.	May accompany GLG110. Students may receive credit for only one of the following: GLG111 or GLG110I N. Course Attribute(s): General Education Designation: Global Awareness - [G] in combination with GLG110 General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with GLG110	Acad	LAB 1.0 3.0 3.0	T
GLG121	2018 Fall	Geology of the Grand Canyon		Introduction to the physiography and geology of the Grand Canyon. Includes a hiking field trip to the Grand Canyon.	Prerequisites: None. GLG103 suggested but not required.		Acad	L+L 1.0 2.0 2.0	T
GLG140	1996 Fall	Introduction to Oceanography		Investigates the marine environment in terms of basic scientific concepts. Emphasizes the impact of ocean pollutants, climate fluctuations, and resources from the sea	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

GLG140IN	2020 Fall	Introduction to Oceanography		Introduces students to the physical, chemical, and geological conditions that regulate global ocean phenomena. Topics covered include history of oceanography, physical and chemical properties of ocean water, air-sea interactions, current, wave, and tidal phenomena, origins of the oceans, geologic processes and features, biological influences, and environmental issues. Laboratory exercises are included to provide experimental learning opportunities.	Prerequisites: None.	Enrollment in both a GLG140IN lecture section and a GLG140IN laboratory section is required. May include one or more field trips.	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
GLG229AB	2023 Fall	Field Studies for Educators		Field trips to selected geological areas in Arizona in order to collect and/or observe geological phenomena. Designed for pre-college teachers.	Prerequisites: None.		Acad	LAB 2.0 10.0 2.0	F
GLG229AC	2023 Fall	Field Studies for Educators		Field trips to selected geological areas in Arizona in order to collect and/or observe geological phenomena. Designed for pre-college teachers.	Prerequisites: None.		Acad	LAB 3.0 15.0 3.0	F
GLG230AA	2014 Fall	Field Geology of the Southwest		Field trips to selected areas in the Southwest, such as Arizona, Utah, California, and Sonora to observe and interpret various geological features and phenomena.	Prerequisites: None. GLG103 suggested but not required.	GLG230AA may be repeated for a total of four (4) credit hours.	Acad	LAB 1.0 5.0 1.0	F
GLG230AB	2014 Fall	Field Geology of the Southwest		Field trips to selected areas in the Southwest, such as Arizona, Utah, California, and Sonora to observe and interpret various geological features and phenomena.	Prerequisites: None. GLG103 suggested but not required.	GLG230AB may be repeated for a total of eight (8) credit hours.	Acad	LAB 2.0 10.0 2.0	F
GLG230AC	2014 Fall	Field Geology of the Southwest		Field trips to selected areas in the Southwest, such as Arizona, Utah, California, and Sonora to observe and interpret various geological features and phenomena.	Prerequisites: None. GLG103 suggested but not required.	GLG230AC may be repeated for a total of twelve	Acad	LAB 3.0 15.0 3.0	F

						(12) credit hours.			
GLG231AA	2014 Fall	Special Topics in Geology		Exploration of important topics in geology. Specific topic varies.	Prerequisites: None.	GLG231A A may be repeated for a total of two (2) credit hours.	Acad	LEC 0.5 0.5 0.5	S
GLG231AB	2014 Fall	Special Topics in Geology		Exploration of important topics in geology. Specific topic varies.	Prerequisites: None.	GLG231A B may be repeated for a total of four (4) credit hours.	Acad	LEC 1.0 1.0 1.0	S
GLG231AC	2014 Fall	Special Topics in Geology		Exploration of important topics in geology. Specific topic varies.	Prerequisites: None.	GLG231A C may be repeated for a total of eight (8) credit hours.	Acad	LEC 2.0 2.0 2.0	S
GLG231AD	2014 Fall	Special Topics in Geology		Exploration of important topics in geology. Specific topic varies.	Prerequisites: None.	GLG231A D may be repeated for a total of twelve (12) credit hours.	Acad	LEC 3.0 3.0 3.0	S
GLG280	1994 Fall	Geology of Arizona Lecture		Acquaints students with the physical and historical geology of Arizona, including the origin of present-day land forms and outstanding modern geologic features and processes now in operation	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
GLG281	2018 Fall	Geology of Arizona Lab		May accompany GLG280. Examples of specific geologic processes and local areas. May require field trips	Prerequisites: None.		Acad	LAB 1.0 3.0 3.0	T
GLG282AA	2023 Fall	Volunteerism for Geology: A Service Learning Experience		Service-learning field experience within human service organizations, government offices, public schools, or hospitals.	Prerequisites: Permission of Instructor.	GLG282A A may be repeated for a total of six (6) GLG282	Acad	LAB 1.0 1.0 0.0	L

						credit hours; may not repeat specific agency assignment for more than three (3) credit hours. Standard grading available according to college catalog.			
GLG296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
GLG296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to		Acad	LAB 2.0 10.0 0.0	Z

					students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
GLG296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
GLG296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or		Acad	LAB 4.0 20.0 0.0	Z

					permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
GLG298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
GLG298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
GLG298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

GPH111	2019 Fall	Introduction to Physical Geography Lecture		Earth's physical processes and impacts on human environments via the atmosphere, biosphere, lithosphere and hydrosphere. Topics include severe weather, climate change, biomes and ecosystems, landform processes; mountain building and erosion by rivers, glaciers, waves and wind.	Prerequisites: None.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with GPH112.	Acad	LEC 3.0 3.0 3.0	S
GPH112	2019 Fall	Introduction to Physical Geography Lab		Earth's physical processes and impacts on the human environment via the atmosphere, biosphere, lithosphere and hydrosphere. Practical experiences include earth-sun relationships, weather, climate, biomes, landform processes; mountain building and erosion by rivers, glaciers, waves and wind, topographic maps.	Prerequisites: A grade of C or better in GPH111 or Corequisites: GPH111.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with GPH111.	Acad	LAB 1.0 3.0 3.0	T
GPH113	2019 Fall	Introduction to Physical Geography		Earth's physical processes and impacts on human environments via the atmosphere, biosphere, lithosphere and hydrosphere. Topics and practical experiences include severe weather, climate change, biomes and ecosystems, landform processes; mountain building and erosion by rivers, glaciers, waves and wind, topographic maps.	Prerequisites: None.	General Education Value: GPH111 (3) and GPH112, Natural Science - Quantitative (SQ), Natural Science - Quantitative (SQ)	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
GPH194	1999 Spring	Special Topics in Physical Geography		Detailed study of specific regions, topics, or current issues in physical geography. Emphasis on relationships within and between the atmosphere, lithosphere, hydrosphere, biosphere, and how	Prerequisites: None.	GPH194 may use field trips as a mandatory	Acad	LEC 3.0 3.0 3.0	S

				humans relate to their environment. Topics may include environmental ecosystems, physical processes (i.e., weather, climate, geomorphology, oceanography), natural resources and the impacts of human population (i.e., pollution, politics, religion, economic activities).		componen t.			
GPH210	2007 Fall	Society and Environment		Principles of physical geography relating to environmental problems pertinent to contemporary society. Pollution, maladjusted land use, resource exploitation	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	Course Attribute(s): General Education Designation: Global Awareness - [G]	Acad	LEC 3.0 3.0 3.0	S
GPH211	2023 Fall	Landform Processes		Geographic characteristics of landforms and earth surface processes emphasizing erosion, transportation, deposition and implications for human management of the environment.	Prerequisites: None.		Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
GPH212	2025 Fall	Introduction to Meteorology I		Atmospheric processes and elements. General and local circulation, heat exchange and atmospheric moisture.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
GPH213	2025 Fall	Climate and Weather		Study of atmospheric phenomena over periods of time measured in months, years or longer. Includes average weather conditions, infrequent and unusual types of weather, and the influence of weather on the cultural and human landscape.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
GPH214	2025 Fall	Introduction to Meteorology Laboratory I		Explores meteorological operations, including temperatures, precipitation, weather systems, and weather forecasting.	Prerequisites: None. Corequisites: GPH212.		Acad	LAB 1 3 3	T
GPH215	2025 Fall	Climate and Weather Laboratory		A mathematical, statistical, and spatial analysis of climatological phenomena.	Prerequisites: None. Corequisites: GPH213.		Acad	LAB 1.0 3.0 3.0	T
GPH230	2024 Fall	Climate Change		Investigates natural and human effects on global, regional, and local scale climate variability; explores	Prerequisites: A grade of C or better		Acad	LEC 3.0	S

				climate reconstruction, chronology, and theory from paleoclimate through modern times, and discusses implications for climate futures.	in ENG101 or ENG107.			3.0 3.0	
GPH267	2013 Spring	Extreme Weather and Climate		Emphasis on interaction of physical and cultural geography in potentially hazardous weather and climate processes. Exploration of hazard risk analysis.	Prerequisites: A grade of C or better in ENG101 or ENG107.	Course Attribute(s): General Education Designation: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
GPH282AA	2023 Fall	Service-Learning Experience in Physical Geography		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	GPH282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
GPH282AB	2023 Fall	Service-Learning Experience in Physical Geography		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	GPH282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L

GPH282AC	2023 Fall	Service-Learning Experience in Physical Geography		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	GPH282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
GPH298AA	2005 Fall	Special Projects	GCU298A A	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
GPH298AB	2005 Fall	Special Projects	GCU298A B	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
GPH298AC	2005 Fall	Special Projects	GCU298A C	Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

				available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
GRK101	2020 Fall	Elementary Classical Greek I		Introduction to the basic grammar and vocabulary of Ancient Greek. Includes introductory study of Ancient Greek culture. Practice reading and translating Ancient Greek as well as basic translation of English to Ancient Greek.	Prerequisites: None.		Acad	LEC 4.0 4.0 4.0	S
GRK102	2020 Fall	Elementary Classical Greek II		Continued study of the grammar and vocabulary of Ancient Greek and Ancient Greek culture. Emphasis on reading and translating Ancient Greek to English, culminating in the reading of unadapted ancient texts.	Prerequisites: A grade of C or better in GRK101 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 4.0 4.0 4.0	S
GRK296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
GRK296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6		Acad	LAB 2.0 10.0 0.0	Z

				related to the career objectives of the students.	grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
GRK296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
GRK296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or		Acad	LAB 4.0 20.0 0.0	Z

					career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
GRK298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
GRK298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
GRK298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

				individualized learning to be combined to maximize student development.					
GST201	2020 Fall	Game Studies		Introduces concepts, tools, and topics necessary to studying and understanding games, whether analog or digital, as closed systems for definition, analysis, design, development, play, critique, and revision. Surveys games from around the world and introduces concepts, tools, and topics necessary to studying and understanding them, whether analog or digital, as closed systems for definition, analysis, design, development, play, critique, and revision.	Prerequisites: A grade of C or better in (RDG100 or RDG100LL) or (RDG100AA and RDG100AB and RDG100AC) or RDG111 or RDG112 or RDG113 or eligibility for ENG101 as indicated by appropriate writing assessment test score.		Acad	LEC 3.0 3.0 3.0	S
GST202	2020 Fall	Games, Culture and Aesthetics		Considers games as artifacts and expressions of our basic consciousness, humanity, and potential. Explores through the lens of world cultures such concepts as values, power relations, gender roles, arts, aesthetics, and desire. Compares games across cultural, temporal, geographic, and linguistic divides, for the purpose of examining and appreciating the experiences, contributions, and values of diverse populations, as conveyed through the global phenomenon of games.	Prerequisites: A grade of C or better in (RDG100 or RDG100LL) or (RDG100AA and RDG100AB and RDG100AC) or RDG111 or RDG112 or RDG113 or eligibility for ENG101 as indicated by appropriate writing assessment test score.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
GST245	2023 Fall	Games for Teaching and Learning		Survey of past and present games for teaching and learning from multiple cultures and continents. Exploration of the potential for games to help us: face challenges; solve problems; enhance our quality of life; and render our experience of the world in a more meaningful way. Applies theories of learning to determine best practices in game design, development, and production. Demonstrates how to align instructional content with	Prerequisites: A grade of C or better in (ENG101 or ENG107) and (RDG100 or RDG100LL or RDG111 or RDG112 or RDG113) or satisfactory score on District reading placement exam or		Acad	LEC 3.0 3.0 3.0	S

				appropriate game-based mechanics and thinking. Culminates in the prototype of a game for teaching and learning.	permission of Instructor.				
GTC104	2018 Fall	Manufacturing Processes		Introduces students to manufacturing processes used in conversion of raw materials into useful products. Presents the basic manufacturing processes in logical groups, based on similarities of purpose and applications	Prerequisites: None.		Occ	L+L 4.0 7.0 7.0	T
GTC106	2018 Fall	Industrial Safety	MIT106 OSH106	Safety, health management, and accident prevention in industrial work environment. Role of Occupational Safety and Health Administration (OSHA) act, materials handling, electrical safety, machine safety, first response to fire and medical emergencies, safety signs and color codes, recognition of safety and health hazards accident prevention, management responsibilities, and OSHA 10 certification.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
GTC106AA	2018 Fall	Industrial Safety		Safety, health management and accident prevention in industrial work environment. Role of Occupational Safety and Health Administration (OSHA) act, materials handling, electrical safety, machine safety, first response to fire and medical emergencies, safety signs and color codes, recognition of safety and health hazards accident prevention, and management's responsibilities.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
GTC107	2013 Spring	Technical Mathematics I		Mathematical principles to include basic operations, significant digits, exponents, square roots and order of operations. Solve problems using arithmetic, signed numbers, percentages, fractions, exponents, and square root. Use of hand held calculator. Technology related problems	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
GTC108	2013 Spring	Technical Mathematics II		Fundamental algebraic operations. Problem solving involving metric measurement, gears, pulleys, simple	Prerequisites: A grade of C or better in GTC107 or		Occ	LEC 3.0	S

				mechanism problems. Areas and volume calculations of geometric figures. Essentials of trigonometry for solving right and oblique triangles.	permission of Instructor.			3.0 3.0	
GTC121	1995 Fall	Construction Estimating I		Fundamentals of determining quantities of material, equipment and labor for given project. Includes procedures used in applying proper unit costs to these items	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
GTC123	1993 Fall	Construction Estimating II		Details of job estimates. Includes unit cost considerations and subcontracting. Emphasis on bid preparation	Prerequisites: A grade of C or better in GTC121 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
GTC127	2018 Fall	Beginning Woodworking		Introduction to woodworking fundamentals and applications. Familiarization with the basic woodworking tools emphasizing the safe and proper use of woodworking hand tools and stationary and portable power tools. Class projects develop a working project plan, identify material needs, cost analysis, basic construction of the project, and basic finishing techniques	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
GTC128	2018 Fall	Intermediate Woodworking		Further development and application of basic woodworking skills. Complex projects with emphasis on planning and calculating and buying needed materials. Introduction of jointery, complex fitting, more advanced finishing, and wood carving.	Prerequisites: A grade of C or better in GTC127 or previous woodworking experience.		Occ	L+L 3.0 4.0 4.0	T
GTC129	2018 Fall	Manufacturing Welding		Technical theory, safety considerations, and application of shop and welding processes commonly used in manufacturing, including oxyacetylene welding, brazing, and cutting, SMAW (Elec ARC), GMAW (MIG), GTAW (TIG) and plasma cutting	Prerequisites: None.		Occ	L+L 3.0 8.0 8.0	T
GTC130	2018 Fall	Furniture Construction I		Process of building a piece of furniture including calculating and buying needed material, using tools properly and safely (hand tools and	Prerequisites: A grade of C or better in GTC128 or previous woodworking		Occ	L+L 3.0 6.0 6.0	T

				machines), joinery, wood preparation and basic finishing techniques.	experience and permission of Instructor.				
GTC131	2018 Fall	Furniture Construction II		Continuation of GTC130 including special set-ups on machines, special joints, adhesives, special finishes, panel doors, panel drawers, metal drawer guides and plastic laminates	Prerequisites: A grade of C or better in GTC130 or permission of instructor.		Occ	L+L 3.0 6.0 6.0	T
GTC132	2018 Fall	Wood Finishing		Introduction to the materials, processes, and sequences used in applying a variety of finishes to various wood types. Includes abrasives, stains, fillers, surface coats, tools and equipment, and basic refinishing techniques.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
GTC144	2018 Fall	Introduction to Cabinetmaking		Techniques and projects to produce complex cabinet projects. Includes project planning, working from plans, material cost analysis, and advanced finishing techniques.	Prerequisites: A grade of C or better in GTC130 and permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
GTC145	2018 Fall	Advanced Cabinetmaking		Further exploration of advanced woodworking techniques on complex projects.	Prerequisites: A grade of C or better in GTC144 and permission of instructor.		Occ	L+L 3.0 5.0 5.0	T
GTC181	2018 Fall	Introduction to Fluid Power		Develops an understanding of the fundamental laws and principles of fluids together with consideration of such fluid devices as valves, cylinders, pumps, sizes of lines, and simple hookups. Includes both hydraulics and pneumatics	Prerequisites: A grade of C or better in ELE101 or equivalent.		Occ	L+L 3.0 6.0 6.0	T
GTC182	2018 Fall	Building Construction Methods I		Basics of building construction from job site selection through exterior finish of the shell. Focuses mainly on residential construction for the consumer. Includes blueprints, estimating materials and labor, work scheduling, job layout, foundations, framing, and exterior finish. Energy conservation, safety, and building codes discussed throughout the course	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
GTC185	2018 Fall	Electro-Mechanical Devices		Concepts, principles, maintenance, and troubleshooting of mechanical and electro-mechanical devices;	Prerequisites: A grade of C or better in ELE101 or		Occ	L+L 4.0	T

				mechanical alignment of shafts, pillowblocks, gears, and couplers on mechanical breadboard; transmission devices including lead screws, linkages, worm and worm wheels, gear trains, speed reducers, chain drives, and belt drives; principles of lubrication; operation of dc(direct current), ac(alternating current), and stepping motors; application of tachometers, stepping motors, linear actuators, relays, solenoids, switches, contactors, starters, and fuses; selection and specification of components from manufacturer's catalogs.	GTC108 or (MAT103AA and MAT103AB) or permission of Instructor.			6.0 6.0	
GTC208	1993 Fall	Statistical Process Control		Study of statistical process control concepts and methods. Extraction and application of specific parameters from data retrieved from a process	Prerequisites: A grade of C or better in ELE101 or GTC108 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
GTC209	2018 Fall	Automated Manufacturing	MIT209	Evolution of automation in manufacturing from fixed (hard) automation to Computer Integrated Manufacturing (CIM) is presented with numerical control (NC) ; computer-aided design/computer-aided manufacturing (CAD/CAM); automated material handling; automation communication protocol. Manufacturing management strategies include statistical process control (SPC); material requirements planning (MRP); manufacturing resource planning (MRPII); and just-in-time (JIT). Hands-on experience with programmable logic controllers (PLC) and robotics included	Prerequisites: A grade of C or better in ELT131 or ELE131 or GTC/MET206 or equivalent.		Occ	L+L 3.0 6.0 6.0	T
GTC216	1994 Fall	Properties of Materials		Study of manufacturing properties of materials, the behavior of materials under load, stress and strain and torsion and qualities of materials other than strength	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

GTC223	2018 Fall	Advanced Machine Tools		Advanced machining practices; emphasis on application of machines and tool theory.	Prerequisites: A grade of C or better in GTC102 or MET231.		Occ	L+L 3.0 6.0 6.0	T
GTC236	2018 Fall	CAD/CAM Computer Numerical Control (CNC) Programming		Programming of Computer Numerical Control (CNC) machine tools such as CNC Milling Machines, and Turning Centers. Utilizing Computer Aided Drafting and Computer Aided Manufacturing (CAD/CAM) for design and generation of part geometry. Verification of tool path using CAM graphics. Generate program media using a CAM post processor	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
GTC272	2018 Fall	Automated Control Systems (PLC Applications)		The programmable logic controller as the control unit for the application of sensors, switches, and transducers. Motors, stepper motors, and other prime movers are controlled. Includes both on/off and analog devices.	Prerequisites: A grade of C or better in GTC/MIT209 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
GTC273	2018 Fall	Industrial Automation Controls and System Integration.		A study in application and implementation of industrial control systems including machine building and system integration	Prerequisites: A grade of C or better in GTC272.		Occ	L+L 3.0 6.0 6.0	T
GTC276	2018 Fall	Solids Programming		Parametric modeling, CNC part production, model to CAM system integration, and solid model part representation. Applied CAD/CAM in the role of Computer Integrated Technology (CIM)	Prerequisites: A grade of C or better in GTC266.		Occ	L+L 3.0 6.0 6.0	T
GTC296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled		Occ	LAB 1.0 5.0 0.0	Z

					in at least one class which is related to students major or career interest or with permission of Instructor.				
GTC296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
GTC296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with		Occ	LAB 3.0 15.0 0.0	Z

					permission of Instructor.				
GTC296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
GTC298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
GTC298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				combined to maximize student development.					
GTC298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
HBR101	2003 Spring	Elementary Biblical Hebrew I		Introduction to the basic alphabet, grammar, pronunciation and vocabulary of classical Hebrew. Listening, speaking, reading, and writing skills	Prerequisites: None.		Acad	LEC 4.0 4.0 4.0	S
HBR102	2014 Fall	Elementary Biblical Hebrew II		Continued study of grammar and vocabulary of classical Hebrew with emphasis on oral reading and interpretation skills.	Prerequisites: A grade of C or better in HBR101 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 4.0 4.0 4.0	S
HBR201	2014 Fall	Intermediate Biblical Hebrew I		Advanced study of grammar and vocabulary of classical Hebrew with emphasis on oral reading and interpretation skills.	Prerequisites: A grade of C or better in HBR102 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 4.0 4.0 4.0	S
HCC102	2022 Fall	Introduction to Safe Patient Handling and Mobility		Introduction to the history and principles of safe patient handling and mobility (SPHM). Introduction to patient mobility bedside assessment. Use of safe patient handling equipment and principles for in-bed movement, transfers to and from stretchers and chairs, exercise, and safe ambulation. Use of equipment for	Prerequisites: None.		Occ	L+L 0.5 0.5 0.5	T

				home care. Review and application of body mechanics.					
HCC109	2016 Spring	CPR for Health Care Provider	RES109	Current American Heart Association standards for one and two rescuer cardiopulmonary resuscitation (CPR) and obstructed airway procedures on the adult, infant, and pediatric victim. Use of automatic, external defibrillation and resuscitation equipment.	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
HCC109AA	2019 Fall	CPR for Healthcare Providers Practice and Testing		Knowledge and skills refreshment for renewal of a current American Heart Association (AHA) Healthcare Provider (HCP) card or completion of eLearning practice and testing. Including one and two rescuer Cardiopulmonary Resuscitation (CPR) and obstructed airway procedures on the adult, infant, and pediatric victim. Automated external defibrillation (AED) application and oxygenation/ventilation management.	Prerequisites: Valid Healthcare Provider CPR card at time of course or Part 1 Completion Certificate from an AHA HCP eLearning online course.	Successful completion of the HCC109AA course content meets requirements for an American Heart Association (AHA) Healthcare Provider CPR renewal card.	Occ	LEC 0.25 0.25 0.25	S
HCC130	2017 Fall	Fundamentals in Health Care Delivery		Overview of current and recent development of health care professions, including career and labor market information, health care delivery systems, third party payers, and facility ownership. Health organization structure, patient rights and quality care. Health care and life values. Definition and importance of values, ethics, and essential behaviors in the workplace. Worker rights and responsibilities. Healthful living practices to include nutrition, stress management and exercise. Occupational Safety and Health Administration (OSHA) standard precautions and facility safety. Use of	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				principles of body mechanics in daily living activities. Basic communication skills which facilitate inter-professional teamwork in the health care setting. Focus on development of personal communication skills and an understanding of how effective communication skills promote teamwork. Focus on intercultural communication strategies.					
HCC130AF	2024 Fall	Decision Making in the Health Care Setting		Principles and application of a decision making model. Description and application of ethics and process improvement and the relationship of both to the decision making model.	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
HCC145	2017 Fall	Medical Terminology for Health Care Professionals		Medical terminology used in health care, with special care populations and in special services. Body systems approach to terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing terms using word parts. Medical abbreviations and symbols and term spelling.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HCC145AA	2017 Fall	Medical Terminology for Health Care Professionals I		Introduction to medical terms used in health care. Body systems approach to selected terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing selected terms using basic word parts. Selected medical abbreviations and symbols and term spelling.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
HCC145AB	2017 Fall	Medical Terminology for Health Care Professionals II		Selected medical terms used in health care. Body systems approach to more detailed terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing selected terms using standard word parts. Selected abbreviations and symbols and term spelling.	Prerequisites: A grade of C or better in HCC145AA.		Occ	LEC 1.0 1.0 1.0	S
HCC145AC	2017 Fall	Medical Terminology for Health Care Professionals III		Medical terminology used with special care populations and in special services. Includes obstetric, pediatric, mental health, diagnostic imaging,	Prerequisites: A grade of C or better in HCC145AA and		Occ	LEC 1.0 1.0 1.0	S

				oncology, and surgery terms. Use of special care populations and special services word parts and term spelling.	HCC145AB or HCC146.				
HCC146	2017 Fall	Common Medical Terminology for Health Care Professionals		Common medical terms used in health care. Body systems approach to common terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing common terms using word parts. Common medical abbreviations and symbols and term spelling.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
HCC164	2024 Fall	Pharmacology for Allied Health		Chemical, generic, and trade names for drugs. Use of drug references. Pharmacological principles of drugs. Routes of drug administration. Federal and Arizona regulations. Classification of drugs. Abbreviations and symbols for drug measurement, administration, and prescription.	Prerequisites: A grade of C or better in HCC130, or work experience, or equivalent course education as evaluated by the Health Core Curriculum Coordinator.		Occ	LEC 0.5 0.5 0.5	S
HCC200	2024 Fall	Basic Client Care for Allied Health		Safety procedures for the hospitalized client. Transfer, moving and positioning techniques. Client assessment methods and procedures. Protection of airways, drains, tubes, intravenous lines, and infusion pumps. Care of patient in traction and those with limitations to movement. Gloving, gowning, and sterile procedures.	Prerequisites: A grade of C or better in HCC130 or equivalent.		Occ	LAB 0.5 1.5 1.5	T
HCC204	2024 Fall	Clinical Pathophysiology		Causes of disease and their impact on the human body. Common physiologic effects of disease on body systems. Roles of the multidisciplinary health care team in the diagnosis and treatment of disease. Cultural implications in prevention and treatment of disease.	Prerequisites: A grade of C or better in HCC130 or equivalent, and (BIO160 or BIO201).		Occ	LEC 3.0 3.0 3.0	S
HCC208	2024 Fall	Health Care Leadership		Introduction to concepts and skills required of health care leaders. Discussion of leadership styles and conflict management. Application of motivation, delegation, and	Prerequisites: A grade of C or better in HCC130 or equivalent.		Occ	LEC 1.0 1.0 1.0	S

				communication techniques to teamwork and leadership.					
HCC218	2024 Fall	Venous Access for Diagnostic Agents and Pharmaceuticals		Scope of practice and regulations governing venipuncture. Anatomy and physiology of the vascular system. Occupational Safety and Health Administration (OSHA) guidelines. Theory and practice of basic venipuncture for diagnostic agents and pharmaceuticals including equipment and procedures.	Prerequisites: A grade of C or better in HCC130, or work experience or equivalent course education as evaluated by the Health Core Curriculum Coordinator, or currently credentialed as a health care provider.		Occ	LAB 0.5 1.5 1.5	T
HCC298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
HCC298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
HCC298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z

				for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
HCE113	2009 Fall	Biomedical Electronics I		Electronic concepts, electrical connections including grounding, and electrical and patient safety	Prerequisites: Admission to the Electroneurodiagnostics Program or admission to Polysomnographic Technology Program.		Occ	LEC 2.0 2.0 2.0	S
HCE124	2006 Summer I	Donor Phlebotomy: Interviewing Techniques		Theory and practice of interviewing techniques in donor setting or health care environment.	Prerequisites: Acceptance into the Donor Phlebotomy program or permission of Program Director.	HCE124 is offered on a Credit (P) No credit (Z) basis. Standard grading available according to procedures outlined in college catalog.	Occ	L+L 2.0 10.0 0.0	Z
HCE125	2006 Summer I	Practicum: Donor Interviewing Techniques		Application of interviewing techniques in donor setting or health care environment.	Prerequisites: A grade of C or better in (HCE124 and acceptance into the Donor Phlebotomy program) or permission of Program Director.	HCE125 is offered on a Credit (P) No credit (Z) basis. Standard grading available according to procedures outlined in college catalog.	Occ	LAB 1.5 12.0 0.0	Z
HCE126	2006 Summer I	Donor Phlebotomy: Basic Donor Collection		Theory and practice of basic donor phlebotomy including preparation; operation of equipment; and	Prerequisites: A grade of C or better in (HCE124 and acceptance into the	HCE126 is offered on a Credit (P)	Occ	L+L 1.5 3.0 0.0	Z

				transportation, packing, and shipping procedures.	Donor Phlebotomy program) or permission of Program Director.	No credit (Z) basis. Standard grading available according to procedures outlined in college catalog.			
HCE127	2006 Summer I	Practicum: Basic Donor Collection		Application of basic donor phlebotomy to obtain blood from donors in a community blood center setting including preparation, operation of equipment, and shipping and packaging procedures.	Prerequisites: A grade of C or better in (HCE126 and acceptance into the Donor Phlebotomy program) or permission of Program Director.	HCE127 is offered on a Credit (P) No credit (Z) basis. Standard grading available according to procedures outlined in college catalog.	Occ	LAB 1.0 9.5 0.0	Z
HCE271	2018 Fall	Patient Care Technician Skills		Designed to prepare students for advanced patient care skills. Fundamentals in microorganisms and microbial control. Specimen collection, handling and testing, wound care, catheterization, and other designated procedures.	Prerequisites: Acceptance into the Patient Care Technician program or permission of Program Director.		Occ	L+L 1.0 1.75 1.75	T
HCE272	2018 Fall	Practicum: Patient Care Technician		Designed to provide clinical experience in the medical facility. Emphasis on application of advanced patient-care skills. Includes incorporation of new skills into a work assignment and development of working relationships in an expanded role.	Prerequisites: (A grade of C or better in HCE109 and HCE261 and HCE271 and current CPR card for Health Care Provider proof of immunity and health declaration form signed by a licensed health care provider proof of negative results to a	CPR card must remain current throughout the HCE272 externship/practicum.	Occ	LAB 1.0 4.75 4.75	T

					drug screening and current fingerprinting clearance card) or permission of Program Director.				
HCE298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
HCE298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
HCE298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
HCR100	2019 Spring	Care of the Medically Complex Child		Course content will cover the orientation materials and fundamental concepts of foster parents caring for a medically complex child. The course will cover the common disorders and	Prerequisites: None.	HCR100 may be repeated for credit. HCR100	Occ	LEC 1.0 1.0 1.0	S

				disease processes of children while providing basic knowledge to caregivers.		is graded as a P/Z for one credit and can be taken as many times as the student wishes to achieve competency of the content.			
HCR210	2015 Fall	Clinical Health Care Ethics		An introduction to health care ethics with emphasis on analysis and ethical decision making at both the clinical and health policy levels for health care professionals. Theoretical foundation of bioethics reviewed within historical and contemporary contexts.	Prerequisites: A grade of C or better in ENG102 or ENG108 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
HCR220	2015 Fall	Introduction to Nursing and Health Care Systems		Introduction to the social, political, and economic contexts of the nursing profession and health care systems in the United States.	Prerequisites: A grade of C or better in ENG102 or ENG108 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
HCR230	2023 Fall	Culture and Health		Relation between cultures of diverse groups and health/illness. Emphasis on cross-cultural communication, including awareness of own cultural influences and indigenous and complementary healing practices.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Global Awareness - [G]	Occ	LEC 3.0 3.0 3.0	S
HCR240	2015 Fall	Human Pathophysiology		Chemical, biological, biochemical, and psychological processes as a foundation for the understanding of	Prerequisites: A grade of C or better in BIO202 or BIO205,		Occ	LEC 4.0	S

				alterations in health. The structural and functional pathophysiology of alterations in health; selected therapeutics considered.	or permission of Instructor.			4.0 4.0	
HCR240AA	2015 Fall	Human Pathophysiology I		Chemical, biologic, biochemical, and psychological processes as a foundation for the understanding of alterations in health. The structural and functional pathophysiology of alterations in health; selected therapeutics considered.	Prerequisites: A grade of C or better in BIO202 or BIO205 or permission of Instructor. Corequisites: HCR240AB or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
HCR240AB	2015 Fall	Human Pathophysiology II		Chemical, biologic, biochemical, and psychological processes as a foundation for the understanding of alterations in health. The structural and functional pathophysiology of alterations in health; selected therapeutics considered.	Prerequisites: A grade of C or better in BIO202 or BIO205 or permission of Instructor. Corequisites: HCR240AA or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
HCR298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
HCR298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

HCR298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
HCS100	2022 Fall	Fundamentals of Surgical Services	SGT100	Preparation for the Certified Registered Central Service Technician (CRCST) role. Central Service work flow, job responsibilities, growth and development in the field, anatomy and physiology, microbiology for Central Service regulations and standards, infection prevention and control, tools for cleaning, decontamination, cleaning and decontamination, disinfection, sterile packaging and storage, processing, sterilization, management of patient care equipment, tracking systems, quality assurance, safety, communication, sterile processing for ambulatory surgery and clinics.	Prerequisites: Admission into the Hospital Central Service Technology or Surgical Technology program or permission of the Program Director.		Occ	LEC 5.0 3.0 3.0 LAB 0.0 6.0 6.0	T
HCS101	2017 Spring	Medical Terminology for Surgical Services	SGT101	Medical Terminology for patient care in surgery related areas. Use of word parts, term spelling, pronunciation and abbreviations related to all surgical specialties.	Prerequisites: None. Corequisites: HCS/SGT100.		Occ	LEC 1.0 1.0 1.0	S
HCS102	2024 Fall	Basic Surgical Instrumentation for Surgical Services	SGT102	History, construction and assembly of surgical instrumentation, categories, instrument set assembly, soft tissue foundation sets, general surgery instrumentation sets.	Prerequisites: Admission into the Hospital Central Service Technology or Surgical Technology program or permission of the Program Director.		Occ	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T
HCS107	2022 Fall	Equipment and Supplies for Surgical Services	SGT107	Introduction to the surgical equipment and supplies used in surgical services areas.	Prerequisites: Admission into the Hospital Central Service Technology		Occ	L+L 1.0 1.0 1.0	T

					or Surgical Technology program or permission of the Program Director.				
HCS110	2018 Fall	Packaging and Sterilization		Instrument identification and care, assembling hospital prepared supplies, safety procedures, asepsis principles, monitoring procedures, sterilizer operations, portable equipment, sterile goods, rotation and storage inventory and distribution systems.	Prerequisites: A grade of C or better in (HCS101 or HCS101AA and HCS101AB) or Corequisites: (HCS101 or HCS101AA and HCS101AB) or permission of Instructor.		Occ	LEC 2.0 2.0 2.0 LAB 2.0 6.0 6.0	T
HCS130	2011 Summer I	Hospital Central Service Practicum I		Supervised student application of central service theory and laboratory skills.	Prerequisites: A grade of C or better in HCS101 or (HCS101AA and HCS101AB) or permission of Instructor. Corequisites: HCS110.		Occ	LAB 5.0 30.0 0.0	C
HCS152	2018 Fall	Advanced Surgical Instruments for Surgical Services	SGT152	Surgical specialty instrumentation care and assembly of instruments to include plastic, gynecologic, urologic, basic bone and joint, head and neck, neurosurgery, cardiovascular and thoracic, microscopic, endoscopes, stapling guns, and robotics procedures.	Prerequisites: A grade of C or better in HCS/SGT102.		Occ	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T
HCS154	2016 Summer	Hospital Central Service Practicum		Direct supervision of students applying knowledge of Hospital Central Service to include communication, policy and procedures, aseptic and sterile technique, instrument trays and packs, sterilization equipment and documentation performed in the clinical environment.	Prerequisites: A grade of C or better in HCS/SGT100 or permission of Instructor. Corequisites: HCS/SGT152.		Occ	LAB 7.0 36.0 0.0	C
HCS296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average		Occ	LAB 1.0 5.0 0.0	Z

					and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
HCS296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
HCS296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals		Occ	LAB 3.0 15.0 0.0	Z

					(students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
HCS296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
HCS298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

HCS298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
HCS298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
HES100	2019 Spring	Healthful Living		Health and wellness and their application to an optimal life style. Explores current topics of interest such as stress management, nutrition, fitness, and environmental health. Evaluates common risk factors associated with modern lifestyles.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
HES101	2011 Fall	Personal Empowerment for Effective Living		Concepts and strategies for setting goals, decision making, communicating more effectively and problem solving to assist in behavior change strategies that lead to a healthier lifestyle. Identifies key health content areas, such as nutrition, physical activity and stress management and provides implementation strategies for all areas, as well as, provides critical	Prerequisites: A grade of C or better in ENG101 or ENG107.		Acad	LEC 3.0 3.0 3.0	S

				analysis of health information for consumers.					
HES105	2021 Fall	Finding Health Information Online		Development of skills and competency in accessing, evaluating, and using online medical and health information resources.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
HES110	2011 Fall	Introduction to Global Health Issues and Disease		Introduction to global health challenges and diseases from throughout the world. Focus is on biological and social aspects of major health issues, infectious disease, nutrition and environmental health. Includes review of groups that are at increased risk of poor health and familiarity with policies and programs designed to reduce health inequalities.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HES120	2023 Fall	Principles of Physical Fitness and Wellness		Stress basic, lifetime health and skill-related components of fitness to achieve total wellness. Topics include nutrition, weight control, exercise and aging, cardiovascular and cancer risk reduction, stress management, prevention of sexually transmitted diseases, substance abuse control, and overall management of personal health and lifestyle habits to achieve the highest potential for well-being.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HES124	2023 Fall	Environmental Wellness		Overview of critical global environmental challenges and the impacts of these issues to human health. Topics to be covered include issues such as transportation options, alternative energy, food production, and air and water issues. Acquire skills, knowledge, and wisdom specific to sustainability which may be applied in many professions, occupations, social institutions, or organizations. At an individual level, learn specific ways to conserve energy, protect your health, and help create sustainable living practices.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HES144	2023 Fall	Strategies in Diabetes Management		Introduction to strategies in diabetes mellitus management and prevention for individuals diagnosed with	Prerequisites: None.		Acad	L+L 3.0	T

				diabetes and their caretakers. Includes a physical activity component.				5.0 5.0	
HES201	2011 Fall	Substance Abuse and Behavior		Principles and factual bases of drug use and abuse. Physiological and socio-psychological effects of drug use and law enforcement of drug abuse. Consultants used extensively to enrich course.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HES210	2011 Spring	Cultural Aspects of Health and Illness		Examines how culture influences health and illness, health care practices, barriers to health care, interactions with health care professionals, and health disparities in the U.S.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Global Awareness - [G]	Acad	LEC 3.0 3.0 3.0	S
HES282AA	2012 Fall	Service-Learning Experience in Health Science		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	HES282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
HES282AB	2012 Fall	Service-Learning Experience in Health Science		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	HES282A B may be repeated for a total of six (6) credit hours. Standard	Acad	LAB 2.0 2.0 0.0	L

						grading available according to procedures outlined in catalog.			
HES282AC	2012 Fall	Service-Learning Experience in Health Science		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	HES282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
HES296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
HES296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome	Prerequisites: Completion of at least twelve (12) college		Occ	LAB 2.0	Z

				related to the career objectives of the students.	credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.			10.0 0.0	
HES296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
HES296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to		Occ	LAB 4.0 20.0 0.0	Z

					students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
HES298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
HES298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
HES298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

				aspects of independent study and individualized learning to be combined to maximize student development.					
HFA101	2003 Fall	Introduction to Insulation		Insulators' union history, significance and benefits. Successful and efficient labor relations. Insulation in relation to other construction trades. Safe and proper use of hand and power tools. Safe work habits, job site safety and first aid. Advanced first aid. Occupational Safety and Health Administration (OSHA) safety training and regulations.	Prerequisites: Registered Apprentice status with the Heat Frost and Asbestos Workers Joint Apprenticeship Training Committee (JATC) or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
HFA102	2018 Fall	Insulation Tools and Equipment: Use and Care		Identify tools and equipment used for installation of mechanical insulation, finishes, and accessories. Proper methods for use and care of various tools and equipment.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
HFA110	2003 Fall	Math for Heat and Frost Technology		Fundamentals of the metric system. Fundamental operations with whole numbers, common fractions, decimals, percentages and ratios and proportions. Algebraic expressions, operations, powers and roots. Compute measurements of geometric figures.	Prerequisites: Registered Apprentice status with the Heat Frost and Asbestos Workers Joint Apprenticeship Training Committee (JATC) or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
HFA115	2003 Fall	Fundamental Insulation Skills: Piping I		Principles of insulation. Materials and methods of insulation. Insulating straight piping. Application of specific types of insulation. Insulation irregular surfaces. Seal and finish insulated pipe.	Prerequisites: Registered Apprentice status with the Heat Frost and Asbestos Workers Joint Apprenticeship Training Committee (JATC) or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
HFA150	2003 Fall	Shop Fabrication: Layout and		Shop fabrication for the heat, frost and asbestos trades related to insulation. Draw, bisect, trisect, divide	Prerequisites: Registered Apprentice status		Occ	LEC 5.0	S

		Pattern-making for Insulators I		and construct geometric linear and curvilinear geometric constructions. Layout and design templates and patterns for tees, valves, flanges, and endcaps.	with the Heat Frost and Asbestos Workers Joint Apprenticeship Training Committee (JATC) or permission of the Apprenticeship Coordinator.			5.0 5.0	
HFA204	2018 Fall	Scaffolding for Insulators		Occupational Safety and Health Association (OSHA) Scaffolding Standard Subpart L, scaffolding terms, safety, erection, and various types of scaffolding used. Aerial lift operation and safety.	Prerequisites: Registered apprenticeship status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
HFA215	2003 Fall	Fundamental Insulation Skills: Piping II		Insulation for piping for cryogenic service. Insulation materials, coverings, finishes, and sealants for underground piping. Measure and cut rigid insulation using hand and table saws. Score block and board. Insulation of vertical and horizontal cylinders, finished heads and finished bodies using wired, bands, pins, stick clips, and washers. Insulate duct work in an air-handling system using fibrous board, duct wrap and flexible sheet	Prerequisites: A grade of C or better in HFA115.		Occ	LEC 5.0 5.0 5.0	S
HFA250	2003 Fall	Shop Fabrication: Layout and Pattern-making for Insulators II		Shop fabrication for the heat, frost and asbestos trades related to insulation. Advanced layout patterns for long and short radius elbows, cones, bevels, and tank heads. Specifications for selecting fittings and structures. Numbers and sizes of miters and gores	Prerequisites: A grade of C or better in HFA150.		Occ	LEC 5.0 5.0 5.0	S
HFA260	2003 Fall	Blueprints and Firestopping		Contents of a set of plans. Major divisions in a set of drawings and title blocks. Bidding requirements, contract forms and conditions of contract. Architect's scale. Architectural, isometric, structural, plumbing, electrical, mechanical, and ductwork drawings. Symbols and abbreviations. Heating, Ventilating, and Air Conditioning system operations. Calculate materials for	Prerequisites: Registered Apprentice status with the Heat Frost and Asbestos Workers Joint Apprenticeship Training Committee (JATC) or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S

				insulation. Firestopping systems, materials, and installation.					
HFA270	2003 Fall	Supervision for Foremen		Foreman's role on the job site. Management and leadership using functional, adaptive and technical skills. Effective supervision and communication skills. Maslow's Motivational Theory. Short term motivators. Foreman responsibilities in area of performance and production. Traits and habits of effective leaders Leadership styles and team building. Labor/contractor cooperation	Prerequisites: Registered Apprentice status with the Heat Frost and Asbestos Workers Joint Apprenticeship Training Committee (JATC) or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
HFA298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
HFA298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
HFA298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z

				aspects of independent study and individualized learning to be combined to maximize student development.					
HIM101	2023 Fall	Introduction to Health Information Management		Provides detailed investigation of the history, development, and evolution of the health information management (HIM) profession. Topics include health care delivery systems, HIM career paths, HIM functions, and HIM in acute and alternative care settings.	Prerequisites: Acceptance into the (Medical Coding: Hospital-Based, or Medical Billing and Coding: Physician-Based, or Health Information Technology) program, and permission of Program Director.		Occ	LEC 3.0 4.0 3.7	S
HIM103	2020 Fall	Long Term Care Delivery		Provides a survey of the Long-Term Care (LTC) continuum and the health information management function in long term care. Topics include long term care services provided in acute, ambulatory, and alternative care settings; LTC ethics and policy considerations; financial management; and special LTC populations.	Prerequisites: Acceptance into the Health Information Technology program and permission of Program Director.		Occ	LEC 4.0 4.0 4.0	S
HIM105	2018 Spring	Computers in Healthcare and Health Record Systems		Introduction to computer applications in healthcare settings including electronic health records, health record content, structure, and origin of clinical information for various healthcare settings. A basic review of federal, state, and organizational documentation guidelines. Legal and ethical issues applicable to health information documentation and coding practices.	Prerequisites: (Acceptance into either the Medical Coding: Hospital-Based or the Medical Billing and Coding: Physician-Based program) and a grade of C or better in HCC130 or permission of Program Director.		Occ	LEC 2.0 2.0 2.0	S
HIM106	2020 Fall	Legal and Ethical Aspects of Health Information Management		Overview of legal and ethical principles in health care and health information management. Topics include federal and state court systems; legal terminology; health care law; privacy, confidentiality, and security; release of information	Prerequisites: Acceptance into the Health Information Technology program and permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S

				guidelines; ethics, bioethics, and ethical dilemmas.					
HIM160	2020 Fall	Health Data and Content		Introduction to data collection methods for health information systems. Overview of data structure, content, and standards, datasets and databases used in various health care settings, and registries and indexes.	Prerequisites: A grade of C or better in (BPC110 or CIS105) or permission of Program Director.		Occ	L+L 2.0 3.0 3.0	T
HIM180	2020 Fall	Introduction to Medical Billing and Reimbursement		Overview of the medical billing profession, the revenue management process, and federal billing guidelines. Topics include Medicare, Medicaid, third party payers, management care models, and national insurance schemes.	Prerequisites: Permission of Program Director.		Occ	LEC 2.0 2.0 2.0	S
HIM181	2020 Fall	Medical Claims Processing		Provides in depth analysis of the medical claims process in ambulatory care settings. Topics include electronic data interchange, claims management, confidentiality, data retention, and the claims review and appeals process.	A grade of C or better required in all Prerequisites. Prerequisites: (BPC110 and HIM180) or permission of Program Director. Prerequisites or Corequisites: HIM208 or permission of Program Director.		Occ	L+L 3.0 5.0 5.0	T
HIM182	2011 Fall	Human Diseases for Coding in Long Term Care Settings		Overview of diseases commonly treated in long term, home health, and hospice settings. Systems approach to causes, signs, symptoms, manifestations, diagnosis, and treatment of these diseases as required for accurate diagnostic coding.	Prerequisites: A grade of C or better in (BIO160 and HCC146) or permission of Program Director.		Occ	LEC 2.0 2.0 2.0	S
HIM183	2020 Fall	Diagnostic Coding in Long Term Care Settings		Introduction to the International Classification of Diseases (ICD) in long term care, home health and hospice settings. Topics include principles for diagnostic coding, standards of ethical coding, and diagnostic coding for reimbursement and coding compliance.	A grade of C or better required in all Prerequisites. Prerequisites: (BIO201 and HCC145) or permission of Program Director. Prerequisites or Corequisites: HIM200		Occ	L+L 4.0 6.0 6.0	T

					or permission of Program Director.				
HIM200	2020 Fall	Human Pathophysiology and Pharmacology for Health Information Management (HIM) Professionals		Surveys common disease states and conditions that impact each of the major body systems and the reproductive process. Explores how the study of diseases, conditions, and treatments are connected to the health information management function. Topics include disease etiology; signs and symptoms of diseases and conditions; prognosis of diseases and conditions; and pharmacological concepts related to drug nomenclatures, sources of drugs, drug actions and dosage, and routes of drug administration.	Prerequisites: A grade of C or better in (HCC145 and BIO201) or permission Program Director.		Occ	LEC 3.0 4.0 3.7	S
HIM203	2022 Fall	Healthcare Statistics and Data Analytics		Emphasizes the role of Health Information Management professionals in calculating, mining, and reporting healthcare statistics for data analytics, research, quality assurance, financial, and other purposes. Topics include health statistics, morbidity, mortality, quality resource management, and research design.	Prerequisites: A grade of C or better in (HIM160 and MAT112) or permission of Program Director.		Occ	L+L 3.0 4.0 4.0	T
HIM205	2020 Fall	Managing Health Information in Long Term Care Settings		Provides an in depth analysis of the health information management function in Long Term Care (LTC) settings. Topics include long term care health record systems; LTC regulatory compliance standards and guidelines; common technologies used in LTC; and statistical and data analytics in LTC.	Prerequisites: A grade of C or better in HIM103. Corequisites: BPC110 or permission of Program Director.		Occ	L+L 2.0 4.0 4.0	T
HIM207	2020 Fall	Health Information Organizational Resource Management		Provides an overview of principles and practices essential to the efficient use of human, financial, and physical resources within health information management services. Topics include team building, planning, leading, organizing, directing, and controlling.	Prerequisites: A grade of C or better in (HIM101 and HIM106) or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
HIM208	2022 Fall	ICD-CM Diagnostic Coding		Introduction to the International Classification of Diseases, Clinical Modification (ICD-CM) coding system.	A grade of C or better required in all Prerequisites.		Occ	L+L 2.0	T

				Topics include application of current ICD-CM guidelines and conventions for symptoms, signs, and abnormal clinical and laboratory findings, diseases, conditions, and external causes of morbidity in inpatient and outpatient settings.	Prerequisites: (BIO202, HCC145, and HIM200) or permission of Program Director. Prerequisites or Corequisites: HIM180 or permission of Program Director.			4.0 4.0	
HIM209	2022 Fall	Procedural Coding Systems for Non-Coders		Surveys major procedural coding systems used in acute, ambulatory, and alternative care settings. Structure, content, and guidelines for the current International Classification of Diseases, Procedure Coding System (ICD-PCS), Current Procedural Terminology (CPT), and Healthcare Common Procedure Coding System (HCPCS) classification systems are explored. Topics include purpose and function of procedural coding; coding guidelines and conventions; and coding accuracy, totality, and sequencing.	A grade of C or better required in all Prerequisites. Prerequisites: HIM200 and BIO202. Prerequisites or Corequisites: HIM208 or permission of Program Director.		Occ	L+L 3.0 6.0 6.0	T
HIM210	2022 Fall	ICD-PCS Coding and ICD Applications		Introduction to the International Classification of Diseases, Procedure Coding System (ICD-PCS). Topics include application of the current ICD-PCS guidelines and conventions for procedures in inpatient settings and coding technologies.	A grade of C or better required in all Prerequisites. Prerequisites: BIO202 and HIM200. Prerequisites or Corequisites: HIM208 or permission of Program Director.		Occ	L+L 2.0 4.0 4.0	T
HIM211	2020 Fall	Advanced Applications of Coding and Reimbursement		Provides foundation for advanced coding application including the use of references, source documents, and technology. Topics include Uniform Hospital Discharge Data Set; diagnostic-related groups; federal regulations for hospital-based settings; coding conventions for home health, long term care, rehabilitation, and other health care settings; and the use of codes for administrative,	Prerequisites: A grade of C or better in (HIM208 and HIM210) or permission of Program Director.		Occ	L+L 4.0 6.0 6.0	T

				reimbursement, marketing, and regulatory purposes.					
HIM213	2022 Fall	CPT and HCPCS Coding		Provides students with the foundation for using the Current Procedural Terminology (CPT) and the Healthcare Common Procedure Coding System (HCPCS). Topics include coding guidelines, healthcare reimbursement, coding technologies, ethical coding, and compliance issues.	Prerequisites: A grade of C or better in BIO202, HCC145, HIM200, and HIM208.		Occ	L+L 3.0 6.0 6.0	T
HIM215	2023 Fall	Physician-Based Billing and Coding Seminar		Guidance in the development of physician-based billing and coding compliance programs.	A grade of C or better required in all Prerequisites. Prerequisites: HIM213 or permission of Program Director. Prerequisites or Corequisites: HIM211, current CPR at BLS Healthcare Provider Level through the American Heart Association, and permission of Program Director. Corequisites: HIM216 or permission of Program Director.		Occ	LEC 1.0 1.0 1.0	S
HIM216	2023 Fall	Professional Practice in Physician-Based Billing and Coding		Practical application of billing and coding guidelines, conventions, and regulations under the supervision of a preceptor in an ambulatory care setting.	A grade of C or better required in all Prerequisites. Prerequisites: HIM213 or permission of Program Director. Prerequisites or Corequisites: HIM211, current CPR at BLS Healthcare Provider Level through the American Heart Association, and permission of Program Director.		Occ	LAB 1.0 5.0 0.0	C

					Corequisites: HIM215 or permission of Program Director.				
HIM219	2022 Fall	Health Information Management Systems		Overview of the fundamental concepts, terminology, and structure of health information systems with an emphasis on applications used to manage electronic health information. Topics include health informatics; health information systems; electronic claims processing; electronic health records; electronic data interchange; and privacy, security, and confidentiality.	Prerequisites: A grade of C or better in HIM160, and (BPC110 or CIS105).		Occ	L+L 3.0 3.0 3.0	T
HIM221	2023 Fall	Medical Coding Seminar		Guides students in the development of hospital-based coding compliance programs. Explores career development tools for medical billers and coders.	A grade of C or better required in all Prerequisites. Prerequisites: HIM213 or permission of Program Director. Prerequisites or Corequisites: HIM211 or permission of Program Director. Corequisites: HIM222 or permission of Program Director.		Occ	LEC 1.0 1.0 1.0	S
HIM222	2023 Fall	Professional Practice in Medical Coding		Practical application of coding guidelines, conventions, and regulations under the supervision of a preceptor in an acute care setting.	A grade of C or better required in all Prerequisites. Prerequisites: HIM213 or permission of Program Director. Prerequisites or Corequisites: HIM211, current CPR at BLS Healthcare Provider Level through the American Heart Association, and permission of Program Director. Corequisites: HIM221		Occ	LAB 1.0 5.0 0.0	C

					or permission of Program Director.				
HIM225	2022 Fall	Health Data Analytics		Provides students with integral tools and skills to analyze data commonly used in healthcare provision. Topics include data analysis, organization, and preparation tools; statistical techniques and variables; study design; benchmarking; and quality and performance improvement.	Prerequisites: A grade of C or better in (CIS114DE and HIM203).		Occ	L+L 3.0 4.0 4.0	T
HIM231	2022 Fall	Health Data Management Seminar		Designed for students pursuing skills and knowledge in health data management. Topics include career development, team building, health data systems management and preparation for the professional certification exam.	Prerequisites: A grade of C or better in CIS114DE, HIM203, HIM208, and HIM209. Corequisites: HIM232.	HIM231 students must participate in the PPE (Professional Practice Experience) Orientation. Consult with Program Director or Instructor.	Occ	LEC 1.0 3.0 2.4	S
HIM232	2022 Fall	Health Data Management Professional Practice		Practical application of health data management knowledge and skills under the supervision of a preceptor in an acute, ambulatory, and/or alternative care setting.	Prerequisites: A grade of C or better in CIS114DE, HIM203, HIM208, HIM209 and current CPR certification at Basic Life Support (BLS) Healthcare Provider level through the American Heart Association. Corequisites: HIM231.	HIM232 students must participate in the PPE (Professional Practice Experience) Orientation. Consult with Program Director or Instructor.	Occ	LAB 1.0 5.0 0.0	C
HIM233	2022 Fall	Revenue Cycle Management Seminar		Prepares students for the workforce in the field of revenue cycle management. Topics include strategies for team building, project	Prerequisites: A grade of C or better in (HIM208 and HIM210) or	Student must participate in the PPE	Occ	LEC 1.0 3.0 2.4	S

				collaboration, career development, and preparation and review for professional exam.	permission of Program Director. Corequisites: HIM234 and permission of Program Director.	(Professional Practice Experience) Orientation. Consult with Program Director or Instructor.			
HIM234	2022 Fall	Revenue Cycle Data Management Professional Practice		Practical application of revenue cycle management knowledge and skills under the supervision of a preceptor in an acute, ambulatory, and/or alternative care setting.	Prerequisites: A grade of C or better in (HIM208 and HIM210) or permission of Program Director, and CPR at BLS Healthcare Provider level through the American Heart Association. Corequisites: HIM233 and permission of Program Director.	Current CPR certification at BLS Healthcare Provider Level through the American Heart Association required prior to placement. Student must participate in the PPE (Professional Practice Experience) Orientation. Consult with Program Director or Instructor.	Occ	LAB 1.0 5.0 0.0	C
HIM298AA	2006 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
HIM298AB	2006 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
HIM298AC	2006 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
HIS100	2022 Fall	History of Western Civilization to Middle Ages		Survey of the origin and development of Western civilization and its institutions from prehistory through the Ancient World and the Middle Ages.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS101	2023 Fall	History of Western Civilization Middle Ages to 1789		Survey of the history of the Western world from the emergence of Western civilization in the Middle Ages to the start of the French Revolution.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS102	2023 Fall	History of Western Civilization 1789 to Present		Survey of the history of the Western world from the French Revolution to the present.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS103	2024 Fall	United States History to 1865		The political, economic, and social development of the United States	Prerequisites: None.	Course Attribute(s)	Acad	LEC 3.0	S

				from the Pre-Columbian period through the end of the Civil War (1865).); General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Social and Behavioral Sciences - [SB] Arizona Shared Unique Number SUN# 1131		3.0 3.0	
HIS104	2016 Fall	United States History 1865 to Present		The political, economic, and social development of United States from 1865 to the present time.	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Social and Behavioral Sciences -	Acad	LEC 3.0 3.0 3.0	S

						[SB] Arizona Shared Unique Number SUN# 1132			
HIS105	2024 Fall	Arizona History		The history of Arizona covering the Native American experience, Spanish colonial times, the Mexican national period, the U.S. federal territorial years, and its political and economic developments as a state.	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
HIS106	2023 Fall	Southwest History		Historical survey of the American Southwest including ecological/environment, political, economic, religious and social developments. Includes the unique role of the region in national and global events.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS107	2022 Fall	Selected Issues in History		In-depth survey of selected issues in history. Includes examination of the relationships among events, ideas, and artifacts relevant to the selected topic. Incorporates various historical lenses pertinent to the topic.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS108	2024 Fall	United States History 1945 to the Present		Survey of American history from 1945 to the present. Focuses on the political, social, economic and cultural history of the United States from the end of World War II to the present time. Includes domestic developments and foreign policy.	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H]	Acad	LEC 3.0 3.0 3.0	S

						General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Social and Behavioral Sciences - [SB]			
HIS109	2024 Fall	Mexican American History and Culture		Examination of the origins and development of Mexican American peoples. Including culture, history and contributions within the United States. Emphasis on educational, social, and economic conditions of Mexican Americans of the southwest.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS110	2024 Fall	World History to 1500		A global survey of the economic, social, cultural, environmental, and political elements of world history to 1500.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS111	2024 Fall	World History 1500 to the Present		A survey of the economic, social, cultural, and political elements of world history from 1500 to the present.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS113	2023 Fall	History of Eastern Civilizations to 1850		An examination of the development of civilizations, religions and philosophies in the Near East, India, Far East, and Southeast Asia from ancient times to the mid-nineteenth century.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS114	2024 Fall	History of Eastern Civilizations 1850 to Present		Examination of characteristics and development of civilizations of Middle East, India, Far East, and Southeast Asia, from mid-nineteenth century to present.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G]	Acad	LEC 3.0 3.0 3.0	S

						General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Social and Behavioral Sciences - [SB]			
HIS140	2023 Fall	American Indian History	AIS140	Survey of American Indian history with emphasis on the last 200 years. Focuses on cultural, economic, political and social continuity and changes. Topics include how federal policies impacted and were shaped by Indigenous peoples and how Indigenous individuals, communities, and nations have maintained cultural identity and sovereignty.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS145	2023 Fall	History of Mexico		Survey of the major forces that shaped the history of Mexico and its culturally diverse communities from pre-Columbian times to the present. Also examines how these historical forces continue to shape contemporary Mexican society and its place within the world.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS170	2023 Spring	American Indian History of the Southwest	AIS170	Covers history of American Indian Peoples of the Southwestern United States from pre-European contact era to the present. Includes historical	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

				events, the development and implementation of non-Indigenous policies and their impact on American Indian Peoples in these areas, and contemporary issues of importance.					
HIS173	2024 Fall	United States (U.S.) Military History 1603 to Present		Examines the history of the United States (U.S.) in war and peace from the colonial era to the present and the role of the military in the nation's development.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS175	2019 Spring	Global History of World War II		Global survey of World War II (WWII), focusing on its origins, major military confrontations and events, conclusion, and historical significance.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS190	2023 Fall	Environmental History		Historical overview of the interactions between humans and the natural environment in various time periods and regions around the world.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS200	2025 Fall	Introduction to Africana Studies	AFR200	Survey of the social, economic, political, environmental, and cultural developments of various African communities from the beginning of human civilization to the present, including the development of the African diaspora as well as the historical and cultural impacts of African interactions with other global communities.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS201	2023 Fall	History of Women in America		Introduction to women's history from the colonial period to the present. Explores changes and developments which have influenced the lives of women.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS203	2024 Fall	African-American History to 1865	AFR203	History and cultural heritage of African-Americans from ancestral origins in Ancient Africa through the experience of chattel slavery in the Americas to eventual emancipation and participation in the American Civil War.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation:	Acad	LEC 3.0 3.0 3.0	S

						Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Social and Behavioral Sciences - [SB]			
HIS204	2023 Fall	African-American History 1865 to Present	AFR204	The multifaceted history and cultural heritage of African-American communities since the Civil War, presented within the broader context of U.S. history. This course explores the social, economic, political, and cultural history of African-American communities, including the historical and cultural impacts of slavery and discrimination, and the collective struggle for freedom, equality, and self-determination throughout U.S. history.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS209	2023 Spring	The Chicana/o in 20th and 21st Century America		Analysis of the 20th and 21st century Chicano experience. Interdisciplinary approach to contemporary Mexican American history and culture in the borderlands.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS212	2019 Spring	History of Religion		Survey of the historical contexts in which the major religions have emerged and evolved. Focuses on social and political events throughout history and their impact on religious beliefs and practices.	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness	Acad	LEC 3.0 3.0 3.0	S

						s - [H] General Education Designatio n: Humanitie s, Arts and Design - [HU]			
HIS240	2008 Fall	History of Islamic Civilization from the 6th Century to 1800		Overview of the historical, economic, political, and cultural conditions that brought about the various transformations within the Arab/Islamic world; examination of the impact and interaction of the Islamic civilization with other peoples	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HIS241	1994 Fall	Latin American Civilization in the Colonial Period		A survey of the political, economic, and social forces which molded Latin American civilization in the Colonial Period	Prerequisites: None.	Course Attribute(s): General Education Designatio n: Historical Awarenes s - [H] General Education Designatio n: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
HIS242	1994 Fall	Latin American Civilization in the Post-Colonial Period		A survey of the political, economic, and social forces which molded Latin American civilization in the period of the development of Republics	Prerequisites: None.	Course Attribute(s): General Education Designatio n: Global Awarenes s - [G] General Education Designatio n:	Acad	LEC 3.0 3.0 3.0	S

						Historical Awareness - [H] General Education Designation: Social and Behavioral Sciences - [SB]			
HIS251	2024 Fall	History of England to 1700		Analysis of the major political, social, economic, and cultural/intellectual factors in English historical development from Celtic times to the end of the 17th century.	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
HIS252	2024 Fall	History of England 1700 to Present		Analysis of the major political, cultural, social, and intellectual factors in English historical development from c. 1688 to present.	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and	Acad	LEC 3.0 3.0 3.0	S

						Design - [HU]			
HIS273	2012 Summer I	US Experience in Vietnam 1945 - 1975		Survey of the US experience in Vietnam, 1945-1975, in view of political, economic, and social forces of the Cold War	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
HIS277	2012 Spring	The Modern Middle East		Survey of the political, religious and economic development of the Middle East since 1500. Emphasis on the decline of the Moslem empire(s), the resurgence of contemporary Pan-Arabism, the Palestinian-Israeli question, jihadism, fundamentalist terrorism, the Taliban and Al Qaeda, and the impact of oil production on the region and the rest of the world.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: General Education Designation: Historical Awareness - [H] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S

HIS279	2020 Fall	Creating and Telling Fact-Based Historical Stories	STO279	Creating and telling fact-based stories and stories from history.	Prerequisites: A grade of C or better in EDU/HUM/STO292.	HIS/STO279 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
HIS282AA	2014 Summer	Service-Learning Experience in History		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	HIS282AA may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
HIS282AB	2014 Summer	Service-Learning Experience in History		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	HIS282AB may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L
HIS282AC	2014 Summer	Service-Learning Experience in History		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	HIS282AC may be repeated for a total of six (6) credit hours. Standard grading	Acad	LAB 3.0 3.0 0.0	L

						available according to procedures outlined in catalog.			
HIS296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
HIS296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with		Acad	LAB 2.0 10.0 0.0	Z

					permission of the Instructor.				
HIS296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
HIS296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
HIS298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual	Prerequisites: Permission of		Acad	LAB 1.0	Z

				student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			1.0 0.0	
HIS298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
HIS298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
HLC130	2023 Fall	Fundamentals in Health Care Delivery		Overview of current and recent development of health care professions, including career and labor market information, health care delivery systems, third party payers, and facility ownership. Health organization structure, patient rights and quality care. Health care and life values. Definition and importance of values, ethics, and essential behaviors in the workplace. Worker rights and responsibilities. Healthful	Prerequisites: Admission to program, and successful completion of RDG100 or higher or appropriate reading placement into CRE101.	Students must earn a grade of C or better for all courses required within the program.	CLK	30	

				living practices to include nutrition, stress management and exercise. Occupational Safety and Health Administration (OSHA) standard precautions and facility safety. Use of principles of body mechanics in daily living activities. Basic communication skills which facilitate inter-professional teamwork in the health care setting. Focus on development of personal communication skills and an understanding of how effective communication skills promote teamwork. Focus on intercultural communication strategies.					
HLC145	2024 Fall	Medical Terminology for Health Care Professionals		Medical terminology used in health care, with special care populations and in special services. Body systems approach to terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing terms using word parts. Medical abbreviations, symbols, and term spelling.	Prerequisites: A grade of C or better is required in HLC130.		CLK	105	
HMC100	2024 Fall	Medical Billing and Coding Examination Review		This course reviews separate subjects that will be taught in preparation for the National Certified Professional Coder (CPC) Examination administered through the American Academy of Professional Coders (AAPC).	Prerequisites: A grade of C or better is required in HMC213 or permission of Instructor.		CLK	40	
HMC105	2024 Fall	Computers in Healthcare and Health Record Systems		Introduction to computer applications in healthcare settings including electronic health records, health record content, structure, and origin of clinical information for various healthcare settings. A basic review of federal, state, and organizational documentation guidelines. Legal and ethical issues applicable to health information documentation and coding practices.	Prerequisites: A grade of C or better is required in HMC181 and HMC213.		CLK	40	
HMC180	2024 Fall	Introduction to Medical Billing and Reimbursement		This course provides an overview of the medical billing profession and the revenue management process. Topics include Medicare, Medicaid,	Prerequisites: A grade of C or better is required in HMC200.		CLK	45	

				third-party payers, managed care models, and national insurance schemes.					
HMC181	2024 Fall	Medical Claims Processing		This course provides an in-depth analysis of the medical claims process in ambulatory care settings. Topics include electronic data interchange, claims management, confidentiality, data retention, and the claims review and appeals process.	Prerequisites: A grade of C or better is required in HMC180.		CLK	50	
HMC200	2020 Fall 1	Human Pathophysiology and Pharmacology for HMC		This course surveys common disease states and conditions that impact each of the major body systems and the reproductive process. Topics include disease etiology; signs and symptoms of diseases and conditions; prognosis of diseases and conditions; and pharmacological concepts related to drug nomenclatures, sources of drugs, drug actions and dosage, and routes of drug administration.	Prerequisites: A grade of C or better is required in HLC145.		CLK	180	
HMC208	2025 Fall	ICD-CM Diagnostic Coding		This course introduces students to the International Classification of Diseases, Clinical Modification (ICD-CM) coding system. Topics include application of current ICD-CM guidelines and conventions for symptoms, signs, and abnormal clinical and laboratory findings, diseases, conditions, and external causes of morbidity in inpatient and outpatient settings.	Prerequisites: A grade of C or better is required in ISP110PC.		CLK	100	
HMC213	2024 Fall	CPT and HCPCS Coding		This course provides students with the foundation for using the Current Procedural Terminology (CPT) and the Healthcare Common Procedure Coding System (HCPCS) coding systems. Topics include coding guidelines, healthcare reimbursement, coding technologies, ethical coding, and compliance issues.	Prerequisites: A grade of C or better is required in HMC208.		CLK	215	
HON190	2018 Spring	The Honors Experience		Interdisciplinary studies of selected issues confronting the individual and society and overall human experience. Critical inquiry of specific	Prerequisites: Admission to the college honors program or	Course Attribute(s): General Education	Acad	LEC 3.0 3.0 3.0	S

				themes from a wide variety of academic viewpoints. Comprehensive and interdisciplinary review of global, historical, and cultural trends, supplemented by readings and discussion. Varied content due to changing honors forum themes and issues.	permission of Instructor.	Designation: Humanities, Arts and Design - [HU]			
HON201	2014 Summer	Leadership Development: Historical and Contemporary Perspectives		Interdisciplinary study of leadership focusing on development of leadership skills.	Prerequisites: Admission to the college honors program or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
HRC101	2016 Summer	Overview of Healthcare Compliance		Introduction and overview of healthcare compliance; evolution of the field as a profession. Exploration of federally legislated mandates for a Compliance Program. Program elements. Organizational steps for implementation in specific settings.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
HRC228	2022 Fall	Healthcare Industry Regulation		Comprehensive review and study of laws that regulate the healthcare delivery industry including fraud and abuse, patient privacy, Protected Health Information (PHI) and electronic Protected Health Information (ePHI), and occupational safety for workforce members, patients, and visitors.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HRC230	2022 Fall	Healthcare Corporate Compliance Program Design		Creation, management, and evaluation of all aspects of a formal health care corporate compliance program. Compliance officers, compliance committee. Risk analysis, recommendations for corrective action. Implementation of corrective action.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HRC232	2022 Fall	Health Care Regulatory Compliance Program Design		Creation, management and evaluation of a health care regulatory compliance program including the work plan. Address the Health Insurance Portability and Accountability Act (HIPAA) Privacy and Breach Rules, HIPAA Security and Meaningful Use Attestation,	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				Occupational Safety and Health Plan for workforce members, patients, and visitors. Occupational Safety and Health Administration (OSHA), Arizona Division of Occupational Safety and Health (ADOSH), Medicare/Medicaid Fraud and Abuse, Human Resources employment laws, Clinical Laboratory Improvement Act (CLIA) and Arizona Radiation Regulatory Agency (ARRA).					
HRC234	2022 Fall	Health Care Regulatory Enforcement Case Studies		Comprehensive review of case studies involving litigation and enforcement of health care law including review of landmark and contemporary cases brought by the United States Office of the Inspector General (Fraud and Abuse); the Office of Civil Rights; the Health Insurance Portability and Accountability Act (HIPAA) Privacy and Security Laws. Application of knowledge and skills from earlier coursework to real-world situations.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HRM110	2004 Fall	Introduction to Hospitality and Tourism Management		A fundamental overview of the hotel, restaurant, and tourism segments of the hospitality and tourism industry. Provides an overview of the operational sectors of the industry and reviews management components and skills. Contains components to develop communication skills and a professional career plan	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HRM120	1995 Fall	Hotel Facility Management		Fundamental duties and responsibilities of hotel facility management. Emphasis on detail tasks, including personnel, cleaning, purchasing, equipment, textiles, maintenance, and safety. Examines basic systems for hotel facility management record keeping	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HRM130	1995 Fall	Guest Services Management		Examines organization and management of the hotel front office and guest service operations. Explores key front office functions and	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				related systems and skills necessary to ensure guest satisfaction and efficient operations					
HRM140	1995 Fall	Food Production Concepts		Concepts related to preparation of hot foods, pantry, and bakery items for commercial kitchens. Emphasis on essential components and techniques of food production, food cost control, setting standards, ordering, and inventory	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HRM142	2010 Spring	Wine: From Vine to Table		An overview of the history, culture, viticulture techniques, production, distribution, control, and consumption in the wine industry. Provides an overview of wine and health issues, interpreting wine labels, alcohol service laws, and general operational concepts of the wine industry.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HRM145	2007 Fall	Events Management		Introduction to organizing special events from concept through completion, including planning, coordination, marketing, financing and risk management. Overview of the critical stages and functions involved in staging and managing special events including meetings, conferences, entertainment, expositions, conventions and sporting events	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HRM146	2007 Fall	International Meetings, Conventions and Exhibitions		Introduces the planning and executing of multinational and multicultural meetings, conventions and exhibitions. Emphasizes coordination, logistics, venue selection, budgeting and cultural competencies critical to a global business environment	Prerequisites: A grade of C or better in HRM110.		Occ	LEC 3.0 3.0 3.0	S
HRM150	2020 Fall	Hospitality and Tourism Information Systems I		Overview of current computer technology, concepts and terminology as it applies to the hospitality and tourism industry. Use of software applications including word processing, spreadsheet, database and presentation graphics. Discussion of social and ethical issues related to computers. Exploration of relevant	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				and emerging technologies in the industry.					
HRM160	2011 Spring	Tourism Principles and Practices		Introduces the fundamental principles and practices of tourism. Examines tourism sectors, consumer behavior, and factors that influence tourism. Focuses on the interaction of tourism with the economy, environment and people.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G]	Occ	LEC 3.0 3.0 3.0	S
HRM170	2022 Spring	Hospitality in Healthcare and Life Care Management		Provides an overview of the role of hospitality in healthcare facilities and life care communities. Topics include history and future growth, customer service in these high-touch environments, facility design and housekeeping requirements, medical and health management, sensitivity to those healing and dealing with end-of-life issues, overall providing a strong management and customer service structure while caring for the most vulnerable.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HRM220	2011 Fall	Hospitality Managerial Accounting		Study of financial statement analysis, asset management, ratio analysis, analytical techniques, and investment decision making. Emphasis on planning, budgeting, and management decisions.	Prerequisites: A grade of C or better in ACC111 or ACC211 or HRM265.		Occ	LEC 3.0 3.0 3.0	S
HRM230	1995 Fall	Beverage Management		Identification, production, purchasing, and service of spirits, wine and beer products. Marketing, menu development, and cost controls of a beverage operation. Special emphasis on staffing training, and legal regulations for beverage sales	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HRM235	2001 Fall	Club Management		Examines organization and management of private clubs. Emphasis on member services and operations management. Explores key functions including food and beverage, golf operations, fitness and recreation programs	Prerequisites: A grade of C or better in HRM110.		Occ	LEC 3.0 3.0 3.0	S
HRM240	2018 Fall	Commercial Food Production		Application of food preparation principles, procedures, and techniques to small and large quantity	Prerequisites: A grade of C or better		Occ	L+L 3.0	T

				food production. Emphasis on techniques and procedures used in contemporary commercial kitchens	in HRM110 and HRM140.			4.0 4.0	
HRM250	2005 Fall	Hospitality and Tourism Information Systems II		Use of computer systems to generate information needed for management of lodging, tourism and food service businesses. Emphasis on computer-based hotel property and restaurant management systems. Includes basic ledger principles	Prerequisites: A grade of C or better in (HRM110 and HRM150) or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
HRM260	2006 Spring	Hospitality Human Resource Management		Examines concepts and applications of human resource management in the hospitality industry. Topics include recruitment, selection, training and evaluation. Emphasis on current management methods and productivity in the service environment	Prerequisites: A grade of C or better in HRM110 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
HRM265	2014 Spring	Financial Management for Hospitality and Tourism		Examines financial management concepts, analytical techniques and decision making processes essential to hospitality and tourism management. Provides an applied management approach to managing profitability, financing growth, and using financial analysis to make decisions.	Prerequisites: A grade of C or better in HRM110. MAT140 or MAT141 or MAT142 recommended but not required.		Occ	LEC 3.0 3.0 3.0	S
HRM270	2007 Fall	Hospitality Marketing		Essential skills of defining a service market, developing a market plan, and directing personnel to follow market plan. Emphasis on marketing in the hospitality industry and understanding segmentation, positioning and promotion in that market	Prerequisites: A grade of C or better in HRM110.		Occ	LEC 3.0 3.0 3.0	S
HRM275	1996 Spring	Restaurant Management		Overview of restaurant industry with focus on the major segments. Emphasis on developing plans for: marketing, accounting system, staffing, training, menu development and cost controls for restaurant operation. Special emphasis on safety and sanitation, and legal regulations in the restaurant industry	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

HRM280	2005 Fall	Hospitality and Tourism Law		Examines legal aspects of hotel, restaurant and tourism management. Uses case study approach to develop understanding of the laws and regulations governing guest relationships, contracts, employee relations, civil rights, alcoholic beverages, safety and product liability	Prerequisites: A grade of C or better in HRM110.		Occ	LEC 3.0 3.0 3.0	S
HRM290	2005 Fall	Ecotourism		Overview of ecotourism planning and development with emphasis on contemporary issues associated with environmentally sound, culturally sensitive and economically viable tourism development. Examines the history and emergence of ecotourism and the establishment of policies and management practices associated with sustainable development that conserves natural resources while providing economic benefits	Prerequisites: A grade of C or better in HRM110.		Occ	LEC 3.0 3.0 3.0	S
HRM295AA	2019 Spring	Hospitality Internship		Hospitality and/or tourism work experience in a business or industry. Eighty hours of designated work per credit.	Prerequisites: Permission of Department or Division.	HRM295A A may be repeated for three (3) credits.	Occ	LAB 1.0 1.0 0.0	C
HRM295AB	2019 Spring	Hospitality Internship		Hospitality and/or tourism work experience in a business or industry. Eighty hours of designated work per credit for a total of 160 hours.	Prerequisites: Permission of Department or Division.		Occ	LAB 2.0 2.0 0.0	C
HRM295AC	2019 Spring	Hospitality Internship		Hospitality and/or tourism work experience in a business or industry. Eighty hours of designated work per credit for a total of 240 hours.	Prerequisites: Permission of Department or Division.		Occ	LAB 3.0 3.0 0.0	C
HRM296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor		Occ	LAB 1.0 5.0 0.0	Z

					Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
HRM296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
HRM296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to		Occ	LAB 3.0 15.0 0.0	Z

					students major or career interest or with permission of Instructor.				
HRM296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
HRM298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
HRM298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				individualized learning to be combined to maximize student development.					
HRM298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
HSE101	2023 Fall	Teaching Foundations in Healthcare Education		Examination of teaching foundations essential to understanding healthcare education as a discipline. Orientation to health professions concepts such as patient-centered care, interdisciplinary teams and evidence-based practice. Exploration of differences in healthcare education versus educational practices to develop skills necessary for a career as a health professions educator.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HSE102	2023 Fall	Ethics and Diversity in Healthcare Educational Settings		Exploration of topics related to ethics and diversity within the educational setting as it relates to healthcare programs. Examination of the role of prejudice, stereotyping, and cultural incompatibilities in healthcare education. Reiterating topics of professionalism, legal knowledge, code of conduct, and other issues that are routinely addressed in the classroom and healthcare.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HSE103	2023 Fall	Curriculum Design and Teaching in Healthcare Education		Introduction to curriculum design for healthcare education coursework derived from formal career and clinical knowledge. Examination and application of learning and teaching theories and curriculum models within the classroom, laboratory, or clinical learning environment in healthcare education.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S

HSE104	2023 Fall	Assessment and Evaluation in Clinical Education		Application and determination of student performance using various methods. Methodologies will be explored on how to gauge the students' comprehension and understanding, and this feedback will help inform instruction.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HSE105	2023 Fall	Technology Integration and Design for Healthcare Education		Explore and apply various forms of tools and technology in the teaching and learning processes, and how to engage these processes in the classroom. Introduction to Learning Management Systems (LMSs) and course design.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
HSE106	2003 Spring	Introduction to HIPAA Privacy Rule		Purpose and intent of the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule. Regulation interpretation and application in the health care environment. Guidelines for development of key documents. Penalties for non-compliance	Knowledge of basic operations of a medical practice or other health care environment.		Occ	LEC 2.0 2.0 2.0	S
HSE107	2023 Fall	Research Methods for Healthcare Education		Introduction of qualitative, quantitative, and mixed methods research in the study of education within the health professions. Explores ethical issues, human subject protection, and institutional review boards associated with research in higher education. Enables students to become better consumers of educational research.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
HSE108	2023 Fall	Practicum in Healthcare Education		Capstone course including curriculum, design, and assessment. Facilitates role transition from student to healthcare educator. Focus on student presentations to a panel of students or peers.	Prerequisites: A grade of C or better in HSE101, HSE102, HSE103, HSE104, HSE105, and HSE107, or permission of Program Director.		Occ	LAB 3.0 3.0 3.0	T
HSE110	2003 Spring	Successful Grant Writing		Grant seeking and grant writing processes for the beginning grant writer. Pre-application preparation, application development, and grant proposal evaluation and follow-up. Includes development of grant	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S

				applications for government and private funding sources					
HSM122	2001 Fall	Health Services Supervision		Skills and techniques for the leadership and supervision of health services employees. Emphasis placed on assertive supervision, effective human relations skills, and the enhancement of oral and written workplace communications	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HSM125	2001 Fall	Current Issues in Health Services Management		Overview of the inner workings of the health care industry and the forces that drive and control the delivery of health services. Explores financial, technological and human resources, regulatory systems, and national, state and local issues	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HSM207	2012 Spring	Health Service Management Internship		Application of leadership, supervisory and managerial skills and observation of administrative function in a specific health services setting.	Prerequisites: A grade of C or better in Any three (3) of the following four (4) courses: HSM122, or HSM125, or HSM222, or HSM226, or permission of Instructor.		Occ	LAB 3.0 15.0 0.0	C
HSM222	2001 Fall	Health Services Management		The role and functions of management in understanding and building organizational effectiveness. Focuses on the manager as a leader and planner capable of developing motivated and committed employees and work teams	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HSM226	2001 Fall	Ethics and Legalities of Health Services Management		Identification, analysis, and problem solving related to legal and ethical issues in health services management. Includes an emphasis on employment law, confidentiality issues, accurate financial reporting and personal promotional preparation	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
HSM230	2022 Fall	Healthcare Strategic Planning and Deployment		A comprehensive look at the development and implementation of strategic plans within healthcare business environments. This course explores essential techniques, tools, data, and communication strategies	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				for developing strategic plans in order to make better recommendations for initiatives across the continuum of healthcare services.					
HSM282AA	2018 Fall	Volunteerism for Health Services Management: A Service Learning Experience		Service learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: A grade of C or better in Any three (3) of the following four (4) courses: HSM122, or HSM125, or HSM222, or HSM226, or permission of Instructor.		Occ	LAB 1.0 1.0 1.0	T
HST180	2019 Fall	Overview of Histology (Anatomic) Laboratory		Overview of anatomic laboratory services, anatomic laboratory professionals, and the role of the histology technician. Emphasis on certification, accreditation, and regulatory agencies. Application of process improvement, quality control, laboratory mathematics, infection control, sharps/mechanical hazards, documentation, medico-legal implications, and chemical hygiene principles. Includes information management in anatomic laboratories. Importance of management and supervision leadership principles and professional growth and ethical conduct.	Prerequisites: Admission to Histologic Technology program or permission of Program Director.		Occ	LAB 2.0 2.0 2.0	T
HST181	2024 Fall	Chemistry of Fixation		Principles of fixation and fixative solutions. Anatomic laboratory instrumentation and specimen handling, identification, and tracking protocols. Emphasis on gross examination processes, tissue processing protocols, and specialized processing techniques.	Prerequisites: Admission to Histologic Technology program or permission of Program Director, and a grade of C or better in HST180.		Occ	L+L 3.0 4.0 4.0	T
HST182	2024 Fall	Microtomy		Emphasis on decalcification techniques, ergonomic safety practices for microtomy, and frozen section techniques. Application of embedding orientation by tissue type. Procedures for paraffin embedding station, cryostat and rotary microtome	Prerequisites: A grade of C or better in HST181.		Occ	L+L 5.0 5.0 5.0	T

				set-up and maintenance, and sharps safety practices for the microtome. Includes techniques for microtomy, specialized microtomy, frozen section, and cytology specimen preparation.					
HST183	2019 Fall	Practicum: Chemistry of Fixation		Practicum in histology techniques performed in an anatomic laboratory. Application of clinical skills for specimen handling, identification, and tracking protocols. Use of anatomic laboratory instrumentation. Study of gross examination protocols. Demonstration of fixation techniques, paraffin processing protocols, and specialized processing techniques. Performance of clerical and computer functions using medico-legal guidelines for documentation. Use of professional and ethical conduct in all interpersonal communications.	Prerequisites: A grade of C or better in HST181 or permission of Program Director.		Occ	LAB 1.0 4.5 0.0	C
HST184	2019 Fall	Practicum: Microtomy		Practicum in histology techniques performed in an anatomic laboratory. Use of decalcification and frozen section techniques. Includes embedding orientation by tissue type and ergonomic safety practices for microtomy. Procedures for the paraffin embedding station, cryostat and rotary microtome set-up and maintenance, and sharps safety practices for the microtome. Emphasis on techniques for microtomy, specialized microtomy, frozen section, and cytology specimen preparation.	Prerequisites: A grade of C or better in HST182.		Occ	LAB 1.0 4.5 0.0	C
HST185	2024 Fall	Cellular Biological Staining		Recognition of basic cellular structure. Identification of carbohydrates classification, pigments, minerals, and lipids in tissues and connective tissue structures. Explanation of chemical staining theory. Stain principles and procedures for nuclear and cytoplasmic structures, carbohydrates and lipids, connective tissue, and tissue pigments and minerals stains.	Prerequisites: A grade of C or better in HST182. Corequisites: HST187.		Occ	L+L 5.0 5.0 5.0	T

HST186	2024 Fall	Cellular Biological and Immunohistochemical Staining		Identification of pathologic organisms and neurological structures. Use of stains for microorganisms and neurological structures. Explanation of theories of histochemical and immunohistochemical staining. Procedures for histochemical and immunohistochemical stains. Overview of specimens for electron microscopy and autopsy procedures. Emphasis on assessing histology workflow processes, laboratory procedure manuals, and workload and productivity recording and monitors.	Prerequisites: A grade of C or better in HST185.		Occ	L+L 5.0 5.0 5.0	T
HST187	2019 Fall	Practicum: Cellular Biological Staining		Practicum in histology techniques performed in an anatomic laboratory. Recognition of basic cellular structure, carbohydrate structures, connective tissue, lipid structures, and pigments and minerals in tissues. Application of chemical staining. Emphasis on stains for nuclear and cytoplasmic structures, carbohydrates and lipids, connective tissue, and tissue pigments and minerals stains.	Prerequisites: A grade of C or better in HST185.		Occ	LAB 1.0 4.5 0.0	C
HST188	2019 Fall	Practicum: Cellular Biological and Immunohistochemical Staining		Practicum in histology techniques performed in an anatomic laboratory. Identification of pathologic organisms and neurological structures. Use of stains for microorganisms and neurological structures. Application of histochemical and immunohistochemical stains. Observation of electron microscopy and autopsy procedures. Emphasis on histology workflow processes, laboratory procedure manuals, and workload and productivity recording and monitors.	Prerequisites: A grade of C or better in HST186.		Occ	LAB 1.0 4.5 0.0	C
HTM150	2015 Fall	Introduction to Healthcare IT and Systems		Introduction to current and emerging Healthcare IT systems with particular emphasis on healthcare information and data, governance, information systems and technologies, and	Prerequisites: A grade of C or better in CIS105 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S

				industry challenges in a value-added healthcare environment.					
HTM200	2018 Fall	Healthcare IT Software Infrastructure: Interoperability, Security and mHealth		Application of industry-specific IT skills to entry-level Healthcare IT software development projects, with particular skills emphasis on high-growth areas such as interoperability, security and Mobile Health (mHealth).	Prerequisites: A grade of C or better in [(CIS133AA and CIS133BA and CIS133CA) or CIS133DA] and CIS150AB and HTM150 and permission of Program Director.	Admission to either CCL or AAS program in Healthcare Technology Systems required for permission to enroll. Application includes verification that student has met program prerequisites.	Occ	L+L 3.0 4.0 4.0	T
HTM230	2020 Fall	Healthcare Data Analytics, Artificial Intelligence (AI) and Machine Learning		Overview of theories and practical applications of Data Analytics, Artificial Intelligence (AI), and Machine Learning. A focus on trends, opportunities, and emerging uses, as well as best practices, limitations, and ethical implications. Hands-on practice with current tools to solve complex healthcare problems.	Prerequisites: A grade of C or better in (BPC110 or CIS105) and HTM150.		Occ	L+L 3.0 4.0 4.0	T
HTM250	2018 Fall	Healthcare IT Systems Development Life Cycle (SDLC)		Introduction to the Systems Development Life Cycle (SDLC) methodologies and tools currently used on healthcare Information Technology (IT) projects, with particular emphasis on software development. Experience with application development and testing tools in a project-based lab setting.	Prerequisites: A grade of C or better in CIS224 and HTM200 or Corequisites: CIS224 and HTM200.		Occ	L+L 3.0 4.0 4.0	T
HTM270	2018 Fall	Healthcare IT Systems Capstone		Culminating application of the skills, knowledge, communication and critical thinking skills from the	Prerequisites: A grade of C or better in HTM250.		Occ	L+L 3.0	T

				Healthcare Technology Systems program to address industry-specific challenges. Includes investigation and application of current and emerging healthcare technologies.				4.0 4.0	
HTM280	2020 Fall	Healthcare Technology Systems Career Strategies		Overview of the career exploration and planning process designed to assist students interested in healthcare technology systems and related fields to transition into the professional world. Focuses on current occupational trends and career decision-making strategies with a special emphasis on experiences within the field. Includes practice with self-presentation in the professional world such as effective resumes, personal portfolio, interviewing skills, online presence and professional appearance.	Prerequisites: A grade of C or better in HTM150.		Occ	L+L 3.0 2.0 2.0	T
HUM100	1995 Spring	Great Ideas Symposium		Interrelationships among cultures and behavior in the modern world. Focuses on selected themes and topics	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
HUM101	1994 Fall	General Humanities		A general humanities course concentrating on three great ages of outstanding human achievement: The Golden Age of Greece, the Renaissance and the 20th Century	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
HUM107	1995 Fall	Humanities Through the Arts		Introduction to humanities including film, drama, music, literature, painting, sculpture, and architecture	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S

HUM108	2005 Spring	Contemporary Humanities		An exploration of human expression in contemporary arts and sciences	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
HUM120	2015 Spring	Cultural Viewpoints in the Arts		Introduction to the influence of culture and ethnicity on the artist, including factors such as race, religion, gender, class, sexual preference, age, and region. Lecture and discussion on various art forms, including literature, visual arts, music, dance, film, and theater.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HUM190AA	1995 Fall	Honors Forum		Interdisciplinary studies of selected issues confronting the individual and society. Formal lectures followed by informal discussions with outstanding scholars and social leaders. Supplemented by readings and pre- and post-forum discussion and critique. Varied content from module to module due to changing forum themes and issues	Prerequisites: Admission to the College Honors Program or Permission of Instructor.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] - Combination select three (3) courses from: HUM190A A, HUM190A B,	Acad	LEC 1.0 1.0 1.0	S

						HUM190A C, HUM190A D, HUM190A E,HUM19 0AF, HUM190A G, HUM190A H, HUM190A I			
HUM190AB	1995 Fall	Honors Forum		Interdisciplinary studies of selected issues confronting the individual and society. Formal lectures followed by informal discussions with outstanding scholars and social leaders. Supplemented by readings and pre- and post-forum discussion and critique. Varied content from module to module due to changing forum themes and issues	Prerequisites: Admission to the College Honors Program or Permission of Instructor.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] - Combination select three (3) courses from: HUM190A A, HUM190A B, HUM190A C, HUM190A D, HUM190A E,HUM190AF, HUM190A G, HUM190A H, HUM190A I	Acad	LEC 1.0 1.0 1.0	S

HUM190AC	1995 Fall	Honors Forum		Interdisciplinary studies of selected issues confronting the individual and society. Formal lectures followed by informal discussions with outstanding scholars and social leaders. Supplemented by readings and pre-and post-forum discussion and critique. Varied content from module to module due to changing forum themes and issues	Prerequisites: Admission to the College Honors Program or Permission of Instructor.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]-Combination select three (3) courses from: HUM190A A, HUM190A B, HUM190A C, HUM190A D, HUM190A E,HUM190AF, HUM190A G, HUM190A H, HUM190A I	Acad	LEC 1.0 1.0 1.0	S
HUM190AD	1995 Fall	Honors Forum		Interdisciplinary studies of selected issues confronting the individual and society. Formal lectures followed by informal discussions with outstanding scholars and social leaders. Supplemented by readings and pre-and post-forum discussion and critique. Varied content from module to module due to changing forum themes and issues.	Prerequisites: Admission to the College Honors Program or Permission of Instructor.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]-Combination select	Acad	LEC 1.0 1.0 1.0	S

						three (3) courses from: HUM190A A, HUM190A B, HUM190A C, HUM190A D, HUM190A E,HUM190AF, HUM190A G, HUM190A H, HUM190A I			
HUM190AE	1995 Fall	Honors Forum		Interdisciplinary studies of selected issues confronting the individual and society. Formal lectures followed by informal discussions with outstanding scholars and social leaders. Supplemented by readings and pre- and post-forum discussion and critique. Varied content from module to module due to changing forum themes and issues	Prerequisites: Admission to the College Honors Program or Permission of Instructor.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] - Combination select three (3) courses from: HUM190A A, HUM190A B, HUM190A C, HUM190A D, HUM190A E,HUM19	Acad	LEC 1.0 1.0 1.0	S

						0AF, HUM190A G, HUM190A H, HUM190A I			
HUM190AF	1995 Fall	Honors Forum		Interdisciplinary studies of selected issues confronting the individual and society. Formal lectures followed by informal discussions with outstanding scholars and social leaders. Supplemented by readings and pre- and post-forum discussion and critique. Varied content from module to module due to changing forum themes and issues	Prerequisites: Admission to the College Honors Program or Permission of Instructor.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] - Combination select three (3) courses from: HUM190A A, HUM190A B, HUM190A C, HUM190A D, HUM190A E,HUM190AF, HUM190A G, HUM190A H, HUM190A I	Acad	LEC 1.0 1.0 1.0	S
HUM190AG	1995 Fall	Honors Forum		Interdisciplinary studies of selected issues confronting the individual and society. Formal lectures followed by informal discussions with outstanding scholars and social leaders. Supplemented by readings and pre-	Prerequisites: Admission to the College Honors Program or Permission of Instructor.	Course Attribute(s): General Education Designation:	Acad	LEC 1.0 1.0 1.0	S

				and post-forum discussion and critique. Varied content from module to module due to changing forum themes and issues		Humanities, Arts and Design - [HU] - Combination select three (3) courses from: HUM190A A, HUM190A B, HUM190A C, HUM190A D, HUM190A E,HUM190AF, HUM190A G, HUM190A H, HUM190A I.			
HUM190AH	1995 Fall	Honors Forum		Interdisciplinary studies of selected issues confronting the individual and society. Formal lectures followed by informal discussions with outstanding scholars and social leaders. Supplemented by readings and pre-and post-forum discussion and critique. Varied content from module to module due to changing forum themes and issues	Prerequisites: Admission to the College Honors Program or Permission of Instructor.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] - Combination select three (3) courses from: HUM190A A, HUM190A	Acad	LEC 1.0 1.0 1.0	S

						B, HUM190A C, HUM190A D, HUM190A E,HUM19 0AF, HUM190A G, HUM190A H, HUM190A I			
HUM190AI	1995 Fall	Honors Forum		Interdisciplinary studies of selected issues confronting the individual and society. Formal lectures followed by informal discussions with outstanding scholars and social leaders. Supplemented by readings and pre- and post-forum discussion and critique. Varied content from module to module due to changing forum themes and issues	Prerequisites: Admission to the College Honors Program or Permission of Instructor.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] - Combination select three (3) courses from: HUM190A A, HUM190A B, HUM190A C, HUM190A D, HUM190A E,HUM19 0AF, HUM190A G, HUM190A H,	Acad	LEC 1.0 1.0 1.0	S

						HUM190A I			
HUM201	2014 Fall	Humanities: Universal Themes		Study of worldviews in a variety of historical and contemporary world cultures, including analysis of origin and creation myths, artistic expression, spirituality, and the natural environment.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
HUM202	2015 Summer	Humanities: Universal Themes		The hero/heroine; fool, the social world, and the future as themes in the humanities	Prerequisites: None.	General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
HUM205	2014 Fall	Introduction to Cinema	THF205	Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
HUM206	2017 Spring	Introduction to Television Arts	THF206	History and development of electronic media and its impact on popular arts.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
HUM209	2018 Spring	Women and Films	WST209	Analysis of images of women in films from both historical and contemporary perspectives	Prerequisites: None.	Course Attribute(s): General	Acad	LEC 3.0	S

						Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]		3.0 3.0	
HUM210	2014 Fall	Contemporary Cinema	THF210	A study of contemporary films, directors and critics with emphasis on evaluating film as an art form.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
HUM211AA	1995 Fall	Foreign Films: Classics		Analysis of contributions of foreign directors to the art and history of motion pictures through a study of selected films	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
HUM211AE	2011 Fall	Foreign Films: Italian		Analysis of contributions of Italian directors to the art and history of motion pictures through a study of selected films.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

HUM212	2023 Spring	Documentary Film		Survey of documentary or non-fiction film. Emphasis on the interplay between form, subject, cultural context and filmmaker perspective. Focuses on primary types of documentary film, such as poetic, observational, expository reflexive, participative, and performative. Analyzes what distinguishes documentary film from fiction film.	Prerequisites: A grade of C or better in ENG101 or ENG107.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
HUM213	1995 Fall	Hispanic Film		Analysis of Hispanic film as art form and as social commentary	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
HUM214	2002 Fall	African-Americans in Film		Study of films featuring African-American performers and directors from the Silent Era to the present. Emphasis on the historical and social elements of African Americans in film and basics of film analysis	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education	Acad	LEC 3.0 3.0 3.0	S

						Designation: Humanities, Arts and Design - [HU]			
HUM215	2012 Summer I	Film Comedy		Explores the basics of humor in film by tracing its roots through a historical examination of a variety of arts, artists, and theorists. Focuses on films' unique contributions to the world of laughter. Investigates how comedy, and film comedy in particular, provides an essential and unifying force for culture and society.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
HUM216	2013 Spring	The Films and Career of Alfred Hitchcock		Focuses on the career, films, and cinematic and cultural influence of acclaimed director Alfred Hitchcock. Includes the director's cinematic innovations, techniques, major films, and his influence on modern filmmakers.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
HUM220	2019 Summer	History and Film		Presents historically based films and analyzes their accuracy, filmmaking techniques, and their value as cinematic historical records of U.S. and global events.	Prerequisites: A grade of C or better in ENG101 or ENG107.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
HUM225	2012 Spring	Introduction to Popular Culture		Introduction to major topics in the field of popular culture studies. Includes basic theories, methods, and concepts used to analyze popular culture texts and practices.	Prerequisites: A grade of C or better in ENG101 or ENG107.	Course Attribute(s): General Education Designation: Literacy	Acad	LEC 3.0 3.0 3.0	S

						and Critical Inquiry - [L]			
HUM235	2021 Fall	Disability Studies		Considers representations of disability as artifacts of Western and non-Western cultures against changing backdrops in knowledge, ideas, beliefs, values, and practices. Works to build awareness, understanding, and empathy in regards to diverse forms of humanity and to de-stigmatize disease, illness, and impairment.	Prerequisites: A grade of C or better in ENG101 and (RDG100 or RDG100LL or RDG111 or RDG112 or RDG113 or eligibility for CRE101 as indicated by appropriate reading placement test score).	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU] Literacy and Critical Inquiry - [L] Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
HUM245	2015 Fall	Introduction to Holocaust Studies		Introduction to essential information about the Holocaust. Provides theological, social and political background to establish contexts of anti-Semitism, especially in 19th and 20th centuries, with particular attention to National Socialist ideologies. Ghetto and camp life, including resistance, are explored. Emphasis is on texts of the Holocaust, including historical documents, participant testimonies, fiction, creative non-fiction, and poetry, much of which involves theological and moral debate. Includes analysis of supplementary	Prerequisites: None. CRE101 or CRE111 or equivalent as indicated by appropriate reading placement test score recommended but not required.	General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S

				visual material and some performing arts.					
HUM250	2021 Fall	Ideas and Values in the Humanities: Early Civilizations to the Renaissance		An historical analysis of the interrelationships of art, architecture, literature, music, and philosophy from the early civilizations to the Renaissance, including western and non-western cultures.	Prerequisites: A grade of C or better in ENG101.		Acad	LEC 3.0 3.0 3.0	S
HUM251	2021 Fall	Ideas and Values in the Humanities: Renaissance to the Contemporary World		An historical analysis of the interrelationships of art, architecture, literature, music, and philosophy from the Renaissance to modern period, including Western and Non-Western cultures.	Prerequisites: A grade of C or better in ENG101.		Acad	LEC 3.0 3.0 3.0	S
HUM260	1996 Fall	Intercultural Perspectives		Cultural, literary, and artistic expressions of Native, Hispanic, and African Americans. Includes traditional and modern work and contribution to American civilization	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
HUM261	1998 Fall	Asian Ideas and Values		An examination of Asian cultural traditions for their humanistic ideas and values: the arts, music, literature, religions, and philosophies of Asia, with emphasis on India and its sphere of influence in southeast Asia, and on China and its sphere of influence, particularly Japan	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Historical Awareness - [H]	Acad	LEC 3.0 3.0 3.0	S

						General Education Designation: Humanities, Arts and Design - [HU]			
HUM292	2023 Fall	The Art Of Storytelling	EDU292 STO292	Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
HUM295	2006 Fall	Topics in the Humanities		Exploration of selected topic in the humanities. Focuses on a theme, concept, era, or genre. Analysis and interpretation of topic's representation, development, and significance in at least three different humanities areas and in a variety of world cultures.	Prerequisites: A grade of C or better in (ENG101 or ENG107) or permission of Instructor.	HUM295 may be repeated for a total of nine (9) credit hours.	Acad	LEC 3.0 3.0 3.0	S
HUM296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career		Acad	LAB 1.0 5.0 0.0	Z

					interest or with permission of the Instructor.				
HUM296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z
HUM296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z

HUM296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z
HUM298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
HUM298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z

HUM298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
HVA101	2021 Fall	HVAC for Residential Systems I	FAC101	Introduction to major components and functions of residential heating, ventilation, and air conditioning (HVAC) systems, to include heat flow and basic electrical concepts.	Prerequisites: None.		Occ	L+L 4.0 5.0 5.0	T
HVA102	2021 Fall	HVAC for Residential Systems II		Applications of theory and basic principles of refrigeration in residential heating, ventilation, and air conditioning (HVAC) systems. Includes installations, diagnostics, preventative and predictive maintenance, and customer service.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: FAC/HVA101 or permission of Department or Division.		Occ	L+L 5.0 7.0 7.0	T
HVA104	2023 Fall	EPA Section 608 Technician Preparation and Certification		Laws, standards and procedures for the preparation to complete the certification for the Environmental Protection Agency (EPA) SECTION 608 - stationary equipment. Core certification requirements for Type I Technicians, Type II Technicians, Type III Technicians, and Universal Technicians. Type I Technician - primarily works on small appliances. Type II Technician - primarily works on appliances/equipment using high and very high pressure refrigerant. Type III Technician - primarily works on appliances/equipment using a low pressure refrigerant. Universal Technician - for servicing all appliances.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
HVA120	2021 Fall	HVAC Installation		Introduction to installation of residential heating, ventilation, and air	Prerequisites: A grade of C or better		Occ	L+L 4.0	T

				conditioning (HVAC) systems. Includes startup and verification of proper equipment operation.	in HVA102 or permission of Department.			6.0 6.0	
HVA130	2021 Fall	HVAC Troubleshooting		Introduction to troubleshooting the components of residential heating, ventilation, and air conditioning (HVAC) systems, to assure proper equipment operation.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: HVA120 or permission of Department.		Occ	L+L 4.0 6.0 6.0	T
HVA131	2020 Summer	Electrical Systems	CON131	Electricity related to residential and light commercial applications, to include common electrical components, AC and DC circuits, and electrical safety. Provides an introduction to reading, interpreting, and creating wiring diagrams and the application of electrical power. Operation and use of specific meters, tools, and an introduction to National Electrical Code (NEC).	Prerequisites: None.		Occ	L+L 3.5 4.0 4.0	T
HVA170	2024 Fall	Construction Trades: H.V.A.C.r	CON170	Introduction to major components and functions of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems, including heat flow and basic electrical concepts. Introduction to installation of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems. Includes startup and verification of proper equipment operation. Includes installations, diagnostics, preventative and predictive maintenance, and customer service. Introduction to troubleshooting the components of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems to ensure proper equipment operation. Examines federal laws, standards, and procedures for the preparation to complete the certification for the Environmental Protection Agency (EPA) SECTION 608.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 9.0 12.0 12.0	T

HVA170AA	2024 Fall	Construction Trades: Introduction to H.V.A.C.r for Residential Systems	CON170A A	Introduction to major components and functions of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems, to include heat flow and basic electrical concepts. Examines federal laws, standards and procedures for the preparation to complete the certification for the Environmental Protection Agency (EPA) SECTION 608.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
HVA170AB	2024 Fall	Construction Trades: H.V.A.C.r Installation	CON170A B	Installation of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems. Includes startup and verification of proper equipment operation. Includes installations, diagnostics, preventative and predictive maintenance, and customer service.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 4.0 3.0 3.0	T
HVA170AC	2024 Fall	Construction Trades: H.V.A.C.r Troubleshooting	CON170A C	Introduction to troubleshooting the components of residential heating, ventilation, air conditioning, and refrigeration (H.V.A.C.r) systems, to assure proper equipment operation.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: [(CON103 or CON271) and (CON102 or (CON102AA, CON102AB, and CON102AC))], or permission of Instructor.		Occ	L+L 4.0 3.0 3.0	T
HVA210	2021 Fall	Facilities Air Conditioning Systems	FAC210	Fundamental principles of air conditioning including all-air, all-water (hydronic) and air-water combination systems. Overview of the physical principles, including air distribution systems and heating and cooling load calculation. System components and	Prerequisites: A grade of C or better in HVA130 or permission of Department.		Occ	L+L 4.0 6.0 6.0	T

				<p>application theory for boilers, chillers, pumps, fans, and cooling towers. Theory and application of central air conditioning systems, air cleaning and humidification devices, pressure boosting, heat storage, expansion and pressurization equipment. Properties of water, pressure distribution in hydronic systems, flow in pipes, pressure drop/head loss, pump applications and pressurization of open and closed hydronic systems. Fundamentals of low and high temperature water systems.</p>					
HVA231	2021 Fall	Codes	FAC231	<p>Local codes, Federal Housing Administration and Urban Development standards. Acceptable building practices based on the Uniform Building Code, National Electric Code, Uniform Mechanical Code, and the Uniform Plumbing Code. Impact of American with Disabilities Act (ADA) on new and existing facilities.</p>	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
HVA296WA	2002 Fall	Cooperative Education		<p>Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.</p>	<p>Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.</p>		Occ	LAB 1.0 5.0 0.0	Z

HVA296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
HVA296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
HVA296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6		Occ	LAB 4.0 20.0 0.0	Z

				related to the career objectives of the students.	grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
HVA298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
HVA298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
HVA298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z

				expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
HVC101	2020 Fall 1	HVAC for Residential Systems I		Introduction to major components and functions of residential heating, ventilation, and air conditioning (HVAC) systems, to include heat flow and basic electrical concepts.	Prerequisites: None.		CLK	130	
HVC102	2020 Fall 1	HVAC for Residential Systems II		Applications of theory and basic principles of refrigeration in residential heating, ventilation, and air conditioning (HVAC) systems. Includes installations, diagnostics, preventative and predictive maintenance, and customer service.	Prerequisites: None.		CLK	130	
HVC120	2020 Fall 1	HVAC Installation		Introduction to installation of residential heating, ventilation, and air conditioning (HVAC) systems. Includes startup and verification of proper equipment operation.	Prerequisites: A grade of C or better in HVC102 or permission of department.		CLK	130	
HVC130	2021 Summer	HVAC Troubleshooting		Introduction to troubleshooting the components of residential heating, ventilation, and air conditioning (HVAC) systems, to assure proper equipment operation.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: HVC120 or permission of department.		CLK	130	
HWC101	2024 Fall	Health and Wellness Coaching		Provides the foundational practical skills for the application of the appropriate structure and processes of health and wellness coaching. Fundamental techniques and concepts used in coaching to establish effective coach-client partnerships, build trust and rapport, assess client readiness, and ensure ethical and professional considerations in coaching. Satisfies components of the National Board for Health and Wellness Coaching requirements.	Prerequisites: None. It is recommended that HES100 be completed prior to or concurrent with this course.		Acad	L+L 3.0 4.0 4.0	T

HWC290	2024 Fall	Health and Wellness Coaching Internship		Work-based experience in health and wellness coaching. Eighty hours of designated work per credit.	Prerequisites: A grade of C or better in HES100 and HWC101.	HWC290 may be repeated for credit.	Acad	LAB 1.0 1.0 0.0	C
IBS101	2002 Spring	Introduction to International Business		A basic overview of international business to introduce students to international trade concepts. Focus of the course is on international business environment issues that influence global business practices, decisions and applications	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G]	Occ	LEC 3.0 3.0 3.0	S
IBS104	1997 Fall	International Finance		The development of foreign exchange and international banking is examined. Methods of export financing, including both short- and medium-term credit and an in-depth review of application to and administration of government loan programs are covered. Important factors in country risk analysis are discussed	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
IBS105	1997 Fall	International Law		Introduction to the legal aspects and ramifications of international trade topics including multinational enterprises, sovereignty, technology transfer, arbitration, negotiation and diplomacy	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
IBS108	1997 Fall	Basics of Import/Export Operations		An overview of the steps involved in importing and exporting a product or service from beginning to end. Course includes an introduction to the United States Customs Service, what customs brokers do, duty rate structure and determination, basic laws affecting imports, currency exchange and letters of credit. Practical advice about storage and transportation of shipments after they have cleared customs. Other topics will include marketing, organization, regulations, terms of sale, documentation, shipment and financing involved with international enterprises, sovereignty, technology	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S

				transfer, arbitration, negotiation, and diplomacy					
IBS109	2000 Fall	Cultural Dimension for International Trade		The importance of cultural sensitivity in international business relations investigated by studying the impact of geography, history, religion, politics, customs and cross-cultural communications on society	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Social and Behavioral Sciences - [SB]	Occ	LEC 3.0 3.0 3.0	S
IBS116	2004 Summer I	Export/Import Management		Basics of importing and exporting processes with focus on documentation and procedures. Includes transportation and distribution options, freight forwarders, International Common Terms (INCO) shipping terms, packaging strategies, contract negotiation, and execution of international contracts	Prerequisites: A grade of C or better in IBS101 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
IBS118	2004 Summer I	International Marketing Management		Planning, implementing, and managing international marketing strategies through application of international marketing research and evaluation in diverse cultural, economic, and political environments. Emphasis on implementation of product, price, promotion, and distribution strategies	Prerequisites: A grade of C or better in IBS101 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
IBS123	2004 Summer I	U.S. Customs and Export Licensing Regulations		Requirements for importing into the United States, and for export clearance, licensing, and foreign entry. Includes role of customs brokers, duty rate structure and determination as well as Commerce Control List (CCL) and Export Control Commodity Numbering (ECCN),	Prerequisites: A grade of C or better in IBS101 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S

				export licenses, and governmental requirements regarding exports					
IBS140	2004 Summer I	International Financial Management		Development of foreign exchange and international banking, including methods of payment, export financing, and application for and administration of government loan programs, country risk analysis, and negotiation and processing of letter of credit and other payment methods	Prerequisites: A grade of C or better in IBS101 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
IBS298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
ICE220	2017 Spring	Sectional Anatomy	DMI220 DMS220	Sectional human anatomy in the transverse, sagittal and coronal planes. Emphasis on the brain, neck, chest, abdomen and pelvic cavity.	Prerequisites: (BIO160 or BIO201) and (HCC145 or HCC146), or a graduate of a related medical program of study or currently registered as a technologist in radiography, nuclear medicine, radiation therapy or sonography OR Admission to the Medical Radiography Program or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
ICE223	2023 Fall	Introduction to Computed Tomography		Overview of the principles and operation of computed tomography (CT) scanner. Content includes history, physics processes, instrumentation components, imaging	Prerequisites: Admission to the Medical Radiography Program or permission of Instructor.		Occ	LEC 1.0 1.0 1.0	S

				acquisition, reconstruction and display for computed tomography imaging.					
ICE229	2015 Fall	Magnetic Resonance (MR) Multi-Planar Sectional Anatomy		Three dimensional anatomy presented in transverse, sagittal and coronal planes of specified regions of the human body as viewed from magnetic resonance imagery. Includes structure identification of the bones, muscles, vascular system, organs, soft tissue components and weighted imaging.	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy), or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or (certified by American Registry of Diagnostic Medical Sonography (ARDMS) or ARRT in Diagnostic Medical Sonography), or (Radiography, Radiation Therapist, Nuclear Medicine, or Sonography student currently enrolled at GateWay), or registry eligible graduate] and DMI/DMS/ICE220 and ICE233.		Occ	LEC 2.0 2.0 2.0	S
ICE231	2013 Spring	Professional and Patient Interactions		Principles of verbal and non-verbal communication skills through the development of understanding self, patients, colleagues and others. Includes verbal communication, written instructions, communications devices, telephone protocol, resume writing and job interviewing techniques	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
ICE233	2015 Summer	Fundamentals of Magnetic Resonance Imaging (MRI)		Overview of magnetic resonance imaging, program policies and student responsibilities. Includes fundamental principles of magnetic resonance imaging (MRI), primary and	Prerequisites: (Certified by American Registry of Radiologic Technologists		Occ	LEC 1.0 1.0 1.0	S

				secondary equipment, and MRI terminology. Imaging parameters, clinical applications overview for MRI and preparation for physics, instrumentation, and safety coursework. Basic overview of safety issues and MRI contrast agents.	(ARRT) in Radiography or in Radiation Therapy), or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or (certified by American Registry of Diagnostic Medical Sonography (ARDMS) or ARRT in Diagnostic Medical Sonography), or (Radiography, Radiation Therapist, Nuclear Medicine or Sonography student currently enrolled at GateWay), or registry eligible graduate. Corequisites: DMI/DMS/ICE220 or permission of Department or Division.				
ICE240	2008 Spring	Fundamentals of Positron Emission Tomography		Overview of Positron Emission Tomography (PET). Comparison to other diagnostic imaging modalities. History of PET, applications and importance. Introduction to PET radiation safety.	Prerequisites: Completion of Associate in Applied Science in Medical Radiography or completion of Associate in Applied Science in Nuclear Medicine Technology or completion of Certificate of Completion in Radiation Therapy program or Corequisites: DMI220 ICE220 or permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S

ICE248	2016 Summer	Computed Tomography (CT) Multi-Planar Sectional Anatomy		Sectional human anatomy in the transverse, sagittal and coronal planes. Multi-planar emphasis on the musculoskeletal system to include multi-planar imaging of the facial bones, cervical, thoracic and lumbar spine, and extremities; and the heart and vascular structures.	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy), or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or (Radiography or Nuclear Medicine student currently enrolled at GateWay), or registry eligible graduates] and DMI/DMS/ICE220 and (DMI/ICE223 or NUC250) with a grade of "C" or higher, or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
ICE250	2022 Fall	Mammography		Screening and diagnostic mammography. Includes anatomy, positioning, equipment, patient history, clinical breast examination, and image evaluation related to mammography. Breast pathology along with advanced testing and treatments, including other imaging modalities.	Prerequisites: American Registry of Radiologic Technologists (A.R.R.T.) certification or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
ICE254	2013 Fall	Advanced Imaging Practicum		Advanced imaging procedures for the Graduate Radiologic Technologist from American Registry of Radiologic Technologists (ARRT) or registry eligible graduate performed under strict supervision. Use of correct technical and positioning techniques. Apply safety measures and procedures established by the institution and college. Observe	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy), or (certified by ARRT or the Nuclear	ICE254 may be repeated for a total of ten (10) credit hours.	Occ	LAB 1.0 6.0 0.0	C

				ethical and legal guidelines and use of effective communication skills.	Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or (Radiography or Nuclear Medicine student currently enrolled at GateWay), or registry eligible graduates] or permission of Instructor.				
ICE263	2016 Summer	Computed Tomography Physics and Instrumentation		Overview and evolution of Computed Tomography (CT) in medical imaging to include: X ray production, CT principles, system components and operation; image acquisition, processing, reconstruction, and display; artifacts, quality assurance, radiation dosimetry and patient safety; contrast administration, imaging protocols; and competencies as outlined by American Registry of Radiologic Technologists (ARRT) for the CT Certification Examination.	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy), or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or (Radiography or Nuclear Medicine student currently enrolled at GateWay), or registry eligible graduates] and DMI/DMS/ICE220 and (DMI/ICE223 or NUC250) with a grade of "C" or higher, or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
ICE264	2015 Fall	MRI Physics, Instrumentation and Safety		An overview into the physics, equipment, physical design, and image characteristics of Magnetic Resonance Imaging (MRI) systems.	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in		Occ	LEC 3.0 3.0 3.0	S

					Radiation Therapy), or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or (certified by American Registry of Diagnostic Medical Sonography (ARDMS) or ARRT in Diagnostic Medical Sonography), or (Radiography, Radiation Therapist, Nuclear Medicine, or Sonography student currently enrolled at GateWay), or registry eligible graduate] and DMI/DMS/ICE220 and ICE233.				
ICE265	2016 Summer	Computed Tomography Procedure Protocols		Standard procedures and protocols for Computed Tomography (CT) imaging in alignment with the American Society of Radiologic Technologists (ASRT) examination curriculum outline. Includes patient preparation and safety, choosing appropriate protocols, interventional procedures, contrast indicators, post-exam processing quality issues, and adapting to atypical scanning situations.	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy), or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or (Radiography or Nuclear Medicine student currently enrolled at GateWay), or registry eligible graduate] and (DMI/ICE223 or NUC250), and ICE248, and ICE263		Occ	LEC 3.0 3.0 3.0	S

					with a grade of "C" or higher, or permission of Instructor.				
ICE267	2015 Fall	Computed Tomography Advanced Imaging Practicum		Computed Tomography advanced imaging clinical practicum for those certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy, or certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine, or current Radiography or Nuclear Medicine student, or registry eligible graduates to perform under strict supervision. Use of correct computed tomography instrumentation, protocol implementation and positioning techniques. Apply patient safety measures and follow As Low As Reasonably Achievable (ALARA) practices to reduce radiation dose as established by the institution. Practice within established ethical and legal guidelines. Use effective communication skills.	Prerequisites: Currently enrolled in the Computed Tomography Program.		Occ	LAB 2.0 12.0 0.0	C
ICE268	2016 Fall	MRI Advanced Imaging Practicum		Advanced Magnetic Resonance imaging (MRI) clinical practicum is for those certified by the American Registry of Radiologic Technologists (ARRT) in Radiography, Radiation Therapy, or Sonography, or certified by ARRT of the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine. Use of correct magnetic resonance imaging instrumentation, protocol implementation and positioning techniques. Apply MRI safety, quality control procedures and effective patient care and communication skills.	Prerequisites: Currently enrolled in the Magnetic Resonance Imaging Program.	ICE268 may be repeated for a total of four (4) credit hours.	Occ	LAB 2.0 12.0 0.0	C
ICE269	2015 Fall	Magnetic Resonance Procedure Protocols		Imaging techniques related to the central nervous system (CNS), neck, thorax, musculoskeletal system and abdominopelvic regions. Specific clinical application, available coils and use. Considerations in scan	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in		Occ	LEC 3.0 3.0 3.0	S

				sequences, specific choices in protocols including slice thickness, phase direction, flow compensation, and positioning criteria. Anatomical structures and plane that best demonstrates anatomy. Signal characteristics of normal and abnormal structures.	Radiography or in Radiation Therapy), or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or Certified by the American Registry of Diagnostic Medical Sonography (ARDMS) or (Radiography or Nuclear Medicine student), or registry eligible graduate] and ICE233 and ICE264 with a grade of "C" or higher, or permission of Instructor.				
ICE270	1999 Fall	Contrast Media		Functions and applications of contrast media used in diagnostic radiographic imaging procedures. Chemical characteristics and properties of contrast media. Indications and contraindications including potential hazards of contrast media administration. Adverse reactions, patient care associated with reactions and medicolegal issues associated with administration of contrast media	Graduate radiologic technologist or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
ICE271	1999 Fall	Physiologic Monitoring		Physiologic monitoring to include electrophysiology of the heart, electrocardiography, rhythms and dysrhythmias. Hemodynamic monitoring including equipment, parameters, and cardiovascular pressures. Vital signs to include normal and abnormal values	Graduate radiologic technologist or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
ICE272	2015 Fall	Magnetic Resonance Pathology		Common pathologies found in magnetic resonance imaging, their appearance with various imaging protocols including all commonly imaged body systems and areas.	Prerequisites: [(Certified by American Registry of Radiologic Technologists (ARRT) in		Occ	LEC 3.0 3.0 3.0	S

				Case studies and images of the pathologies to reinforce the lectures.	Radiography or in Radiation Therapy), or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or Certified by the American Registry of Diagnostic Medical Sonography (ARDMS) or (Radiography or Nuclear Medicine student), or registry eligible graduate] and ICE233 and ICE229 with a grade of "C" or higher, or permission of Instructor.				
ICE273	2013 Fall	Computed Tomography Pathology		Common diseases diagnosed using Computed Tomography (CT) imaging. Appearance of pathology on CT to include: physiology, etiology, indications for exam, findings, and diagnosis. Case studies, images, and descriptions of pathologic conditions in various body systems will be presented in alignment with CT certification guidelines published by the American Registry of Radiologic Technologists (ARRT).	[(Certified by American Registry of Radiologic Technologists (ARRT) in Radiography or in Radiation Therapy), or (certified by ARRT or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine), or (Radiography or Nuclear Medicine student currently enrolled at GateWay), or registry eligible graduate] and DMI/DMS/ICE220 and ICE248 with a grade of "C" or higher, or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S

ICE290	1999 Fall	Registry and Board Examinations Preparation		Preparation for the American Registry of Radiologic Technologist (ARRT) and the Medical Radiologic Technology Board of Examiners (MRTBE)examinations. Review of the ARRT and MRTBE content specifications, techniques for preparation and review of current literature	Qualified individuals preparing for the ARRT and MRTBE or permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
ICE291	2023 Fall	Computed Tomography Registry and Board Exam Preparation	NUC291	Discussion of concepts outlined in the American Registry of Radiologic Technologists (ARRT) published content specifications for their post-primary certification exam in computed tomography (CT).	Prerequisites: Permission of the Program Director or Instructor.		Occ	LEC 1.0 1.0 1.0	S
ICE292	2008 Fall	MRI Board Exam Review Preparation		Preparation for the American Registry of Radiologic Technologists (ARRT) Medical Resonance Imaging (MRI) examination. Review of elements required to pass the AART examination, including patient care and safety, imaging procedures, data acquisition, and physical principles of image formation.	Prerequisites: A grade of C or better in DMI220, ICE220, ICE229, ICE233, ICE264, ICE269 and ICE272. Corequisites: ICE254.		Occ	LEC 1.0 1.0 1.0	S
ICE293	2013 Spring	Registry Examination Preparation in Vascular-Interventional Radiography		Preparation for the American Registry of Radiologic Technologist (ARRT) in Vascular Interventional Radiography examination. Review of the ARRT content specifications, techniques for preparation, and review of current literature.	Prerequisites: Registered Radiographers preparing for the American Registry of Radiologic Technologist (ARRT) Vascular Interventional Radiography examination or permission of Instructor.	ICE293 may be repeated for credit.	Occ	LEC 1.0 1.0 1.0	S
ICE298AA	2001 Spring	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and	Prerequisites: None.		Occ	LAB 1.0 1.0 0.0	Z

				individualized learning to be combined to maximize student development.					
ICE298AB	2001 Spring	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: None.		Occ	LAB 2.0 2.0 0.0	Z
ICE298AC	2001 Spring	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: None.		Occ	LAB 3.0 3.0 0.0	Z
IEC101	1995 Fall	Basic Electricity		Electrical and first aid safety. Introduction to electricity, trade math, wiring techniques. Introduction to the National Electrical Code	Prerequisites: None.		Occ	LEC 5.0 5.0 5.0	S
IEC102	2001 Spring	Electrical Residential		Series-parallel circuits, governing bodies, residential wiring practices, Kirchhoff's Law, kitchen outlets, heating systems, low voltage systems, service entrance requirements and swimming pools	Prerequisites: A grade of C or better in IEC101 or permission of Instructor.		Occ	LEC 5.0 5.0 5.0	S
IEC104	2021 Fall	Wiring Motors and Transformers		Sizes of wire, conduit and boxes; National Electric Code, sizing service and feeders, sizing transformers and protection of transformers	Prerequisites: Permission of Instructor.		Occ	LEC 5.0 5.0 5.0	S
IEC105	2018 Fall	Electric Blueprint Reading		Three-phase systems, transformers, and blueprint reading, construction process, plumbing, masonry and welding blueprints as well as	Prerequisites: A grade of C or better in IEC104 or permission of Instructor.		Occ	L+L 5.0 5.0 5.0	T

				mechanical systems; electrical blueprints and grounding.					
IEC106	2018 Fall	Electric Motor Controls		Motor Control system, alternating current (AC) and direct current (DC) contactors and magnetic motor starters; time delay circuits, reversing circuits, power distribution systems and hazardous locations, signs and fiber optics.	Prerequisites: A grade of C or better in IEC105 or permission of Instructor.		Occ	L+L 5.0 5.0 5.0	T
IEC108	2021 Fall	Alarm Systems and Codes		Fire and signaling systems. Installation and start-up of fire alarm systems, fire alarm maintenance and troubleshooting. Wiring methods and materials, circuits and equipment protection, motors and air conditioning circuits, transformers and generating. Dwelling occupancies, industrial and commercial locations, hazardous locations- swimming pool and leadership	Prerequisites: Permission of Instructor.		Occ	LEC 5.0 5.0 5.0	S
IEC298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
IEC298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
IEC298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual	Prerequisites: Permission of		Occ	LAB 3.0	Z

				student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			3.0 0.0	
IFS110	2017 Spring	Critical Research for College Success		Access, evaluate, and incorporate sources appropriately into academic projects.	Prerequisites: None.	IFS110 may be repeated for a total of four (4) credit hours.	Acad	LEC 1.0 1.0 1.0	S
IFS112	2018 Spring	College Research Foundations		Development of research skills and competencies essential for college success including accessing, evaluating, and incorporating information sources into academic projects. Examination of information ecosystems, online presence, and the implications of one's information seeking behaviors.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
IFS150	2024 Fall	Social Media, Society, and Ourselves		Introduction to the role of social media in historical, social, cultural, and political contexts. Examine social media experience through the lens of creator and consumer. Analysis of the impact of social media on information and communication, including its influence on mental health, relationships, and identity formation.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
IFS201	2024 Fall	Information in a Post-Truth World		Develop a critical approach to using information as both a consumer and creator. Explore the impact of culture and worldview on how information is created, shared, understood, and used. Utilize analysis, evaluation, interpretation, and synthesis through substantial writing and/or speaking tasks.	Prerequisites: A grade of C or better in ENG101 or ENG107.	Course Attribute(s): General Education Designation: Literacy and Critical Inquiry - [L] General	Acad	LEC 3.0 3.0 3.0	S

						Education Designation: Social-Behavioral Sciences - [SB]			
IFS210	2020 Fall	Information Without Borders: Research in a Global Society		A comparative study focused on access to digital information in a global environment. Explore the global culture developing around the Internet and the impact of local, national and global cultures as well as economic and social factors related to the flow of information in a global society. Examine emerging technologies to produce and distribute information across cultures in a global society in an ethical manner.	Prerequisites: None.	IFS210 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
IFS213	2021 Fall	Hacking and Open Source Culture		Focus on the multi-dimensions of hacking and open source culture, including rule-breaking, innovation, and creative use of programming/technology. Social, economic, cultural, and political implications of hacking and technology, in historical and contemporary contexts will be addressed.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social-Behavioral Sciences - [SB] General Education Designation: Historical Awareness - [H]	Acad	LEC 3.0 3.0 3.0	S
IFS215	2023 Fall	Health Information and Cultural Communities		Investigates impact of cultural diversity (ex: linguistic, religious, racial, ethnic, and gender groups) on health literacy by exploring characteristics of culturally competent health information. Examines barriers to high quality, culturally competent health information and creates methods of providing relevant information to low literacy populations.	Prerequisites: A grade of C or better in ENG101 or ENG107.		Acad	LEC 3.0 3.0 3.0	S

IGS290	2001 Fall	Integrated Studies		Integrated nature of human experience. Critical inquiry of a particular theme from a wide variety of academic viewpoints. Synthesis of knowledge and skills. Evaluation of experience and decisions from ethical, aesthetic, and intellectual perspectives. Preparation of three formal papers.	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.		Acad	LEC 3.0 3.0 3.0	S
IGS290AA	1996 Fall	Integrated Studies		Integrated nature of human experience. Critical inquiry of a particular theme from a wide variety of academic viewpoints. Synthesis of knowledge and skills. Evaluation of experience and decisions from ethical, aesthetic, and intellectual perspectives. Preparation of two formal papers	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
IGS290AB	1993 Fall	Integrated Studies		Preparation of a formal paper related to IGS290AA that demonstrates competency in gathering, interpreting and evaluating evidence.	Prerequisites: A grade of C or better in IGS290AA or Corequisites: IGS290AA.		Acad	LEC 1.0 1.0 1.0	S
IGS291	2010 Summer I	Studies in Global Awareness		Interdisciplinary examination of selected topics in global awareness. Study of the human organization and modern global interdependence. Selected topics vary	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	Course Attribute(s): General Education Designation: Global Awareness - [G]	Acad	LEC 3.0 3.0 3.0	S
IGS291AA	1996 Fall	Studies in Global Awareness		Interdisciplinary examination of selected topics in global awareness. Study of the human organization and modern global interdependence. Selected topics vary	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
IGS292	1999 Fall	Studies in Cultural Diversity		Interdisciplinary examination of selected topics in cultural diversity. Study of the interrelationships among diverse cultures within the contemporary United States. Selected topics vary	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	Course Attribute(s): General Education Designation: Cultural Diversity - [C]	Acad	LEC 3.0 3.0 3.0	S
IGS292AA	1996 Fall	Studies in Cultural Diversity		Interdisciplinary examination of selected topics in cultural diversity.	Prerequisites: None.		Acad	LEC 1.0	S

				Study of the interrelationships among diverse cultures within the contemporary United States. Selected topics vary				1.0 1.0	
IGS293	2010 Summer I	Studies in Historical Awareness		Interdisciplinary examination of selected topics in historical awareness. Study of the historical method and of human events that have created modern life. Selected topics vary.	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.		Acad	LEC 3.0 3.0 3.0	S
IGS293AA	1996 Fall	Studies in Historical Awareness		Interdisciplinary examination of selected topics in historical awareness. Study of the historical method and of human events that have created modern life. Selected topics vary	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
IGS294	2005 Fall	Integrative Study of the Future		Integrative and interdisciplinary study of the future. Critical inquiry of the future from historical, philosophical, literary, scientific, social, psychological, and religious perspectives. Comprehensive review of contemporary scientific-technological, environmental, and global and cultural trends and possible directions in the future. Synthesis of theoretical knowledge and practical and personal applications	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.		Acad	LEC 3.0 3.0 3.0	S
IMC112	2018 Fall	Introduction to Mechanical Trades Construction		Theories and concepts for mechanical trades construction: Basic safety, materials handling and construction math. Application and maintenance of hand and power tools, and basic rigging. Types and interpretation of construction drawings. Introduction to basic communication and employability skills.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
IMC114	2018 Fall	Overview of Mechanical Trades: Sheet Metal, Pipefitting, and Plumbing		Overview of the work performed in the mechanical trades. Theories and concepts of care, use, and safety procedures related to hand and power tools motorized equipment. Introductory concepts in construction drawings, safety hazards and installation of ductwork.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T

IMC120	2018 Fall	Plumbing, Drain, and Waste Piping		Interpretation and grade requirements for drain piping. Planning, testing, and installation of specific types of drains.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
IMC122	2018 Fall	Multiple Trades Cross Training: Tubes, Fittings and Piping Systems		Principles of architectural sheet metal, copper tube and fittings, carbon steel pipe and fittings, mechanical piping systems, and plastic pipe and fittings. Introductory concepts of drain, waste and vent (DWV) systems, soldering for sheet metal and pipefitting power tools.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
IMC124	2018 Fall	Multiple Trades Cross Training: Standards		Fundamentals and theories of trade standards for sheet metal, plumbing systems, and mechanical piping systems installation.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
IMC231	2018 Fall	Mechanical Trades Construction: Plumbing Intermediate Principles and Concepts		Intermediate principles and concepts for the plumbing trade related to commercial drawings and calculations. Installation of fixtures, valves, faucets, roof, floor and area drain. Types of drains and fuel gas systems.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
IMC233	2018 Fall	Mechanical Trades Construction: Sheet Metal Intermediate Principles and Concepts		Intermediate principles and concepts for the sheet metal trade related to duct fabrication standards, air properties, bend allowances, field measuring, and triangulation.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
IMC235	2018 Fall	Mechanical Trades Construction: Pipefitting Intermediate Principles and Concepts		Intermediate principles and concepts for the pipefitting trade related to trade calculations, motorized equipment, above ground pipe installation. Emphasis on field routing, vessel trim, pipe hangers and support, testing systems and equipment.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
IMC236	2018 Fall	Mechanical Trades Construction: Plumbing Advanced		Advanced principles and concepts for the plumbing trade related to water supply piping installation, testing, and sizing. Application of advanced trade calculations and fundamentals of	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T

		Principles and Concepts		backflow prevention and types of venting.					
IMC237	2018 Fall	Mechanical Trades Construction: Sheet Metal Advanced Principles and Concepts		Advanced principles and concepts for the sheet metal trade related to piping practices, radial line development, layout and fabrication. Emphasis on air systems, shop production and organization.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
IMC238	2018 Fall	Mechanical Trades Construction: Pipefitting Advanced Principles and Concepts		Advanced principles and concepts for the pipefitting trade relative to blueprint reading, drawing, and detail sheets. Advanced application of weld pipe fabrication, rigging, standards, and specifications.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
IMC241	2018 Fall	Mechanical Trades Construction: Plumbing Advanced Skill Building		Application and review of advanced principles for drain, waste and vent (DWV) systems, pumps, compressed air systems, and potable water treatment. Fundamentals of business practices for plumbers.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
IMC243	2018 Fall	Mechanical Trades Construction: Sheet Metal Advanced Skill Building		Application and review of advanced sheet metal layout, fabrication, and installation. Review principles of airflow, air distribution systems, standards, comprehensive planning and specification reading.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
IMC245	2018 Fall	Mechanical Trades Construction: Pipefitting Advanced Skill Building		Application and review of advanced principles and concepts for valve maintenance, hot taps, special piping, and pipe fabrication.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
IMC246	2018 Fall	Mechanical Trades Construction: Plumbing Advanced Applications and Techniques		Application and review of advanced plumbing techniques for water pressure boosters, recirculation systems, review and function of codes for indirect and special wastes and the plumbing industry. Introduction to hydronic and solar heating systems, servicing piping systems, fixtures and appliances. Team leadership skills.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
IMC247	2018 Fall	Mechanical Trades Construction:		Application and review of advanced sheet metal techniques for air testing and balancing. Review of codes and	Prerequisites: Registered apprenticeship status		Occ	L+L 6.0	T

		Sheet Metal Advanced Applications and Techniques		specifications pertaining to fume and exhaust system design including review and practice of lay out patterns, fabrication and selection of sheet metal fittings.	or permission of Apprenticeship Coordinator.			6.0 6.0	
IMC248	2018 Fall	Mechanical Trades Construction: Pipefitting Advanced Applications and Techniques		Application and review of advanced pipefitting techniques for advanced blueprint reading, steam systems, stress relieving and aligning. Purpose and function of in-line specialties and an introduction to supervisory roles.	Prerequisites: Registered apprenticeship status or permission of Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
IND110	2000 Spring	Introduction to the Printing Industry		Brief history/introduction of graphic arts technologies including printing, photography, graphics and text. Safety and health practices, job estimating and trade customs as well as legal restrictions and requirements covered	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
IND111	2018 Fall	Paper, Binding and Finishing Techniques		Finishing techniques and binding styles of paper. Covers paper properties, requirements, and grades. Various finishing and binding styles emphasized	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
IND112	2018 Fall	Lithographic Inks and Offset Press Operations		Basic overview of lithographic inks and offset press operations. Sheet-fed and web-fed offset presses emphasized	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
IND133AB	1996 Spring	Speaking in Business - Delivering Communication Messages		Practical, effective speech techniques for everyday business interactions. Examination of effective message preparation skills and communication styles and techniques	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
IND135	2011 Spring	Interpersonal Skills and Leadership in Construction		Values and expectations of the workforce, building relationships, satisfying stakeholders. Effective communication, management grid, creating a leadership environment. Behavioral interviewing and professional development of personnel.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
IND136	2010 Spring	Communications in Construction	ABA136	Communication in the construction industry. Positive direct communication, written communication, active listening, understanding, negotiation, and	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S

				dealing with difficult people. Communication skills at all organizational levels, with groups, combining oral and written communication for maximum effectiveness.					
IND138	2019 Spring	Introduction to Project Management and Resource Control	CON138	Technical and management skills such as preconstruction planning, cost and risk control and policy development. Criteria for project layout purchasing, subcontractor management, project layout. Preparation process for project start up, close out and alternate project delivery methods. Major factors which affect production control and production control standards. Project manager's role.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
IND140	2021 Fall	Construction Scheduling and Time Management		Fundamental training in scheduling, including listing and sequencing, bar charts, network diagrams and methods of managing resources. Importance of formal schedules, job planning, and establishing priorities and alternative scheduling methods.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
IND142	2022 Fall	Construction Safety/Loss Prevention		Construction safety and loss prevention from the perspective of the construction superintendent. Includes communication and motivation for safety and loss prevention, project security and traffic control, and scheduling planning to prevent losses. Also includes loss prevention documents and inventories, assigning responsibility for safety and equipment maintenance, handling inclement weather and emergencies, and government regulations and inspections.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
IND144	1988 Fall	Improving Construction Productivity		Techniques for improving the productivity of construction projects including external factors influencing productivity, planning and communications as functions of a productive project, and the relationship of motivation and job	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S

				satisfaction to productivity. Also presents techniques for evaluating methods improvement, including the use of time lapse photography and development of a methods improvement program, time management and delegating responsibility					
IND150	2014 Fall	Construction Foreman	PNT150	Examine the basic supervisory and leadership concepts and skills needed to manage a construction project. Includes basic theories of motivation, role of communications in construction project management, decision making process, planning and organizing, strategies, developing production schedules to control production, discussing accident prevention and loss control	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
IND170AA	1985 Fall	Training for Business, Industry, and Government - AA		Customized one credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170AA requisites are defined on the suffixed IND170 specific courses.	Occ	LEC 1.0 1.0 1.0	S
IND170AB	1985 Fall	Training for Business, Industry, and Government - AB		Customized two credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170AB requisites are defined on the suffixed IND170 specific courses.	Occ	LEC 2.0 2.0 2.0	S
IND170AC	1985 Fall	Training for Business, Industry, and Government - AC		Customized three credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170A C requisites are defined on the suffixed IND170	Occ	LEC 3.0 3.0 3.0	S

						specific courses.			
IND170AD	2018 Fall	Training for Business, Industry, and Government - AD		Customized two credit lecture/lab course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170AD requisites are defined on the suffixed IND170 specific courses.	Occ	L+L 2.0 4.0 4.0	T
IND170AE	2018 Fall	Training for Business, Industry, and Government - AE		Customized three credit lecture/lab course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170AE requisites are defined on the suffixed IND170 specific courses.	Occ	L+L 3.0 5.0 5.0	T
IND170AF	2018 Fall	Training for Business, Industry, and Government - AF		Customized four credit lecture/lab course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170AF requisites are defined on the suffixed IND170 specific courses.	Occ	L+L 4.0 6.0 6.0	T
IND170AG	1986 Fall	Training for Business, Industry, and Government - AG		Customized one-half credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170AG requisites are defined on the suffixed IND170 specific courses.	Occ	LEC 0.5 0.5 0.5	S
IND170AH	1990 Fall	Training for Business, Industry, and Government - AH		Customized four credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170AH requisites are defined on the	Occ	LEC 4.0 4.0 4.0	S

						suffixed IND170 specific courses.			
IND170AI	1990 Fall	Training for Business, Industry, and Government - AI		Customized five credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170AI requisites are defined on the suffixed IND170 specific courses.	Occ	LEC 5.0 5.0 5.0	S
IND170AJ	1996 Spring	Training for Business, Industry, and Government - AJ		Customized one and one-half credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170AJ requisites are defined on the suffixed IND170 specific courses.	Occ	LEC 1.5 1.5 1.5	S
IND170AK	1996 Spring	Training for Business, Industry, and Government - AK		Customized two and one-half credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170AK requisites are defined on the suffixed IND170 specific courses.	Occ	LEC 2.5 2.5 2.5	S
IND170AL	1996 Spring	Training for Business, Industry, and Government - AL		Customized three and one-half credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170AL requisites are defined on the suffixed IND170 specific courses.	Occ	LEC 3.5 3.5 3.5	S
IND170AM	1996 Spring	Training for Business, Industry, and Government - AM		Customized four and one-half credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170A M requisites are defined on the	Occ	LEC 4.5 4.5 4.5	S

						suffixed IND170 specific courses.			
IND170AN	1996 Spring	Training for Business, Industry, and Government - AN		Customized one quarter credit lecture course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170A N requisites are defined on the suffixed IND170 specific courses.	Occ	LEC 0.25 0.25 0.25	S
IND170AO	2018 Fall	Training for Business, Industry, and Government - AO		Customized one credit lecture/lab course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: None.	IND170A O requisites are defined on the suffixed IND170 specific courses.	Occ	L+L 1.0 2.0 2.0	T
IND170AP	2018 Fall	Training for Business, Industry, and Government - AP		Customized two credit lecture/lab course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170AP requisites are defined on the suffixed IND170 specific courses.	Occ	L+L 2.0 3.0 3.0	T
IND170AQ	2018 Fall	Training for Business, Industry, and Government - AQ		Customized three credit lecture/lab course to meet the immediate training needs of business, industry, and government within Maricopa County.	Prerequisites: None.	IND170A Q requisites are defined on the suffixed IND170 specific courses.	Occ	L+L 3.0 4.0 4.0	T
IND170AR	2018 Fall	Training for Business,		Customized one credit lab course to meet immediate training needs of	Prerequisites: None.	IND170A R requisites	Occ	LAB 1.0	T

		Industry, and Government - AR		business, industry and government within Maricopa County.		are defined on the suffixed IND170 specific courses.		2.0 2.0	
IND170AS	2018 Fall	Training for Business. Industry, and Government - AS		Customized 1.75 credit L+L course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: None.	IND170AS requisites are defined on the suffixed IND170 specific courses.	Occ	L+L 1.75 1.75 1.75	T
IND170AT	2018 Fall	Training for Business, Industry, and Government - AT		Customized 1.25 credit L+L course to meet immediate training needs of business, industry and government.	Prerequisites: None.	IND170AT requisites are defined on the suffixed IND170 specific courses.	Occ	L+L 1.25 1.25 1.25	T
IND170AU	2018 Fall	Training for Business, Industry, and Government-AU		Customized two credit lab course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: None.	IND170AU requisites are defined on the suffixed IND170 specific courses.	Occ	LAB 2.0 6.0 6.0	T
IND170AV	2018 Fall	Training for Business, Industry and Government-AV		Customized three credit lab course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: None.	IND170AV requisites are defined on the suffixed IND170 specific courses.	Occ	LAB 3.0 9.0 9.0	T
IND170AW	2018 Fall	Training for Business,		Customized one credit lab course to meet immediate training needs of	Prerequisites: To be specified.	IND170AW	Occ	LAB 1.0	T

		Industry, and Government-AW		business, industry and government within Maricopa County.		requisites are defined on the suffixed IND170 specific courses.		3.0 3.0	
IND170AX	2010 Fall	Training for Business, Industry, and Government-AX		Customized twelve credit lecture course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: To be specified.	IND170AX requisites are defined on the suffixed IND170 specific courses.	Occ	LEC 12.0 12.0 12.0	S
IND170BA	2019 Fall	Training for Business, Industry, and Government-BA		Customized two credit lecture with zero credit laboratory course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: To be specified.	IND170BA requisites are defined on the suffixed IND170 specific courses.	Occ	LEC 2.0 1.5 1.5 LAB 0.0 1.5 1.5	R
IND170BB	2019 Fall	Training for Business, Industry, and Government-BB		Customized two credit lecture with zero credit laboratory course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: To be specified.	IND170BB requisites are defined on the suffixed IND170 specific courses.	Occ	LEC 4.0 2.0 2.0 LAB 0.0 6.0 6.0	R
IND170BC	2020 Spring	Training for Business, Industry, and Government-BC		Customized four credit lecture with zero laboratory course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: To be specified.	IND170B C requisites are defined on the suffixed IND170 specific courses.	Occ	LEC 4.0 2.5 2.5 LAB 0.0 1.5 1.5	R

IND170BD	2020 Spring	Training for Business, Industry, and Government-BD		Customized L+L 4.0 credits, 4.5 periods, 5.0 load course to meet immediate training needs of business, industry and government within Maricopa County.	Prerequisites: To be specified.	IND170BD prerequisites are defined on the suffixed IND170 specific courses.	Occ	L+L 4.0 4.5 5.0	R
INS100	2018 Fall	Insurance Industry Profession		Introduction to the insurance industry profession and environment. Includes identification of personal career goals, effective workplace behaviors and professionalism in the workplace in addition to strategies for problem solving and conflict management. Also covers the importance of integrity and ethical behavior in the insurance industry.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
INS140	2019 Spring	Review for the Property and Casualty Insurance Agent Licensing Exam		Preparation for the Property and Casualty Insurance Producer licensing exam required by the State of Arizona Department of Insurance for licensure as a Property/Casualty Insurance Agent. Covers the basic principles and legal parameters of property and casualty insurance including homeowners, auto, and business policies. Designed for students with no prior experience in the insurance field as well as those seeking to expand their licensing authority with the State of Arizona.	Prerequisites: None.	Licensure in Arizona as a Property and Casualty Insurance Producer requires fingerprinting and a criminal background check as well as a satisfactory score on the official licensing exam. This course includes neither the state	Occ	LEC 1.0 1.0 1.0	S

						exam nor any aspect of criminal background check. INS140 may be repeated for credit.			
INS150	2021 Fall	Introduction to Personal Lines Policies		Introduction to personal lines policies for the customer service representative. Includes principles of insurance, contracts, and the role of regulation in the insurance industry. Covers various types of personal insurance including property, liability, dwelling, homeowner, and auto insurance in addition to procedures for rating a policy.	Prerequisites: Permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
INS151	2021 Fall	Introduction to Commercial Property Policies		Introduction to commercial property policies for the customer service representative. Includes principles of commercial property, business owner, and commercial insurance for businesses. Covers terminology, forms, and procedures for policy coverages, declarations, exclusions, and endorsements.	Prerequisites: Permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
INS155	2021 Fall	Fire Product Procedures		Customer service emphasis on fire product procedures. Covers types of coverage, endorsements, discounts, and eligibility in addition to fair access concerns. Also includes procedures for quoting watercraft and homeowner fire coverage and use of state-specific guidelines and procedures.	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 3.0 3.0	T
INS200	2018 Fall	Principles of Property and Liability Insurance		Basic principles of insurance. Introduction to insurance contracts. Overview of company functions and operations including ratemaking, underwriting, claims, adjusting, and marketing.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
INS205	2018 Fall	Personal Insurance		Analysis of personal loss exposures and personal insurance coverages including homeowner's, other dwelling	Prerequisites: A grade of C or better in INS200 or		Occ	LEC 3.0	S

				coverages, personal liability, auto, life, health, and government programs.	permission of Instructor.			3.0 3.0	
INS210	2018 Fall	Commercial Insurance		Analysis of commercial coverages including property, business income, inland marine, ocean marine, crime, boiler, general liability, auto, and worker's compensation. Analysis of loss exposures and explanation of coverage parts.	Prerequisites: A grade of C or better in INS200 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
INS241	2020 Fall	Risk in an Evolving World		Introduction to the risk management process and its role in identifying and managing exposure to loss. Process for establishing a framework for hazard identification and the use of analytical and technology tools to determine financial impact to business.	Prerequisites: A grade of C or better in INS210.		Occ	LEC 3.0 3.0 3.0	S
INS242	2020 Fall	Holistically Assessing Risk		Examination of various risk identification and assessment techniques implemented by business to control potential loss exposures. Emphasis on understanding the impact of operational decisions and employee actions on losses and steps used to mitigate financial consequences. Detailed analysis of property, liability, management liability, cyber, and loss exposures as well as use of data analytics to manage risk assessment and control.	Prerequisites: A grade of C or better in INS241.		Occ	LEC 3.0 3.0 3.0	S
INS243	2020 Fall	Successfully Treating Risk		Evaluation of risk financing techniques available to organizations to provide funds to pay for losses incurred. Overview of financial elements of insurance, self-insurance, captives, and non-insurance transfers. Examination of non-traditional methods of financing including reinsurance, derivatives, catastrophe bonds, and insurance linked securities and their implementation to reduce hazard risk and market and credit risks faced by companies.	Prerequisites: A grade of C or better in INS241.		Occ	LEC 3.0 3.0 3.0	S

INS280	2021 Fall	Insurance Studies Internship Preparation		Overview of essential skills necessary for an insurance studies student preparing to enter in the internship environment. Covers essential skills, self-evaluation, and resources available to an insurance student.	Prerequisites: A grade of C or better in INS200 and permission of Department or Division.	INS280 may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 1.0 1.0	T
INS290AA	2020 Fall	Internship for Insurance Studies		Insurance work experience in industry. Eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division.	INS290AA may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 1.0 1.0	T
INS290AB	2020 Fall	Internship for Insurance Studies		Insurance work experience in industry. Eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division.	INS290AB may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 2.0 2.0	T
INT100	2018 Fall	Interior Design Drafting		Basic manual drafting techniques used in the interior design industry. Focus on industry standards of equipment use, lettering, line work, dimensioning, scaling, and annotation. Introduction and practice of industry-specific drawing types, including floor plans, elevations, sections, details, multi-view projection, and paraline. Brief exploration of hand sketching and Computer-Aided Design (CAD) techniques as they relate to manual drafting	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
INT101	2024 Fall	Introduction to Interior Design		Overview of interior design and related professions, the design process, elements and principles of design, color theory, and basic concepts of space planning and furniture layout. Development of design vocabulary relative to architectural details, furnishings, and finishes.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

INT115	2020 Fall	Historical Architecture and Furniture		Historical survey of the development of architecture, interiors, furniture, and decorative arts from antiquity to the Industrial Revolution.	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]	Occ	LEC 3.0 3.0 3.0	S
INT120	2020 Fall	Modern Architecture and Furniture		Survey of the development of architecture, interiors, furniture, and decorative arts from the Industrial Revolution to the present. Emphasis is on modern architects and designers.	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]	Occ	LEC 3.0 3.0 3.0	S
INT122	2024 Fall	Digital Visualization for Design		Introduction to the utilization of leading interior design industry software such as Adobe Photoshop, Illustrator, and InDesign for digital rendering and the development of interior design drawings and presentations.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
INT126	2019 Fall	Sewing for the Home	TEC126	Provides students systemic skills and knowledge to plan and construct draperies, shades, pillows, bedding	Prerequisites: None.	Basic sewing skills are	Occ	LEC 3.0	S

				and other home furnishings through instructional projects. Emphasizes techniques used in producing textile goods for the home.		recommended. INT/TEC126 may be repeated for a total of nine (9) credit hours.		3.0 3.0	
INT131	2024 Fall	Introduction to CAD for Interior Design		This class focuses on the development of two-dimensional and three-dimensional spatial development through the use of Computer-Aided Design (CAD), computer-aided design for interior design following American Institute of Architects (AIA) guidelines.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
INT132	2024 Fall	Advanced CAD for Interior Design		Computer-aided drafting (CAD) instruction directed to the creation of fully annotated plans, elevations, and schematic section views including dimensions, notes, symbols, and schedules. Emphasis is placed on AutoCAD software.	Prerequisites: A grade of C or better in ARC141, or INT131, or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
INT145	2024 Fall	Drawing and Rendering Studio		Development of basic freehand sketching and perspective rendering skills. Explores drawing styles and techniques through quick sketching and the use of digital tools to create presentation drawings as used in the professional interior design industry.	A grade of C or better required in all Prerequisites. Prerequisites: INT101. Prerequisites or Corequisites: INT122.		Occ	L+L 3.0 6.0 6.0	T
INT145AA	2021 Fall	Sketching and Visualization		Development of basic freehand sketching and perspective drawing skills. Explores styles and techniques with emphasis on quick sketch and presentation type drawings as used by design professionals.	Prerequisites: None. Corequisites: INT145AB.		Occ	L+L 1.5 3.0 3.0	T
INT145AB	2021 Fall	Rendering		Development of basic digital sketching and perspective drawing skills. Explores styles and techniques with emphasis on quick sketch and presentation type drawings as used by design professionals.	Prerequisites: None. Corequisites: INT145AA.		Occ	L+L 1.5 3.0 3.0	T
INT156	2018 Fall	Furniture Upholstery I		Techniques of general furniture upholstery, operations of webbing, springing, stuffing, trimming, sewing	Prerequisites: None.	INT156 may be repeated	Occ	L+L 3.0	T

				and cushion making on approved student-selected projects.		for a total of nine (9) credit hours. Students must provide the furniture piece.		5.0 5.0	
INT157	2018 Fall	Furniture Upholstery II		Application and use of modern materials and tools, button tufting, channel construction, and special trim effects.	Prerequisites: A grade of C or better in INT156 or permission of Department or Division.	INT157 may be repeated for a total of (9) credit hours. Students must provide the furniture piece.	Occ	L+L 3.0 5.0 5.0	T
INT158	2018 Fall	Furniture Upholstery III		Advanced techniques in upholstering of furniture and other needle-trade items; time and money saving shortcuts in layout; fabric cutting and sewing.	Prerequisites: A grade of C or better in INT157 or permission of Department or Division.	INT158 may be repeated for a total of (9) credit hours. Students must provide the furniture piece.	Occ	L+L 3.0 5.0 5.0	T
INT159	2018 Fall	Furniture Upholstery IV		Advanced techniques of furniture upholstery for students interested in entering the upholstery trade; modern production techniques for sewing; stuffing; and finishing; job estimating; equipment selection and maintenance.	Prerequisites: A grade of C or better in INT158.	INT159 may be repeated for credit. Students must provide the furniture piece.	Occ	L+L 3.0 5.0 5.0	T

INT160	2020 Fall	Fabrics for Interiors		Study of the properties, design, and performance characteristics of interior fabrics. Psychological and cultural impact of textiles on the built environment. Role of the interior designer in working with textiles. Introduction to regulations and codes within the textile industry.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
INT165	2024 Fall	Space Planning Studio		Study of creative, critical, analytical, and strategic thinking as it relates to human behavior and the built environment. Emphasis on design process, and functional application. Considerations for space utilization including anthropometrics and ergonomics. Development of presentation skills.	A grade of C or better required in all Prerequisites. Prerequisites: INT101, INT122, and ARC141. Prerequisites or Corequisites: INT145 and ARC142.		Occ	L+L 3.0 6.0 6.0	T
INT201	2024 Fall	Color and Design Communication Studio		The application of color theory to professional interior design projects. Emphasis on utilizing leading industry software for the development and delivery of presentations as used in the professional interior design industry.	Prerequisites: A grade of C or better in INT101, INT122, INT145, and INT165.		Occ	L+L 3.0 6.0 6.0	T
INT205	2024 Fall	Custom Design Studio		The development of custom interior design furnishings, millwork, and architectural features. Exposure to the process of manufacturing custom design elements. Emphasis on the visualization of concepts through sketching and the use of digital tools to create shop drawings, renderings, and specifications. Refinement of presentation skills.	Prerequisites: A grade of C or better in (ARC141 or INT131), INT101, INT122, and INT145.		Occ	L+L 3.0 6.0 6.0	T
INT210	2024 Fall	Interior Materials Studio		Exploration of interior finishes, including their properties, performance, maintenance, sustainability, and general characteristics. Emphasis on appropriate material selection and specification. The utilization of digital tools to create specification documents as used in the professional interior design industry. Refinement of presentation skills.	Prerequisites: A grade of C or better in (ARC141 or INT131) and INT122. Corequisites: ARC142 or INT132.		Occ	L+L 3.0 6.0 6.0	T

INT211AA	2021 Fall	Interior Materials		Properties, performance, maintenance, sustainability and general characteristics of interior finishes.	A grade of C or better required in all Prerequisites. Prerequisites: ARC141, or INT140, or permission of Instructor. Prerequisites or Corequisites: INT211AB and [INT222 or [INT240 or (INT240AA and INT240AB)]].		Occ	L+L 1.5 3.0 3.0	T
INT211AB	2021 Fall	Material Specifications		Emphasis on selection, basic estimating, and writing specifications.	A grade of C or better required in all Prerequisites. Prerequisites: ARC141, or INT140, or permission of Instructor. Prerequisites or Corequisites: INT211AA and [INT222 or [INT240 or (INT240AA and INT240AB)]].		Occ	L+L 1.5 3.0 3.0	T
INT212	2024 Fall	Kitchen and Bath Studio		Exploration into the specific requirements associated with kitchen and bath design and their practical application. Emphasis on the design process and functional application utilizing professional interior design digital tools. Refinement of presentation skills.	A grade of C or better required in all Prerequisites. Prerequisites: INT101, INT122, INT145, INT165, and ARC 142. Prerequisites or Corequisites: INT210.		Occ	L+L 3.0 6.0 6.0	T
INT222	2024 Fall	Residential Design Studio		The use of the design process to create design solutions for a residential remodel. Functional and aesthetic analysis of interior components. Includes kitchen and bath design; residential furnishings, fixtures, and equipment (FF&E); and environmental considerations. Advanced application of professional interior design digital tools. Refinement of presentation skills.	A grade of C or better required in all Prerequisites. Prerequisites: INT122, INT145, and INT165. Prerequisites or Corequisites: INT210 and ARC142.		Occ	L+L 3.0 6.0 6.0	T

INT225	2019 Spring	History of Decorative Arts		Survey of historical art, furniture and interiors with an emphasis on decorative arts from various cultures.	Prerequisites: A grade of C or better in INT115 and INT120.		Occ	LEC 3.0 3.0 3.0	S
INT230	2021 Fall	Presentation Techniques		Advanced freehand sketching and perspective drawing skills. Explores a variety of styles and techniques with emphasis on presentation type drawings and portfolio development techniques used by design professionals.	A grade of C or better required in all Prerequisites. Prerequisites: [INT145 or (INT145AA and INT145AB)] and (INT140 or ARC141). Prerequisites or Corequisites: INT122 or ARC142.		Occ	L+L 3.0 6.0 6.0	T
INT235	2011 Fall	Universal Design		The study of innovative, strategic, problem-solving and crucial design principles as it pertains to the constructed surroundings and those using space. Prominence will be placed on Universal Design principles and how they relate to the design process and tasks to be performed within the environment. Emphasis on the creative execution through the application of universal design elements and principles.	Prerequisites: A grade of C or better in INT190 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
INT240AA	2021 Fall	Bath Design		Exploration into the specific requirements associated with bath design. Emphasis on the design process and computer-based tools for interior design.	A grade of C or better required in all Prerequisites. Prerequisites: INT190 and (ARC141 or INT140). Prerequisites or Corequisites: [INT211 or (INT211AA and INT211AB)] and INT240AB.		Occ	L+L 1.5 3.0 3.0	T
INT240AB	2021 Fall	Kitchen Design		Exploration into the specific requirements associated with kitchen design. Emphasis on the design process and computer-based tools for interior design.	A grade of C or better required in all Prerequisites. Prerequisites: INT190 and (ARC141 or INT140). Prerequisites or Corequisites: [INT211		Occ	L+L 1.5 3.0 3.0	T

					or (INT211AA and INT211AB)] and INT240AA.				
INT241	2022 Spring	Advanced Kitchen and Bath Design		Advanced approaches to kitchen and bath design using National Kitchen and Bath Association (NKBA) planning guidelines. Mastery in the development of a design concept, producing construction documents and 3-D model drawings, verbally and visually presenting the solution, and processing necessary documentation needed to follow a kitchen and bath project from inception to completion.	Prerequisites: A grade of C or better in INT240, or (INT240AA and INT240AB), or permission of Program Director.		Occ	L+L 3.0 6.0 6.0	T
INT242	2024 Fall	Interior Design Professional Practices		Examination of marketing, business processes, and ethical issues in the interior design industry. Create materials for use in the profession including a portfolio, resume, and online presence. Exposure to industry professionals and procedures.	Prerequisites: A grade of C or better in INT212.		Occ	L+L 3.0 6.0 6.0	T
INT245	2018 Fall	Color Rendering		Development of color rendering techniques. Emphasis on producing two-dimensional and three-dimensional renderings utilizing various media	AAS Degree in Interior Design or permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
INT250	2020 Fall	Basic Revit	ARC250	Basic skills required to complete architectural drawings with Revit software; simplified overview of the software program and operations gained through completing typical plan, elevation, sectional, and 3D views, using generic walls and related components.	Prerequisites: None. ARC141, or previous AutoCAD/industry experience recommended.	ARC/INT250 may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 6.0 6.0	T
INT251	2020 Fall	Sketchup I: Introduction to Sketchup	ARC265	Provides students with introductory level instruction utilizing Sketchup rendering software for school and workplace applications. Addresses basic drawing/rendering commands, accessing external drawing files, and plotting through the creation of both three-dimensional schematic and rendered interior and exterior building views.	Prerequisites: None. Previous CAD experience recommended but not required.	ARC265/INT251 may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 6.0 6.0	T
INT255	2021 Fall	Advanced Custom Design		Covers advanced custom design for interior designers. Uses creative	Prerequisites: A grade of C or better		Occ	L+L 3.0	T

				problem solving, design theories, and the design process to visualize custom design elements such as interior materials, furnishings, and details, through three-dimensional digital technology and construction processes.	in ARC140, ARC/INT250, ARC265/INT251, (INT145 or (INT145AA and INT145AB)), INT150, INT175, and INT190.			6.0 6.0	
INT260	2020 Fall	Interior Codes and Regulations		Study of interior building codes, regulations, and standards and their impact on the health, safety, and welfare of the public. Emphasis on occupancy classifications, means of egress, fire protection, finish/furniture standards and testing, and Americans with Disabilities Act Accessibility Guidelines (ADAAG). This course is an exploration of codes and regulations as it pertains to the application of interior design projects.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: INT140 or ARC141 or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
INT265	2024 Fall	Building Systems		Overview of technical building systems including structural, mechanical, electrical, plumbing, and other building components, and how they relate to an interior design project. Emphasis on sustainability and the communication between interior designers and other building professionals, including architects, builders, and engineers.	Prerequisites: A grade of C or better in ARC141 or INT131.		Occ	LEC 3.0 3.0 3.0	S
INT266	2018 Fall	Current Topics in Interior Design		Presentation of current topics related to the interior design industry. Emphasis on practical applications of historical, technical, business, social, or creative aspects of the field. Includes demonstration or in-depth description and may involve hands-on experience.	Prerequisites: Permission of Program Director.	INT266 may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
INT267	2021 Summer	Sketchup II: Advanced Rendering Techniques	ARC266	Provides students with advanced instruction utilizing Sketchup, Google Earth, Sandbox and Podium rendering software for school and workplace applications. Creation of photo-realistic rendered three-dimensional interior and exterior building/site views.	Prerequisites: A grade of C or better in ARC265/INT251 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T

INT268	2024 Fall	Lighting Design		Study of the technical and creative approaches to lighting for residential and commercial interior design projects. Advanced application of professional interior design digital tools. Emphasis on environmental considerations, product sourcing, and the development of lighting plans.	Prerequisites: A grade of C or better in INT165.		Occ	L+L 3.0 6.0 6.0	T
INT270	2024 Fall	Commercial Design		The use of the design process to create design solutions for commercial interiors. Functional and aesthetic analysis of interior components. Includes furnishings, fixtures, and equipment (FF&E), building codes, and environmental considerations. Focuses on issues affecting the health, safety, and welfare of the public.	A grade of C or better required in all Prerequisites. Prerequisites: INT122. Prerequisites or Corequisites: INT268.		Occ	L+L 3.0 6.0 6.0	T
INT271AA	2004 Fall	Interior Design Internship		Interior design work experience in the interiors industry. Required to work 80 hours. Supervised and evaluated by a faculty coordinator.	Prerequisites: Permission of Department or Division.	INT271AA may be repeated for a total of four (4) credits with Department Permission.	Occ	LAB 1.0 5.0 0.0	C
INT271AB	2004 Fall	Interior Design Internship		Interior design work experience in the interiors industry. Required to work 160 hours. Supervised and evaluated by a faculty coordinator.	Prerequisites: Permission of Department or Division.	INT271AB may be repeated for a total of four (4) credits with department permission.	Occ	LAB 2.0 10.0 0.0	C
INT271AC	2004 Fall	Interior Design Internship		Interior design work experience in the interiors industry. Required to work 240 hours. Supervised and evaluated by a faculty coordinator	Prerequisites: Permission of Department or Division.		Occ	LAB 3.0 15.0 0.0	C
INT274AA	1996 Spring	Interior Design Study Tour		A tour of the interior design industry outside of the metropolitan Phoenix	Prerequisites: Permission of		Occ	LAB 1.0	H

				area. Includes a variety of experiences and activities to enhance knowledge about this multi-faceted career	Department or Division.			5.0 1.0	
INT274AB	1997 Fall	Interior Design Study Tour		A tour of the interior design industry outside of the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance knowledge about this multi-faceted career	Prerequisites: Permission of Department or Division.		Occ	LAB 2.0 10.0 2.0	F
INT274AC	1997 Fall	Interior Design Study Tour		A tour of the interior design industry outside of the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance knowledge about this multi-faceted career	Prerequisites: Permission of Department or Division.		Occ	LAB 3.0 15.0 3.0	F
INT282AA	2013 Summer I	Service-Learning Experience in Interior Design		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	INT282AA may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 1.0 1.0 0.0	L
INT282AB	2013 Summer I	Service-Learning Experience in Interior Design		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	INT282AB may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 2.0 2.0 0.0	L

INT282AC	2013 Summer I	Service-Learning Experience in Interior Design		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	INT282AC may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 3.0 3.0 0.0	L
INT285	2024 Fall	Interior Design Portfolio		Design, produce, and present a professional portfolio appropriate to the field of Interior Design. Includes content selection, organization, and presentation formatting utilizing professional interior design digital tools.	Prerequisites: A grade of C or better in INT212, or permission of Program Director.		Occ	LAB 1.0 1.5 1.5	T
INT290	2018 Fall	Advanced Commercial Design		Use of design process to create solutions for medium to large multi- story commercial interiors. Focuses on issues affecting the health, safety, and welfare of the public	Prerequisites: A grade of C or better in INT270.		Occ	L+L 3.0 6.0 6.0	T
INT296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with		Occ	LAB 1.0 5.0 0.0	Z

					permission of Instructor.				
INT296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
INT296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
INT296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and	Prerequisites: Completion of at least		Occ	LAB 4.0	Z

				employers to accomplish an outcome related to the career objectives of the students.	twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.			20.0 0.0	
INT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
INT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
INT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an	Prerequisites: Permission of		Occ	LAB 3.0	Z

				atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			3.0 0.0	
IPH101	2018 Fall	Introduction to Public Health		Introduction to Public Health introduces students to the broad discipline of public health and how it influences community and individual health status. Includes sciences of public health, historical context of public health, role of various public health agencies, core functions, methods of measurement and evaluation, major public health issues in the United States, public policy, and factors that contribute to individual and community health.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
IPH105	2023 Fall	Introduction to Community Health Work		Basic concepts of patient navigation including disease prevention and community health, health insurance navigation, as well as accessing and analyzing health information. Training in assisting individuals with limited health literacy to access the maximum array of benefits from community services, clinical care, and health insurance.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
IPH110	2018 Fall	Principles of Health and Behavior Change		Introduction to the social and behavioral science theories used in public health. Provides an overview of health promotion principles and various theories and models developed to change health behavior and promote the health of individuals and societies.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
IPH111	2018 Fall	Public Health Across the Lifespan		Introduction to evidence-based research of trends and developments in health throughout the lifespan, dealing with the prenatal period through advanced age. Training in the individual, social, and environmental	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				factors to determine and address health status and health inequities across the lifespan and in public health interventions such as education, policy, and environmental changes.					
IPH112	2018 Fall	Community-Based Health Education in Health and Illness		Provides the student with a basic understanding of the application of public health principles to community-based health education interventions. Includes an overview of public health, factors impacting health, health education theories and ethical considerations, the community needs assessment process, the program planning process, health communication, interventions at both the individual and population level.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
IPH115	2018 Fall	Introduction to Health Administration and the U.S. Health System		Introduction to the U.S. health care delivery system including knowledge and skills needed to navigate health care within a health care organization.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
IPH201	2023 Fall	Introduction to Epidemiology		Introduction to epidemiology and its role in public health. Training in the application of epidemiologic concepts and methods such as disease causation, terminology, and control principles relating to the spread, prevention, and control of communicable diseases and principles and practices of field investigation.	Prerequisites: A grade of C or better in (MAT206, PSY230 or PSY230WL).		Occ	LEC 3.0 3.0 3.0	S
IPH205	2021 Spring	Chronic Disease Management		Focuses on the prevention and management of chronic disease as a critical priority for health systems around the world. Provides participants with an overview of prevention and management of chronic disease in community settings. Develops practical skills in analyzing and evaluating approaches to chronic disease in a variety of settings. Helps to identify capacities and opportunities for change.	Prerequisites: None.	IPH205 may be repeated for credit.	Occ	LEC 2.0 1.0 1.3	S

IPH220	2018 Fall	Introduction to Mobile Integrated Health Care		Students learn components of patient-centered health care defined specifically for needs of the community. Training in determinants of health, health status indicators, cultural competence, health disparities, and bridging the gap of patient health care needs with social service resources and referrals. Additional topics include legal and ethical issues of mobile care, health care information technology, and insurance and reimbursement programs.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
IPH275	2023 Fall	Community Health Work Practicum		Provides students with hands-on experience in the role of the community health worker in the public health field, including guiding patients through various types of health care situations. 45 hours of workplace engagement per credit.	Prerequisites: Completion of six (6) credits of IPH courses with a grade of C or better, and permission of Department/Division Chair and/or the Program Director.	IPH275 may be repeated for a total of three (3) credit hours.	Occ	LAB 1.0 5.0 0.0	C
IPH280	2021 Spring	Health Education Practicum		Provides students with hands-on experience in the role of the health educator professional in the public health field, including assessing health education needs and developing and delivering health education programs.	Prerequisites: A grade of C or better in [COM270, FON241, (HCR230 or HES210), HTM150, IPH101, IPH110, IPH111, IPH112, and IPH201] or permission of Instructor.		Occ	LAB 3.0 15.0 0.0	C
IPH285	2020 Spring	Health Administration Practicum		Provides students with hands-on experience in the role of the health administrator professional in the public health field, including applying managerial functions within a health care agency.	Prerequisites: A grade of C or better in [(HCR230 or HES210), HSM222, HTM150, IPH101, IPH115, and IPH201] or permission of Instructor.		Occ	LAB 3.0 15.0 0.0	C
IPH290	2021 Spring	Mobile Integrated Health Practicum		Provides students with hands-on experience in the role of the mobile integrated health professional in the public health field, including using evidence-based health care	Prerequisites: A grade of C or better in [COM270, FON241, (HCR230 or HES210), HTM150,		Occ	LAB 3.0 15.0 0.0	C

				interventions and guiding patients through health care payment systems.	IPH101, IPH201, and IPH220] or permission of Instructor.				
IPP198	2018 Fall	Careers in Deaf Studies: Observation		Provides experience through observation to the world of work of a professional interpreter. Observation of professional interpreters in a variety of work settings, including but not limited to professional principles, standards and ethics applied to everyday interpreting settings.	Prerequisites: A grade of C or better in IPP205 or permission of Department or Division. Completion of prerequisites within the last three years is required.	IPP198 may be repeated for a total of three (3) credits.	Occ	L+L 1.0 1.0 1.0	T
IPP205	2020 Fall	Introduction to Interpreting		Theories of role, function, responsibilities, and communication strategies of the American Sign Language (ASL)/English interpreter. Covers application and implementation of the National Registry of Interpreters for the Deaf (R.I.D.) and National Association of the Deaf (N.A.D.) Code of Professional Conduct. Additional topics addressed include interpreters functioning as advocates, moral systems vs. ethical systems, standard business practices, and perceptions of consumers.	Prerequisites: A grade of C or better in ASL201 or permission of Department or Division. Completion of prerequisites within the last three years is required.	IPP205 may be repeated for a total of nine (9) credit hours.	Occ	LEC 3.0 3.0 3.0	S
IPP207	2020 Fall	Ethics and Decision Making for ASL/English Interpreters		Guided exploration of factors that impact decisions within interpreted contexts, including strategies, theory, and models for decision making. Application and implementation of the National Association of the Deaf (N.A.D.)-Registry of Interpreters for the Deaf (R.I.D.) Code of Professional Conduct.	A grade of C or better required in all Prerequisites. Prerequisites: ASL201 or permission of Department or Division. Prerequisites or Corequisites: IPP205 or permission of Program Director. Completion of prerequisites within the last three years is required.	IPP207 may be repeated for a total of eight (8) credit hours.	Occ	LEC 2.0 2.0 2.0	S
IPP208	2020 Fall	Advanced American Sign		Advanced study of terminology and discourse in various fields such as	Prerequisites: A grade of B or better in		Occ	LEC 4.0	S

		Language Discourse		medical, judicial, technological, as well as financial and business transactions. Use of specialized terminology/concepts in dialogues, discussions, and narratives. Advanced use of classifiers, structuring of space, and grammatical features of American Sign Language (ASL)	ASL203. Completion of prerequisites within the last three years is required.			4.0 4.0	
IPP209	2020 Fall	Introduction to Educational Interpreting		Principles, vocabulary, and techniques used specifically in educational (K-12) interpreting and transliterating. Introduces students to the scope of work and issues in primary, secondary, and vocational educational settings. Covers sign systems, technical signs, and appropriate methods of incorporating new signs.	Prerequisites: A grade of B or better in IPP205 or permission of Department or Division. ASL200 recommended.	IPP209 may be repeated for a total of eight (8) credit hours. Repeats 4.0 8.0	Occ	LEC 2.0 2.0 2.0	S
IPP210	2020 Fall	Research in Interpreting		Overview of theory and methodological practice in Interpretation with particular attention to research methods. Emphasis on development of critical thinking skills through active participation in the research process.	Prerequisites: A grade of C or better in COM225, CRE101, ENG102, and IPP207.	IPP210 may be repeated for a total of nine (9) credit hours. Repeats 3.0 9.0	Occ	LEC 3.0 3.0 3.0	S
IPP211	2018 Fall	Preparation for Interpreting		Development of pre-interpreting skills, cognitive processing and analysis of interpreting process theories. Pre-interpreting skills include memory, cloze, identifying meaning, paraphrasing and summarization. Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of monologues.	Prerequisites: Acceptance into the Interpreter Preparation Program or permission of Department or Division.		Occ	L+L 1.0 2.0 2.0	T
IPP215	2018 Fall	ASL to English Consecutive Interpreting		Sequential development of consecutive interpreting skills from American Sign Language (ASL) to English. Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of naturally occurring monologues, guidance for discovering	Prerequisites: (Acceptance into the Interpreter Preparation Program or permission of Department or Division) and a grade		Occ	L+L 2.0 3.0 3.0	T

				personal filters, practice of skills, techniques for self and peer evaluations, and application of theoretical models.	of B or better in IPP211.				
IPP216	2022 Spring	ASL to English Simultaneous Interpreting		Sequential development of simultaneous interpreting skills from American Sign Language (ASL) to English. Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of naturally occurring monologues from different genres with increasing length and difficulty, practice of skills, techniques for self and peer evaluations, and application of theoretical models.	Prerequisites: A grade of B or better in IPP215 and permission of Program Director.	IPP216 must be completed with a grade of B or better to graduate from the Associate in Applied Science (AAS) and Certificate of Completion (CCL) in Interpreter Preparation programs. Students must acknowledge the Interpreter Preparation Exit Requirements prior to enrollment in IPP216 and should consult with an advisor for guidance.	Occ	L+L 3.0 4.0 4.0	T
IPP218	2018 Fall	English to ASL Consecutive Interpreting		Sequential development of consecutive interpreting skills from English to American Sign Language	Prerequisites: (Acceptance into the Interpreter		Occ	L+L 2.0	T

				(ASL). Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of naturally occurring monologues, guidance for discovering personal filters, practice of skills, techniques for self and peer evaluations, and application of theoretical models.	Preparation Program or permission of Department or Division) and a grade of B or better in IPP211. IPP215 suggested but not required.			3.0 3.0	
IPP219	2022 Spring	English to ASL Simultaneous Interpreting		Sequential development of simultaneous interpreting skills from English to American Sign Language (ASL). Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of naturally occurring monologues from differing genres with increasing length and difficulty, practice of skills, techniques for self and peer evaluations, and application of theoretical models.	Prerequisites: A grade of B or better in IPP218, and permission of Program Director. Completion of prerequisites within the last three years is required.	IPP219 must be completed with a grade of B or better to graduate from the Associate in Applied Science (AAS) and Certificate of Completion (CCL) in Interpreter Preparation programs. Students must acknowledge the Interpreter Preparation Exit Requirements prior to enrollment in IPP219 and should consult with an	Occ	L+L 3.0 4.0 4.0	T

						advisor for guidance.			
IPP220	2020 Fall	Interactive Interpreting I		Sequential development of interactive interpreting skills from English to American Sign Language (ASL) and from ASL to English. Perform source language analysis, apply cognitive processing techniques, and produce target language equivalents. Analysis of texts and contexts of naturally occurring dialogues, practice of skills, techniques for self and peer evaluations, and application of theoretical models.	Prerequisites: A grade of B or better in IPP211 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Occ	L+L 3.0 4.0 4.0	T
IPP221	2022 Spring	Interactive Interpreting II		Continued development of interactive interpreting skills from English to American Sign Language (ASL) and from ASL to English. Perform source language analysis, apply cognitive processing techniques, and produce target language equivalents. Analysis of texts and contexts of naturally occurring dialogues, practice of skills, techniques for self and peer evaluations, and application of theoretical models.	Prerequisites: A grade of B or better in IPP220, and permission of Program Director. Completion of prerequisites within the last three years is required.	IPP221 must be completed with a grade of B or better to graduate from the Associate in Applied Science (AAS) and Certificate of Completion (CCL) in Interpreter Preparation programs. Students must acknowledge the Interpreter Preparation Exit Requirements prior to enrollment	Occ	L+L 3.0 4.0 4.0	T

						in IPP221 and should consult with an advisor for guidance.			
IPP229	2013 Spring	Interpreter Preparation Internship Seminar		Classroom portion of the Interpreter Preparation Program internship. Emphasizes the blend of job-related activities including career exploration, employment application procedures, interpersonal skills, and on-the-job problems.	Prerequisites: Acceptance into the Interpreter Preparation Program and/or program director approval. Corequisites: IPP230AA or IPP230AB.	IPP229 may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 0.0	C
IPP230AA	2022 Spring	Interpreter Preparation Program Internship		Laboratory portion of the Interpreter Preparation Program seminar. Eighty (80) clock hours of work required. Practical experience in settings such as educational, rehabilitation, community service centers, and agencies serving children, adolescents, and/or adults who are deaf or hard of hearing. Designed to provide students with the opportunity to synthesize practical and academic experiences gained during the in-classroom portion of the program. Site, supervision, and plan of activity mutually agreed upon by the student and instructor. Capstone experience for Associate in Applied Science (AAS) degree students.	Prerequisites: Acceptance into the Interpreter Preparation Program and Program Director approval. Corequisites: IPP229.	IPP230AA must be completed with a grade of B or better to graduate from the Associate in Applied Science (AAS) and Certificate of Completion (CCL) in Interpreter Preparation programs. IPP230AA may be repeated for a total of four (4) credit hours. Students must	Occ	LAB 1.0 5.0 0.0	C

						acknowled ge the Interpreter Preparatio n Exit Requirem ents prior to enrollment in IPP230AA and should consult with an advisor for guidance.			
IPP230AB	2022 Spring	Interpreter Preparation Program Internship		Laboratory portion of the Interpreter Preparation Program Seminar. One hundred sixty (160) clock hours of work required. Practical experience in settings such as educational, rehabilitation, community service centers, and agencies serving children, adolescents and/or adults who are deaf or hard of hearing. Designed to provide students with the opportunity to synthesize practical and academic experiences gained during the in-classroom portion of the program. Site, supervision, and plan of activity mutually agreed upon by the student and instructor. Capstone experience for Associate in Applied Science (AAS) degree students.	Prerequisites: Acceptance into the Interpreter Preparation Program and Program Director approval. Corequisites: IPP229.	IPP230AB must be completed with a grade of B or better to graduate from the Associate in Applied Science (AAS) and Certificate of Completion (CCL) in Interpreter Preparation programs. IPP230AB may be repeated for a total of four (4) credit hours. Students	Occ	LAB 2.0 10.0 0.0	C

						must acknowledge the Interpreter Preparation Exit Requirements prior to enrollment in IPP230AB and should consult with an advisor for guidance.			
IPP242	2022 Spring	Educational Interpreting Skills		Skill development and application of techniques used specifically in educational (K-12) interpreting and transliterating. Covers sign systems, technical signs, and methods of non-standard sign incorporation.	Prerequisites: A grade of B or better in (IPP209 and IPP211) and permission of Program Director.	IPP242 must be completed with a grade of B or better to graduate from the Associate in Applied Science (AAS) and Certificate of Completion (CCL) in Interpreter Preparation programs. IPP242 may be repeated for a total of four (4) credit hours.	Occ	L+L 1.0 2.0 2.0	T

						Students must acknowledge the Interpreter Preparation Exit Requirements prior to enrollment in IPP242 and should consult with an advisor for guidance.			
IPP250AA	2018 Fall	Special Topics: Interpreter Preparation		Explores a special topic related to interpreter preparation. Topics vary and include concepts relevant to those pursuing career in (American Sign Language) ASL/English Interpreting and Transliterating	Acceptance into the Interpreter Preparation Program or permission of Program Director.	IPP250AA may be repeated for credit	Occ	L+L 1.0 1.0 1.0	T
IPP250AB	2018 Fall	Special Topics: Interpreter Preparation		Explores a special topic related to interpreter preparation. Topics vary and include concepts relevant to those pursuing career in (American Sign Language) ASL/English Interpreting and Transliterating	Acceptance into the Interpreter Preparation Program or permission of Program Director.	IPP250AB may be repeated for credit	Occ	L+L 2.0 2.0 2.0	T
IPP250AC	2018 Fall	Special Topics: Interpreter Preparation		Explores a special topic related to interpreter preparation. Topics vary and include concepts relevant to those pursuing career in (American Sign Language) ASL/English Interpreting and Transliterating	Acceptance into the Interpreter Preparation Program or permission of Program Director.	IPP250AC may be repeated for credit	Occ	L+L 3.0 3.0 3.0	T
IPP250BA	2018 Fall	Special Topics: Interpreter Preparation		Explores a special topic related to interpreter preparation. Topics vary and include concepts relevant to those pursuing a career in American Sign Language (ASL)/English Interpreting and Transliterating.	Prerequisites: Acceptance into the Interpreter Preparation Program or permission of Program Director.	IPP250BA may be repeated for credit.	Occ	L+L 0.5 0.5 0.5	T
IRW101	2013 Spring	Ironworking: Orientation		Overview of the Ironworker labor history, green construction, work place issues and sexual harassment. Basic safety, measuring, tools and	Prerequisites: Registered apprentice status or permission of the		Occ	LEC 3.0 3.0 3.0	S

				rigging. Types of ironwork and welding.	Apprenticeship Coordinator.				
IRW102	2018 Fall	Safety and Health for Ironworking		Safety, health, and accident prevention in the construction work environment related to ironworking. Proper erection, use, and dismantling of scaffolds. Selection, inspection, and use of fall protection including safe operation of forklifts and First Aid/Automated External Defibrillator/Cardiopulmonary Resuscitation (First Aid/AED/CPR).	Prerequisites: Registered Apprentice status with the Ironworkers Apprenticeship and Training Program or permission of Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
IRW103	2022 Fall	Science, Rigging and Hoisting		Science and mechanics related to the plumbing trade. Properties of water and matter, hydraulic and pneumatic mechanics, metals and alloys. Corrosion. Rigging procedures including the use of fiber and wire rope for knots, hitches and slings. Use of hoisting equipment, and cranes. Hoisting with helicopters. Safe and proper loading and unloading of hoisting equipment. Intermediate fitting projects and mathematical applications.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 6.0 6.0 6.0	S
IRW104	2018 Fall	Ironworking: Blueprint Reading		Basic elements of construction drawings including characteristics of various types of blueprints for ironworkers. Drawing interpretation, general abbreviations, acronyms, and basic symbols recognition and drawing classifications.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.5 1.5 1.5	T
IRW105	2007 Summer I	Ironworking III: History		Historical factors, events and activities leading to the founding of the International Ironworkers Labor Union. Circumstances and events between 1906-1912 related to labor unionization. Conspiracy trials involving unionization of Ironworkers, Carpenters, Machinists and the Building Trades. World War II and postwar struggles related to the labor movement. Factors of labor movement growth. The Occupational Health and Safety Administration (OSHA), nuclear power, foreign	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				production of steel, and political influences relating to unionization in the 21st Century					
IRW112	2018 Fall	Lead Hazard Training		Background of lead and its uses including health effects caused by lead exposure. Occupational Safety and Health Administration (OSHA) regulations that apply to lead exposure, hazard communication and workers legal rights. Personal protective equipment (PPE) and work methods on steel structures. General site safety, work practices and confined space entry.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
IRW120	2009 Summer I	Structural Steel Erection I		History and manufacture of iron and steel. Tools, equipment, materials, and trade procedures. Safety precautions. ;Raising gang members, erecting columns, beams, girders, trusses, nets, and railings. Fastening components.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 4.0 4.0	A
IRW121	2009 Summer I	Structural Steel Erection II		Tools, equipment and trade procedures. Advanced structural steel welding and burning. Mobile and tower cranes. Bolted, riveted and pinned connections. Bar joists, and bridging. Detailing stairways, ladders, channel bucks and grating.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 4.0 4.0	A
IRW122	2018 Fall	Cranes		Cause of fatalities. Load charts, wire rope, capacity, hook loads. Ground pressure, minimum and maximum clearances, list and trim. Floating cranes.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
IRW130	2013 Spring	Reinforcing: Rebar		Reinforced concrete; manufacture of reinforcing steel; tools, ties, and safety; types of reinforcing used in building construction; bridge construction; purpose and location of reinforcing steel in concrete; fabricating, unloading, handling, and storing, reinforcing steel, reading engineering and placing drawings.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 4.0 4.0	A
IRW131	2013 Spring	Reinforcing: Post Tensioning Monostrand		Principles, theory, and terminology of post-tensioning. Stressing equipment, hand tools, document control.	Prerequisites: Registered apprentice status or		Occ	L+L 3.0	A

				Installation of monostrand post-tensioned floor systems, tendons. Troubleshooting, encapsulated systems, barrier cables, slabs-on-ground, and field placement drawings.	permission of the Apprenticeship Coordinator.			4.0 4.0	
IRW142	2018 Fall	Conveyors and Industrial Maintenance		History of conveyors, safety and tools. Overview and installation of overhead and floor conveyor systems. Bulk handling, conveyor drawings and maintenance procedures.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
IRW150	2009 Summer I	Rigging I		Rigging history, principles and blocks. Rigging safety. Fabric and wire rope, steal chain, sockets, slings, rigging hardware. Slicing techniques. Reeving systems and personnel requirements.	Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 4.0 4.0	A
IRW151	2010 Spring	Rigging II		Safety rules and information for operation of rigging equipment; operation and assembly of cranes; examples of rigging jobs; use of helicopters in construction; miscellaneous rigging equipment; skids and rollers; access structures.	Prerequisites: A grade of C or better in IRW150 and apprentice status, or permission of the Apprenticeship Coordinator.		Occ	LEC 3.0 3.0 3.0	S
IRW160	2013 Spring	Architectural Ironworking I		Curtain, window wall systems, skylights, storefronts, entranceways, cable walls, sealants, glazing, rails, doors, anchors and fasteners, stairs and ladders, catwalks, grating, fence and guardrails, detention systems, testing, installation and erection.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 4.0 4.0	A
IRW161	2013 Spring	Architectural Ironworking II		Introduction to layout, basic tools, mathematics, automatic levels, lasers, theodolites and transits including total station.	Prerequisites: A grade of C or better in IRW160 and registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 4.0 4.0	A
IRW175	2018 Fall	Precast Concrete, Metal Buildings, and Scaffolding		Preconstruction planning including loading, method of transportation, timing, tolerances, safety, and quality control. Handling, erection and storage including hazards awareness. Use of cranes, hoists, and other specialized equipment. Pre-engineered metal building systems,	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T

				site evaluation and preparation. Framing systems, insulation, walls, metal roofing, repairs and renovations. Basic components of scaffolding, loading, erecting and dismantling of scaffold systems.					
IRW296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
IRW296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with		Occ	LAB 2.0 10.0 0.0	Z

					permission of Instructor.				
IRW296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
IRW296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
IRW298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual	Prerequisites: Permission of		Occ	LAB 1.0	Z

				student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			1.0 0.0	
IRW298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
IRW298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
ISP105	2020 Fall 1	Computer Information Systems		Overview of computer technology, concepts, terminology, and the role of computers in business and society. Discussion of social and ethical issues related to computers. Use of word processing, spreadsheet, database, and presentation software. Includes uses of application software and the internet for efficient and effective problem solving. Exploration of relevant emerging technologies.	Prerequisites: None.		CLK	52	

ISP108B	2019 Fall 1	Keyboarding II		This keyboarding skills course teaches students to use the computer keyboard to enter letters, numbers, and symbols. If students are already experienced typists, they will learn to type faster and more accurately (25 WPM @ 98% accuracy).	Prerequisites: None.		CLK	36	
ISP116	2021 Fall	Computer Foundations		Students learn computer concepts, how to navigate an operating system, control programs, manage files locally and in the Cloud, and search the internet. Students will establish email habits necessary to accomplish workplace success. In addition, students will learn all the necessary applications needed for student success.	Prerequisites: None.		CLK	24	
ITA101	2013 Fall	Elementary Italian I		Introduction to basic grammar, pronunciation, and vocabulary of Italian. Development of speaking, listening, reading, and writing skills. Study of the Italian culture	Prerequisites: None.	Course Attribute(s): Arizona Shared Unique Number SUN#: ITA 1101 General Education Designation: Global Awareness - [G]	Acad	LEC 4.0 4.0 4.0	S
ITA101AA	2018 Fall	Elementary Italian I		Basic grammar, pronunciation and vocabulary of the Italian language. Includes the study of Italian culture. Practice of listening, speaking, reading and writing skills	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G]	Acad	L+L 4.0 5.0 5.0	T
ITA102	2014 Fall	Elementary Italian II		Continued development of speaking, listening, reading, and writing skills in Italian. Study of Italian culture.	Prerequisites: A grade of C or better in ITA101 or ITA101AA or permission of Department or Division. Completion	Course Attribute(s): Arizona Shared Unique Number SUN#:	Acad	LEC 4.0 4.0 4.0	S

					of prerequisites within the last three years is required.	ITA 1102 General Education Designation: Global Awareness - [G]			
ITA102AA	2018 Fall	Elementary Italian II		Continued study of grammar and vocabulary along with the study of Italian culture. Emphasis on speaking, reading and writing skills.	Prerequisites: A grade of C or better in ITA101 or ITA101AA or permission of Department or Division. Completion of prerequisites within the last three years is required.	General Education Designation: Global Awareness - [G]	Acad	L+L 4.0 5.0 5.0	T
ITA115	1994 Fall	Beginning Italian Conversation I		Conversational Italian. Basic sentence structure, pronunciation and vocabulary necessary to develop speaking ability in Italian. Designed for students seeking speaking and listening abilities with little emphasis on grammar	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ITA116	2014 Fall	Beginning Italian Conversation II		Continued development of speaking and listening skills for effective communication in Italian.	Prerequisites: A grade of C or better in ITA115 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
ITA201	2014 Fall	Intermediate Italian I		Review of essential grammar of the Italian language and study of the Italian Culture. Continued practice and development of reading, writing, and speaking skills.	Prerequisites: A grade of C or better in ITA102 or ITA102AA or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Global Awareness - [G] Arizona Shared Unique Number	Acad	LEC 4.0 4.0 4.0	S

						SUN#: ITA 2201			
ITA202	2014 Fall	Intermediate Italian II		Continued development of Italian language skills and continued study of the Italian culture.	Prerequisites: A grade of C or better in ITA201 or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN#: ITA 2202	Acad	LEC 4.0 4.0 4.0	S
ITA225	2014 Fall	Intermediate Italian Conversation I		Continued development of skills in conversational Italian for effective communication. A review of grammar and development of vocabulary. Intensified study of Italian life and culture.	Prerequisites: A grade of C or better in ITA102 or ITA102AA or ITA116 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
ITA226	2014 Fall	Intermediate Italian Conversation II		Continued development of skills in conversational Italian for effective communication. A review of grammar including the extensive use of grammatical concepts. Continued development of vocabulary. Intensified study of Italian life and culture.	Prerequisites: A grade of C or better in ITA201 or ITA225 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
ITA265	2014 Fall	Advanced Italian I		In-depth exploration of selected themes related to Italian culture. Involves reading selections from Italian literature, writing reports, and discussion in Italian. Emphasis on enhancing reading, writing and speaking skills.	Prerequisites: A grade of C or better in ITA202 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
ITA296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and	Prerequisites: Completion of at least		Acad	LAB 1.0	Z

				employers to accomplish an outcome related to the career objectives of the students.	twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.			5.0 0.0	
ITA296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z
ITA296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain		Acad	LAB 3.0 15.0 0.0	Z

					a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
ITA296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z
ITA298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z

				combined to maximize student development.					
ITA298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
ITA298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
ITD200	2023 Fall	The Physical Child: Birth to Age Three		Examines the physical aspects of child growth and development in the first three years of life in the context of contemporary communities. Includes nutrition and feeding, health and safety, motor skills and exercise, neurological development, and identification of developmental delay.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ITD210	2023 Fall	Early Attachments, Relationships, and Families: Birth to Age Three		Explores the attachment process and relationships within families. Considers contemporary social contexts where children develop a concept of self, self-regulation, and interaction skills with children and adults. Examines social-emotional development, societal stresses, and supportive professional roles and responsibilities.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

ITD220	2023 Fall	Cognition and Communication: Birth to Age Three		Examines the cognitive development and language acquisition of infants and toddlers. Considers the role of people and daily environments on development. Also covers disabilities and developmental delays as well as major theories and research in the field.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
ITH150	2009 Spring	Survey of Contemporary Italy		An overview of modern Italian literary and artistic life from World War II to present; covers Italian cultural life and institutions, including political, social, and economic structures, and a comparison to American culture.	Prerequisites: None.	ITH150 is taught in English.	Acad	LEC 3.0 3.0 3.0	S
ITS100	2019 Summer	Information Security Awareness		Computer and network security topics, including network communication. Includes security policy, implementation of basic security measures, the importance of backups and the value of protecting intellectual property. Real-life examples and practical projects to reinforce the need for computer security.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
ITS110	2020 Fall	Information Security Fundamentals		Fundamental concepts of information technology security. Topics include authentication methods, access control, cryptography, Public Key Infrastructure (PKI), network attack and defense methods, hardening of operating systems and network devices, securing remote access and wireless technologies and securing infrastructures and topologies. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and Microsoft (MS) Windows and Linux Administration.	Prerequisites: A grade of C or better in CIS126DL, or CIS126RH, or permission of Program Director. Corequisites: BPC270 or MST150++.		Occ	L+L 3.0 4.0 4.0	T
ITS120	2021 Spring	Legal, Ethical and Regulatory Issues		Exploration of legal and ethical issues unique to information security. Analysis of professional ethical codes and their application to information	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				security practitioners. Federal and state laws as they relate to information security.					
ITS130	2018 Fall	Operating System Security		In-depth examination of operating system security including Transmission Control Protocol/ Data Encryption Standard (DES), Triple Data Encryption Standard (3DES), Advanced Encryption Standard (AES), Pretty Good Privacy (PGP), and other encryption technologies (TCP/IP), Internet Protocol Security (IPSec) and Cisco Internetwork Operating System (IOS), Microsoft Windows, Linux and Mac OSX Security. Procedures to defend networks against attacks and recovery from network disasters. Web server security. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and MS Windows and Linux Administration	Prerequisites: A grade of C or better in ITS110 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
ITS140	2018 Fall	Network Security		Examination of techniques used to defend network security. Design and implementation of devices including firewalls and Intrusion Detection Systems (IDSs) and Virtual Private Networks (VPNs). Risk analysis and security policies methodologies. Emphasis on hands-on labs in both the Windows and Linux environments. Builds on thorough understanding of Transmission Control Protocol/Internet Protocol (TCP/IP) and security concepts and MS Windows and Linux Administration	Prerequisites: A grade of C or better in (ITS110 and ITS130) or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
ITS240	2024 Fall	Ethical Hacking and Network Defense		Preparation for the EC-Council Certified Ethical Hacking examination. In-depth exploration of how to effectively protect computer networks from risks ranging from malicious infiltration to cyber-warfare. Includes	Prerequisites: A grade of C or better in ITS110, or CNT205, or CIS270, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T

				examination of ethical hacking, relevant tools and methodologies, and its importance to network security. Resources to identify new computer network vulnerabilities and counter security strategies will be discussed as well as an overview of relevant computer crime laws and penalties.					
ITS291	2018 Fall	Computer Forensics Foundations		Development of foundational computer forensic skills. Introduction to preserving, identifying, extracting, interpreting, and documenting computer data as part of a forensically sound analysis. Examination of the physical and logical structure of hard drives. Study of the logical structure of Windows-based file systems and common applications. Introduction to the logical structure of Unix/Linux-based file systems and common applications of commercial forensic tools	Prerequisites: A grade of C or better in BPC170 and ITS110 or permission of Instructor.		Occ	L+L 4.0 5.0 5.0	T
ITS292	2018 Fall	Advanced Computer Forensics		Advanced computer forensics analysis techniques with commercial tools. Introduction to open-source forensic tools. Emphasis on data recovery from complex applications and media types. Study of the logical structure of Unix/Linux-based file systems. Advanced search techniques. Analysis of unallocated space, compound files, and NTFS artifacts	Prerequisites: A grade of C or better in ITS291 or permission of Instructor.		Occ	L+L 4.0 5.0 5.0	T
ITS298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

JPH245	2023 Summer	Traditional and Modern Japanese Culture		Survey of traditional and modern Japanese culture in context. Intellectual, spiritual, and artistic traditions of Japan will be examined with an eye on their popular-culture manifestations. The course, conducted in English, will consist of lectures, discussions, as well as oral and written reports.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
JPN100	2012 Summer II	Introduction to Japanese		Brief introduction to the writing and speaking of Japanese. Emphasis on Japanese syllabic writing systems and foundational vocabulary.	Prerequisites: None.	JPN100 may be repeated for a total of four (4) credit hours.	Acad	LEC 1.0 1.0 1.0	S
JPN101	2018 Fall	Elementary Japanese I		Basic grammar, pronunciation, and vocabulary of Japanese. Study of Japanese culture. Development of speaking, listening, reading and writing skills	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN#: JPN 1101	Acad	L+L 5.0 6.0 6.0	T
JPN102	2018 Fall	Elementary Japanese II		Continued study of basic grammar, pronunciation and vocabulary of Japanese. Study of the Japanese culture. Intensive practice in oral communication and development of reading and writing skills.	Prerequisites: A grade of C or better in JPN101 or permission of Department or Division. Completion of prerequisites within	Course Attribute(s): General Education Designation: Global Awareness - [G]	Acad	L+L 5.0 6.0 6.0	T

					the last three years is required.	Arizona Shared Unique Number SUN#: JPN 1102			
JPN115	1991 Fall	Beginning Japanese Conversation I		Conversational Japanese. Basic sentence structure, pronunciation, and vocabulary necessary to develop speaking ability in Japanese. Designed for students seeking speaking and listening abilities, with little emphasis on grammar, reading, or writing	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
JPN116	2014 Fall	Beginning Japanese Conversation II		Continuation of conversational Japanese for survival in everyday business and social situations. Expansion of vocabulary and sentence structure through aural/oral practice. Practice in reading and writing Kana.	Prerequisites: A grade of C or better in JPN115. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
JPN201	2018 Fall	Intermediate Japanese I		Expansion of sentence structures through oral/aural practice. Increased emphasis on reading and writing in Japanese and study of Japanese culture.	Prerequisites: A grade of C or better in JPN102 or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN#: JPN 2201	Acad	L+L 5.0 6.0 6.0	T
JPN202	2018 Fall	Intermediate Japanese II		Extensive review of Japanese grammar; development of vocabulary and idiomatic expressions through reading and writing. Continued practice of oral communication skills and study of Japanese culture.	Prerequisites: A grade of C or better in JPN201 or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Global Awareness - [G] Arizona Shared Unique	Acad	L+L 5.0 6.0 6.0	T

						Number SUN#: JPN 2202			
JPN296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
JPN296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z

JPN296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
JPN296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z
JPN298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z

				and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
JPN298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
JPN298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
JRN101	2022 Fall	Grammar and Style for Journalists		Focus on the fundamentals and application of grammar, punctuation, spelling, style and structure necessary in professional writing fields, including media writing.	Prerequisites: A grade of C or better in ENG091 or eligibility for ENG101 as indicated by appropriate English placement.	JRN101 may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 2.0 2.0	T
JRN105	2022 Fall	Introduction to Journalism		Survey of the field of journalism including what journalists do, their role in society, ethical practices, history, current trends, and the future of the profession. Overview of mass communication media, including	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				newspapers, magazines, radio, television, and the Internet.					
JRN125	2018 Fall	Photo Editing		Basic techniques of photo composition and editing for media reproduction. Teach how to crop and size photographs. Use of photo editing and design software in paginating a newspaper page on the computer. The effect and impact of color vs. black and white photographs. Basic techniques of photo essay, photo page and photo story and/or multimedia news products and the impact of photos on typography.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
JRN133	2018 Summer	Development of Small Publications		Design, plan and write newsletters, brochures, and advertisements. Desktop computer production and paste-up techniques.	Prerequisites: None. Computer experience and BPC138AA suggested but not required.		Occ	LEC 3.0 3.0 3.0	S
JRN201	2020 Fall	News Writing		Writing and producing news for the media. Associated Press (AP) editing style, writing skills, and organizational structure for news.	Prerequisites: A grade of C or better in ENG101 or ENG107.		Occ	LEC 3.0 3.0 3.0	S
JRN205	2022 Fall	Copyediting		Focus on copy editing skills and techniques needed in professional communication industries. Specifically, the basics of grammar of style, interaction of word and image, the process of aggregation and curation, and an introduction to ethics and industry standards are covered. Writing for clarity, completeness, and conciseness is emphasized.	Prerequisites: A grade of C or better in ENG101 or permission of Instructor. JRN201 recommended for Journalism students.		Occ	L+L 3.0 3.0 3.0	T
JRN208	2022 Fall	Media Law		Basic legal concepts for print, broadcast, online, and photojournalism including constitutional legal protections and the Freedom of Information Act (FOIA). Focus on access to courts, public records, public meetings, subpoenas, shield laws, prior restraint, libel, defamation, privacy, source confidentiality, intellectual property, obscenity, and Federal	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				Communications Commission (FCC) regulations.					
JRN210	2022 Fall	News and Media Production		Hands-on experience working in a college newsroom developing content as reporters, photographers, editors, and other roles on the student news team. Roles and responsibilities vary depending on student goals.	Prerequisites: A grade of C or better in JRN201 or [(ENG101 or ENG107) and permission of Program Director or Instructor].	JRN210 may be repeated for a total of nine (9) credit hours.	Occ	L+L 3.0 5.0 5.0	T
JRN212	2022 Fall	Writing for Broadcasts		Broadcast writing techniques emphasizing grammar, style and structure for various communication platforms. Focus on media reporting including writing scripts, interviewing skills, live broadcasting techniques, production overview and journalistic ethics.	Prerequisites: A grade of C or better in ENG101 and (JRN201 or permission of Instructor).		Occ	L+L 3.0 5.0 5.0	T
JRN213	2022 Fall	Writing for Online		Focus on writing content applying fundamentals of style, grammar, and structure for media online.	Prerequisites: None. JRN201 recommended for Journalism students.		Occ	LEC 3.0 3.0 3.0	S
JRN216	2022 Fall	Current Topics in Media Practice		Theory, training and experience in a specific area of journalism, with a focus on specialized types of journalism and cutting-edge and innovative practices.	Prerequisites: A grade of C or better in JRN201. JRN215 recommended but not required.	JRN216 may be repeated with different topics for a total of nine (9) credit hours. Speak to a Program Director for details.	Occ	LAB 1.0 1.0 0.0	P
JRN225	2018 Fall	Photojournalism		Reporting the news as a photojournalist, with emphasis on the development and creation of news photographs. Experience in shooting, editing and transmitting digital photos using professional photo editing and design software.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
JRN226	2022 Fall	Introduction to Multimedia Journalism		Overview to multimedia journalism including video and audio for news websites and TV news, as well as	Prerequisites: A grade of C or better in JRN201.		Occ	L+L 3.0	T

				other multimedia platforms. Focus on conceptualizing story ideas, identifying and interviewing sources, and producing stories using multimedia. Introduction to current technologies for recording audio and video. Laws and ethics as applicable to multimedia journalism will also be explored.				3.0 3.0	
JRN231	2018 Fall	Sports Writing		Writing sports stories for the print media. Composing at the computer keyboard. Associated press editing style, writing skills, and organizational structure for sports news.	Prerequisites: A grade of C or better in JRN201 or permission of Instructor.		Occ	L+L 3.0 3.0 3.0	T
JRN232	2022 Fall	Community Reporting		Focus on the knowledge and skills needed to conduct reporting that is industry ready. Cover a community beat and write and use multimedia skills to publish the stories.	Prerequisites: A grade of C or better in JRN201.		Occ	LAB 3.0 3.0 0.0	P
JRN234	2018 Fall	Feature Writing		Emphasis on crafting stylized human interest stories for publications. Includes research, interviewing, writing techniques, editing and professional concerns. Includes best practices for writing features for traditional and digital media.	Prerequisites: A grade of C or better in ENG101 or ENG107, or permission of Instructor.		Occ	L+L 3.0 3.0 3.0	T
JRN236AA	2022 Fall	Public Relations Internship		Public relations work experience.	Prerequisites: Permission of Program Director.	JRN236A A may be repeated for a total of six (6) credit hours.	Occ	LAB 1.0 1.0 0.0	P
JRN236AB	2022 Fall	Public Relations Internship		Public relations work experience.	Prerequisites: Permission of Program Director.	JRN236A B may be repeated for a total of six (6) credit hours.	Occ	LAB 2.0 2.0 0.0	P
JRN236AC	2022 Fall	Public Relations Internship		Public relations work experience.	Prerequisites: Permission of Program Director.	JRN236A C may be repeated for a total of six (6) credit hours.	Occ	LAB 3.0 3.0 0.0	P

						credit hours.			
JRN238	2018 Fall	Business Journalism		Focus on reporting for and about business. Explores the nature and functions of business and the roles of business journalists. Examines the various media and situations within which business journalism operates.	Prerequisites: A grade of C or better in JRN201 and GBS151.		Occ	L+L 3.0 3.0 3.0	T
JRN240AA	2022 Fall	Journalism Internship		Journalism work experience with a newspaper or other news organization. 80 hours of designated work per credit. Maximum of 6 credits allowed	Prerequisites: A grade of C or better in JRN210.		Occ	L+L 1.0 1.0 0.0	P
JRN240AB	2022 Fall	Journalism Internship		Journalism work experience with a newspaper or other news organization. 80 hours of designated work per credit. Maximum of 6 credits allowed.	Prerequisites: A grade of C or better in JRN210.		Occ	L+L 2.0 2.0 0.0	P
JRN240AC	2022 Fall	Journalism Internship		Journalism work experience with a newspaper or other news organization. 80 hours of designated work per credit. Maximum of 6 credits allowed	Prerequisites: A grade of C or better in JRN210.		Occ	L+L 3.0 3.0 0.0	P
JRN290	2018 Fall	Publications Portfolio		This course is organized around the development of a portfolio of published stories for submission to a jury of professional journalists, active and retired, that supports the district's occupational journalism certificate. Passing requires approval from two-thirds of the jury.	Prerequisites: None.		Occ	LAB 1.0 1.0 1.0	T
JRN296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled		Occ	LAB 1.0 5.0 0.0	Z

					in at least one class which is related to students major or career interest or with permission of Instructor.				
JRN296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
JRN296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with		Occ	LAB 3.0 15.0 0.0	Z

					permission of Instructor.				
JRN296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
JRN298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
JRN298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				combined to maximize student development.					
JRN298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
LAS101	2009 Fall	Introduction to Law		Legal terminology and basic legal principles in the areas of tort, contract, and criminal law. Interrelationships among lawyers, the court system, and law enforcement and administrative agencies. Development of a case for trial, adjudication, and post-verdict procedures in the civil and criminal systems. Suggested but not required: ENG101 and CRE101, or exemption by score on the reading placement test (ASSET)	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
LAS107	2023 Fall	The Paralegal Profession		Focus on the role, responsibilities, and ethical standards of a paralegal. Provides an overview of the legal system and the role of the paralegal in the legal system. Emphasis on professional development and job-search strategies.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
LAS109	2023 Fall	Civil Procedures I		Pretrial procedural issues in both Arizona and the federal system. Emphasis on Arizona Rules of Civil Procedure 1-37, 41, 55, 56, and 72-76. Coverage of applicable time limits, filing requirements, and proficiency in locating appropriate provisions in the Arizona Rules of Civil Procedure. Drafting of pleadings and motions and the application of procedural rules pertinent to the early stages of civil litigation.	Prerequisites: Acceptance into the Paralegal Studies program. A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: LAS101 and LAS107 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S

LAS110	2015 Fall	Civil Procedures II		Application of the procedural aspects of discovery, trial preparation, and post-trial work as part of a litigation team. Emphasis on practical concerns, such as interviewing of witnesses; preparation of discovery documents, exhibits, and transmittal memoranda; summarizing and indexing depositions; organization of files; preparation of trial notebooks; and participation in a mock trial.	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
LAS115	2015 Fall	Criminal Trial Procedure		Procedural aspects of the criminal trial process in Arizona state courts from preliminary proceedings through trial. Emphasis on application of the rules of criminal procedure and preparation of common trial documents by paralegals. Documents include the charging instrument, pre-trial motions, and jury instructions.	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
LAS131	2015 Fall	Legal Writing		The use of proper grammar, punctuation, and spelling in the construction of sentences and the development of paragraphs. Use of case briefs to study effective writing and analytical techniques. Analysis and application of the writing process to produce well-written documents commonly used in the practice of law.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
LAS203	2015 Fall	Ethics and Professional Practice		Rules of professional responsibility and ethical requirements with an emphasis on their application to legal assistants. Sources of power to regulate the practice of law. Issues related to unauthorized practice of law. Examination of professionalism in the legal profession	Prerequisites: A grade of C or better in LAS131 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
LAS204	2015 Fall	Contract Law		Examination of contracts and their regulation by the Uniform Commercial Code. Review and drafting of basic agreements.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S

LAS208	2015 Fall	Probate		Emphasis on various ways in which property can be held and passed on. Requirements for valid wills and trusts. Steps involved in estate administration and appropriate forms to be used. Includes drafting basic wills and simple trusts.	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
LAS211	2015 Fall	Legal Research		Use of print and electronic media to locate public documents, statutes, administrative regulations, and cases from county, state, and federal jurisdictions. Reading and interpreting research results. Shepardizing. Use of proper citation forms.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
LAS212	2015 Fall	Tort Law		Basic elements of negligence, strict liability, intentional torts; defenses; damages; insurance coverage. Evaluation of records and personal injury claims; review of insurance policies; settlement brochure; preparation of case intake memorandum	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
LAS214	2015 Fall	Business Organizations		Analysis and evaluation of business organizations with practical application of the law to analyze the utility, form, and function of Sole Proprietorships, General Partnerships, Limited Partnerships, Limited Liability Companies, and Corporations. Preparation of documents to create the most effective and feasible business organization under a given set of circumstances.	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
LAS217	2015 Fall	Family Law		Legal analysis of marriage, dissolution of marriage, parental rights and duties; pleading and practice.	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
LAS218	2021 Summer	Administrative Law		Introduction to fundamental administrative law concepts including the delegation of powers, due process, citizen access and participation, rulemaking,	Prerequisites: A grade of C or better in LAS109 and (BPC110 or permission of		Occ	LEC 3.0 3.0 3.0	S

				adjudication, and judicial review. Emphasis on Arizona administrative procedures and the role of the paralegal in informal and prehearing advocacy and proceedings before a hearing officer.	Department Chair or Program Director).				
LAS220	2015 Fall	Paralegal Internship Seminar		Coordinates on-the-job experiences with interpersonal relations, communications, time-management, and case-management skills. Provides opportunity to discuss problems encountered during internship.	Prerequisites: A grade of C or better in LAS203, LAS211, (LAS204 or LAS212), and (BPC110 or CIS105 or permission of Program Director). Corequisites: LAS221AB.	LAS220 may be repeated for a total of two (2) credit hours.	Occ	LEC 1.0 1.0 1.0	S
LAS221AB	2015 Fall	Paralegal Internship		Field work through placement at a law firm or other law-related organization where student will gain experience working in a legal setting. Supervision and evaluation by on-the-job supervisor as well as college program director.	Prerequisites: Permission of Program Director. Corequisites: LAS220.	LAS221A B requires a minimum of 160 hours of field experience in a legal setting.	Occ	LAB 2.0 10.0 0.0	C
LAS225	2015 Fall	Legal Research, Analysis, and Writing		Integration and further development of legal research and writing skills with an emphasis on critical thinking, issue analysis, and motion practice. Focus on integrating research, writing, and legal argument development.	Prerequisites: A grade of C or better in LAS131 and LAS211 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
LAS229	2015 Fall	Litigation Technologies		Use of presentation software; use of timekeeping, calendaring, and docketing software; use of litigation support software to organize case files; use of electronic trial presentation software in an electronic courtroom; ethical issues.	Prerequisites: A grade of C or better in LAS110 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
LAS261	2015 Fall	Bankruptcy		Examination of bankruptcy laws and procedures and the role of paralegals in bankruptcy practice, including the commencement of a case, preparation of common forms, review of bankruptcy litigation including	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S

				contested matters and adversary proceedings, and debtors' and creditors' rights and obligations.					
LAS265	2015 Fall	Regulatory Compliance		Examination of, and requirements for, organizations maintaining compliance with regulatory schemes. Emphasis on federal regulations and the role of non-lawyer personnel, such as paralegals, in obtaining, organizing, analyzing, and presenting recommendations for acting on factual information and legal research related to regulatory requirements.	Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
LAS280	2023 Fall	Paralegal Studies Portfolio Capstone		Demonstration of acquired skills and knowledge through review, revision, and supplementation of electronic portfolio containing evidence of program competencies; preparation, revision, and review of work product samples to facilitate the transition from student to entry-level paralegal.	A grade of C or better required in all Prerequisites. Prerequisites: LAS110, LAS203, LAS204, LAS214 and (BPC110 or CIS105 or permission of Program Director). Prerequisites or Corequisites: (LAS225 and LAS229) or permission of Program Director.		Occ	LEC 1.0 1.0 0.0	C
LAS294AA	2021 Summer	Special Topics in Civil Law		Explores special topics related to the practice of civil law. Focuses on substantive and procedural aspects.	Prerequisites: Completion of Legal Assisting degree or certificate, or permission of Department or Division.	LAS294A A may be repeated for a total of two (2) credit hours.	Occ	LEC 1.0 1.0 1.0	S
LAS294BA	2021 Summer	Special Topics in Criminal Law		Explores special topics related to the practice of criminal law. Focuses on substantive and procedural aspects.	Prerequisites: Completion of Legal Assisting degree or certificate, or permission of Department or Division.	LAS294B A may be repeated for a total of two (2) credit hours,	Occ	LEC 1.0 1.0 1.0	S
LAS294CA	2021 Summer	Special Topics in Administrative Law		Explores special topics related to the practice of administrative law. Focuses on substantive and procedural aspects.	Prerequisites: Completion of Legal Assisting degree or certificate, or	LAS294C A may be repeated for a total	Occ	LEC 1.0 1.0 1.0	S

					permission of Department or Division.	of two (2) credit hours			
LAS294DA	2021 Summer	Special Topics in Current Legal Issues		Explores special topics related to the practice of law. Focuses on substantive and procedural aspects.	Prerequisites: Completion of Legal Assisting degree or certificate or permission of Department or Division	LAS294D A may be repeated for a total of two (2) credit hours.	Occ	LEC 1.0 1.0 1.0	S
LAS296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
LAS296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled		Occ	LAB 2.0 10.0 0.0	Z

					in at least one class which is related to students major or career interest or with permission of Instructor.				
LAS296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
LAS296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with		Occ	LAB 4.0 20.0 0.0	Z

					permission of Instructor.				
LAS298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
LAS298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
LAS298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
LAT101	2011 Fall	Elementary Latin I		Introduction to the basic grammar and vocabulary of the Latin language. Practice reading and translating Latin into English	Prerequisites: None.	Course Attribute(s): Arizona Shared Unique Number SUN#: LAT 1101	Acad	LEC 4.0 4.0 4.0	S

LAT102	2014 Fall	Elementary Latin II		Comparative study of English and Latin grammar. Emphasis on analytical thinking, memorization, and familiarization with new terminology. Translation from English and from original works in Latin.	Prerequisites: A grade of C or better in LAT101 or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): Arizona Shared Unique Number SUN#: LAT 1102	Acad	LEC 4.0 4.0 4.0	S
LAT201	2014 Fall	Intermediate Latin I		Introduction to translation technics using selections from various authors; emphasis on use of primary texts.	Prerequisites: A grade of C or better in LAT102. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 4.0 4.0 4.0	S
LAT202	2014 Fall	Intermediate Latin II		Refinement of translation technics using selections from Virgil's Aeneid; emphasis on use of language and meter.	Prerequisites: A grade of C or better in LAT201. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 4.0 4.0 4.0	S
LAT296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least		Acad	LAB 1.0 5.0 0.0	Z

					one class which is related to student's major or career interest or with permission of the Instructor.				
LAT296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z
LAT296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with		Acad	LAB 3.0 15.0 0.0	Z

					permission of the Instructor.				
LAT296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z
LAT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
LAT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z

LAT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
LBA155	2023 Fall	Laboratory Assisting: Principles and Procedures		Overview of laboratory services, laboratory professionals, and the role of a laboratory assistant. Principles and procedures for pre-analytical processing of laboratory specimens. Performance of specimen processing, pre-analytical processes, and point-of-care testing. Application of quality assurance, quality control, quality management principles, infection control, and laboratory safety. Use of laboratory supplies, instrumentation, and information systems. Performing clerical and computer functions using medico-legal guidelines for documentation.	Prerequisites: (Acceptance into the Laboratory Assisting program), (a grade of C or better in PLB109 and PLB111), and permission of Program Director.		Occ	L+L 5.0 5.0 5.0	T
LBA158	2019 Fall	Laboratory Assisting Practicum		Practicum in laboratory assisting based in healthcare facilities or reference laboratories. Performance of clinical skills for pre-analytical processing of laboratory specimens, initial testing phases, and point-of-care testing using laboratory instrumentation, information systems, and supplies. Application of quality assurance, quality control, infection control, and laboratory safety. Performance of clerical and computer functions using medico-legal guidelines for documentation. Use of professional and ethical conduct in all interpersonal communications.	Prerequisites: A grade of C or better in LBA155 and permission of Program Director.		Occ	LAB 2.0 9.0 0.0	C
LDR100	2023 Fall	The Leader in You		Introductory exploration and application of leadership theories, concepts and practices for college	Prerequisites: None.		Occ	LEC 3.0	S

				students that want to make a difference in a changing world. Provides the concept of the relational leadership model and how it differs from traditional leadership theories. Focus on self-development of leadership potential through completion of personal and leadership assessments, values exploration and leadership skill applications.				3.0 3.0	
LDR101	2001 Fall	Emerging Leaders I		Concepts and application of leadership skills and service learning to promote social change and value clarification. Development of organizational leadership skills through experiential learning	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
LDR102	2001 Fall	Emerging Leaders II		Focus on implementing collaborative practices and organizational leadership skills to promote positive social change. Apply value-based leadership behavior in diverse settings	Prerequisites: A grade of C or better in LDR101 or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
LDR201	2001 Fall	Leadership Facilitation I		Designed to provide skills and practice for group facilitation of leadership activities in diverse settings Focus on development of organizational skills to promote effective group functioning	Prerequisites: A grade of C or better in LDR102 or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
LET112	2015 Spring	Introduction to Juvenile Corrections		Introduction to the Arizona Department of Juvenile Corrections. Includes the philosophy, mission, vision, and goals of the department in addition to juvenile corrections statistics and jurisdiction issues. Also covers programs available to youth in the department as well as agency information policy and access. Standards of conduct also covered.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
LET113	2018 Fall	Juvenile Corrections Procedures		Practical application of juvenile corrections procedures. Includes workplace safety, first aid, and cardiopulmonary resuscitation (CPR) procedures in addition to principles of staff safety in the facility. Also covers physical intervention techniques, preparation and transportation of	Prerequisites: None.		Occ	LAB 2.0 6.0 6.0	T

				youth, and radio and telephone communications. Report writing also covered.					
LET114	2018 Fall	Juvenile Corrections Officer Skills		Officer skills for the juvenile corrections system. Includes cultural awareness, data security policy and procedures, and defensive driving skills. Also covers tools for and goals of behavior management and effective communication styles and skills. Contraband legalities and procedures also covered.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
LET115	2015 Spring	Crisis Intervention in Juvenile Corrections		Overview of juvenile corrections officer skills for crisis intervention. Includes phases of the stress model and situation assessment in addition to verbal and non-verbal crisis communication. Also covers behavioral support and conflict resolution goals and limitations. Life Space Interview (LSI) steps included.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
LET116	2015 Spring	Adolescent Treatment Issues		Adolescent treatment issues in the juvenile corrections system. Includes stages of adolescent development and development theories. Covers mental health issues and illness, disorders, and interventions in addition to types of treatments, medications, and behavioral issues.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
LET117	2015 Spring	Juvenile Corrections Supervision		Supervisory skills for the juvenile corrections system. Includes classification principles and systems, stages of change, and case management responsibilities. Also covers indicators of and reporting requirements for child abuse, Incident Command System (ICS) responsibilities, and education team roles and responsibilities. Positive Behavioral Interventions and Support (PBIS) also covered.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
LET118	2015 Spring	Legal Issues in Juvenile Corrections		Overview of legal issues in the Arizona Department of Juvenile Corrections (ADJC) system. Includes justice system treatment philosophies and theories as well as adjudication,	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				conviction, and victim's rights. Also covers civil and criminal liability, causes of civil litigation, and civil rights concerns. Search and seizure, due process, and physical intervention principles also covered.					
LET120	2018 Fall	Juvenile Corrections Housing Unit Operations		Housing unit operations for juvenile corrections officers. Includes policies for housing unit operations, supervisory procedures, and documentation in addition to behavior management goals and techniques. Also covers levels of support, group management skills, and activation procedures for the Incident Command System (ICS).	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
LET130	2025 Fall	Detention Officer Training		Introduction to the detention field. Includes officer responsibilities with regards to discipline, conduct and dealing with inmates in the legal system. Examination of detention services, management principles, philosophy and goals also covered. Constitutional Amendments, law enforcement ethics and corruption included.	Prerequisites: Permission of Department or Division.		Occ	LEC 2.0 2.0 2.0	S
LET132	2019 Summer	Introduction to Correctional Law		Introduction to the legal and constitutional rights of inmates. Pre-trial, sentencing, and probation processes covered. Court cases with regards to enforcement personnel and custodial agencies discussed. Also covers inmate discipline and types of force.	Prerequisites: A grade of C or better in LET130.		Occ	LEC 3.0 3.0 3.0	S
LET134	2025 Fall	Special Needs Issues and Communication		Management skills for dealing with inmates with special needs. Issues related to female inmates, drug addictions, and mental disorders covered. Techniques for dealing with suicidal inmates and gang members included.	Prerequisites: A grade of C or better in LET132.		Occ	LEC 2.0 2.0 2.0	S
LET135	2025 Fall	Problem Solving and Crisis Management		Further examination of management techniques and tools within the detention facilities. Crisis intervention and de-escalation techniques covered. Also includes medical	Prerequisites: A grade of C or better in LET134.		Occ	LEC 2.0 2.0 2.0	S

				screening, inmate grievances, inmate disciplinary reports, and the reclassification system.					
LET136	2025 Fall	Detention Security Procedures		Security procedures within the detention facilities. Officer responsibilities with regards to contraband, facility security, and key/tool control. Procedures for conducting searches, security walks, headcounts, and the proper use of restraints. Dealing with hostage and emergency situations covered.	Prerequisites: A grade of C or better in LET135 or permission of Department or Division.		Occ	LEC 2.0 2.0 2.0	S
LET138	2019 Summer	Detention Officer Emergency Procedures		Techniques for managing emergency situations in the detention facility including fires and medical emergencies. Skills for administering first aid and cardiopulmonary resuscitation (CPR). Procedures for using control devices. Includes Occupational Safety and Health Administration (OSHA) safety equipment and methods as well as Sudden In-Custody Death (SICD) procedures.	Prerequisites: A grade of C or better in LET136.		Occ	LAB 1.0 3.0 3.0	T
LET139	2025 Fall	Detention Facility Training		Daily procedures for managing the detention facility. Includes procedures for processing inmate needs and requests, completing departmental reports and crime scene management. Operational procedures and liability issues also covered.	Prerequisites: A grade of C or better in LET138.		Occ	L+L 2.0 4.0 4.0	T
LET141	2018 Fall	Detention Defensive Tactics		Defensive tactics training for Detention Officers. Covers defensive body mechanics, various defensive techniques, handcuffing, and search techniques as well as pressure points and the carotid control technique. Ground defense and survival skills, survival psychology, and physical fitness also included.	Prerequisites: Permission of Department or Division.		Occ	L+L 4.0 5.0 5.0	T
LET144	2025 Fall	Detention Officer Field Training		Field training procedures for the detention facility officer. Includes officer communication, safety, and security as well as procedures for handling emergency situations in the detention facility. Also covers Order of	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 3.0 3.0	T

				Protection, Injunction Against Harassment, and visitation responsibilities.					
LET146	1999 Spring	Officer Survival		Overview of skills and techniques for officer survival. Tactical thinking, critical incident stress, entry techniques and emergency plans as well as basic high risk traffic stops and search warrants covered. Limitations of the mind and body in a crisis also covered	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
LET148	2018 Fall	Detention Officer Field Training Lab		Application of field training procedures for the detention facility officer. Includes communication and documentation requirements as well as officer safety in the tower and on the floor. Also covers procedures for handling emergency situations and management of special populations within the detention facility.	Prerequisites: Permission of Department or Division.		Occ	LAB 3.0 9.0 9.0	T
LET150	2020 Fall	Firearms I		Overview of firearms usage. Covers firearms safety and nomenclature, basic firearms usage techniques, and firearms care and cleaning.	Prerequisites: Permission of Department or Division.		Occ	L+L 3.0 3.0 3.0	T
LET151	2020 Fall	Firearms II		Practical application of firearms usage. Covers loading and unloading ammunition, firearm safety, daytime and nighttime firing techniques and shooting positions. Emphasis on qualification courses.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: LET150.		Occ	L+L 2.0 2.0 2.0	T
LET152	2020 Spring	Tactical Weapons		Practical application of tactical weapons procedures. Emphasis on handgun and rifle techniques in addition to impact weapon targets, use of force, and taser operation. Includes techniques for engaging suspects, advanced simunitions, and high threat vehicle engagement.	Prerequisites: Permission of Department or Division.		Occ	L+L 4.0 6.0 6.0	T
LET154	2024 Fall	Leadership in Law Enforcement		Skills for effective leaders in the law enforcement industry. Covers behavioral and personality types, leadership styles, organizational accountability, and skills for providing effective mentoring. Emphasis on professionalism and its impact on society and law enforcement.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S

LET155	2025 Fall	General Instructor Certification		Designed to aid persons responsible for training in the workplace. Emphasis on motivating the adult learner, systematic training, planning, and evaluating performance.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
LET160	2000 Spring	Correctional System Ethics and Professionalism		Overview of policies and guidelines with respect to professionalism and ethics in the correctional system. Includes workforce diversity, staff-inmate relations, and harassment issues. Also covers the definition of ethics and the basis for ethical decision making	Prerequisites: Permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
LET162	2019 Fall	Introduction to Inmate Management		Effective inmate management techniques. Includes components of effective management and use of officer discretion. Criminal justice system also covered. Procedures for dealing with inmate discipline and classification, grievances, and use of force determinations.	Prerequisites: Permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
LET164	2000 Spring	Correctional Information Systems		Overview of policies and guidelines for professional and effective distribution of information within the correctional system, including regulations governing two-way radio operation and use of a field notebook	Prerequisites: Permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
LET166	2019 Fall	Correction Officers Safety and Weapons Training		Basic shooting principles of the weapons used by correctional officers. Includes nomenclature, handling, loading and firing of the service handgun, shotgun, and 37mm gas gun. Lawful use of chemical agents including identification, coding, delivery and decontamination procedures.	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 4.0 4.0	T
LET167	2014 Spring	Correctional Sergeant Leadership		Examination of leadership skills, duties and responsibilities, and procedures for sergeants in correctional facilities. Includes leading and creating an environment that motivates employees, effective communication, professionalism, and staffing/roster management procedures. Also covers procedures for the Incident Command System	Prerequisites: Permission of Department or Division.		Occ	LEC 2.0 2.0 2.0	S

				(ICS), Designated Area Response Team (DART), and performance evaluations for correctional employees.					
LET168	2019 Fall	Inmate Security Procedures I		Procedures for dealing with inmate security. Includes progressive behavior control and protective custody. Inmate count, personal property inventory, mail handling procedures, and cell extraction procedures also covered.	Prerequisites: Permission of Department or Division.		Occ	LEC 2.0 2.0 2.0	S
LET169	2018 Fall	Inmate Security Procedures II		Security procedures for handling inmates. Covers searches, contraband, monitoring of inmates and perimeter checks. Transportation of inmates, use of restraints and driving skills including preventable collisions included.	Prerequisites: A grade of C or better in LET168 or Corequisites: LET168.		Occ	L+L 3.0 4.0 4.0	T
LET170	2019 Fall	Security, Custody and Control Procedures		Procedures for maintaining security and control within a correctional institution. Includes custody levels, roles of staff, and essential components with regards to span-of-control. Also covers procedures for dealing with crime scene management, fires, and emergency situations.	Prerequisites: Permission of Department or Division.		Occ	LEC 2.0 2.0 2.0	S
LET172	1997 Summer I	Conflict and Crisis Management I		Conflict and crisis management techniques for correctional institutions. Effecting positive, non-forceful resolutions to potentially violent situations. Emphasis on officer and inmate safety	Prerequisites: Permission of Department or Division.		Occ	LEC 2.0 2.0 2.0	S
LET173	2020 Fall	Introduction to Leadership in Public Safety		Introduction to leadership in the field of public safety. Covers stages of adult human development, generational differences, and characteristics of effective leaders. Also includes characteristics of leaders, including values, ethics, attitudes, behavior, and response techniques in addition to identification of personal strengths and determination of a personal leadership style.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S

LET174	2020 Fall	Organizational Culture and Leadership		Examination of organizational structure and its application to the field of public safety. Covers characteristics and principles of effective organizations, systems and process management, and phases of process building in addition to characteristics of a process enterprise. Also includes levels of leadership and characteristics, ethical considerations, restrictions, and best behaviors of each.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: LET173.		Occ	LEC 3.0 3.0 3.0	S
LET175	2022 Fall	Public Safety Leadership Capstone		Completion and professional presentation of a capstone project such as a formal staff study or leadership portfolio in the field of public safety, including steps for problem identification, research, and analyzing and reporting of information.	Prerequisites: A grade of C or better in LET174.		Occ	LAB 1.0 3.0 3.0	T
LET176	2019 Fall	Medical and Mental Health		Responsibilities of the correctional system staff with regards to medical and mental health of inmates. Includes basic first aid, basic life support, and supervision and care for mentally ill and impaired inmates. Also includes drug and substance abuse and communicable disease control.	Prerequisites: Permission of Department or Division.		Occ	LEC 2.0 2.0 2.0	S
LET178	2018 Fall	Physical Fitness and Self Defense Training		Physical and self defense training for correctional officers. Emphasis on aerobic power, muscular strength, endurance, and flexibility. Includes necessary and legal self defense along with techniques for protection of self and others in physical confrontations. Also includes training guidelines, safety issues and the benefits of good physical fitness.	Prerequisites: Permission of Department or Division.		Occ	L+L 3.0 5.0 5.0	T
LET179	2020 Spring	Highway Patrol Procedures		Overview of operational and response procedures for highway patrol operations. Covers pursuits, roadblocks, emergency response, and high risk stops in addition to incident command systems. Also includes overview of racially biased	Prerequisites: Permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S

				policing, sex trafficking indicators, and marijuana field testing.					
LET180	2019 Summer	Introduction to Computer Aided Dispatch		Introduction to computer aided dispatch. Covers techniques and procedures for emergency broadcast, including dispatch protocol, types of requests, and use of the dispatch panel. Also includes an overview of banking and vehicle security systems, the Incident Command System (ICS), and procedures for officer involved emergencies.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
LET181	2019 Summer	Emergency Communications Personnel		Duties and responsibilities of personnel within the emergency communications industry. Includes information operator and tactical dispatcher responsibilities for handling various types of calls including priority one, hot calls and pursuits. Also covers split configuration communication.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
LET182	2019 Summer	Emergency Communications Procedures		Practical application of emergency communications procedures. Includes dispatch functions, protocol and techniques, Incident Command system (ICS) implementation, and information officer and dispatcher responsibilities. In addition to basic dispatch procedures, covers queries, pursuits, priority one calls, hot calls, all calls, and high-risk situations and procedures. Radio dispatch card procedures also covered.	Prerequisites: None.		Occ	L+L 3.0 9.0 9.0	T
LET183	2020 Spring	Transportation Law		Transportation law provisions. Covers Arizona Revised Statute (ARS) Title 28, drug transportation, and contraband as well as civil and criminal traffic laws. Traffic offenses, violation name, and classification included.	Prerequisites: Permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
LET184	2019 Summer	Introduction to 911 Call Basics		Overview of basics for processing 911 calls. Covers communications terminology, abbreviations and codes as well as various police systems. Also includes location systems including numbering, point of origin,	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				freeway structure, various maps and city codes.					
LET185	2019 Summer	911 Policies and Procedures		Policies and procedures for completing 911 calls. Includes the National Incident Management System (NIMS), Incident Command System (ICS) and the use of an incident action plan. Also covers the purpose and use of radio codes, the online crime reporting website, and call signs. Alarm call types, prioritization, reporting, and cancellation procedures also covered.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
LET186	2019 Summer	Specialized 911 Call Procedures		Procedures for managing specific emergency situations. Includes goals and procedures for handling barricaded suspect calls, active shooter situations and officer involved emergencies. Also covers Critical Incident Stress Management (CISM) resources and the impact of emotional labor.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
LET195	2018 Fall	Proficiency Skills for Fire Investigators		Proficiency skills required of the fire investigator. Includes physical conditioning and wellness as well as defensive tactics and vehicle operations.	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 4.0 4.0	T
LET196	2010 Spring	Patrol Procedures for Fire Investigators		Patrol and off-duty responsibilities procedures for fire investigators. Includes domestic violence authority as well as priorities for handling crimes in progress. Also covers communication procedures and restrictions.	Prerequisites: Permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
LET197	2018 Fall	Firearms for Fire Investigators		Firearms training for the fire investigator. Includes firearm safety and procedures, including daytime and nighttime firing techniques and shooting positions. Practical application in a field environment.	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 4.0 4.0	T
LET198	2010 Spring	Criminal Investigations for Fire Investigators		Overview of procedures for conducting special criminal investigations. Responsibilities of the fire investigator with regard to death investigations, and assault and burglary cases. Also covers gangs	Prerequisites: Permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S

				and gang activity in addition to narcotics and dangerous drug investigations.					
LET201	2016 Spring	Physical Fitness Instructor Certification		Covers skills necessary to instruct and conduct physical fitness tests using the Cooper Institute for Aerobics Research standards and the Peace Officer Physical Aptitude Test (POPAT) standards. Also covers basics of human anatomy, strength training and aerobic conditioning as well as nutrition and prevention of injuries.	Prerequisites: Permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
LET225	2020 Fall	Criminal Investigations Certification		Police Detective Training. Emphasis on investigations, search and seizure, legal aspects of interview and interrogation, report writing, case management, and field problem scenarios.	Prerequisites: Must be a certified police officer or have permission of Department or Division.		Occ	LEC 6.0 6.0 6.0	S
LET225AA	2020 Fall	Criminal Investigations Certification I		Overview of information, strategies, techniques, and resources available to detectives investigating property crimes, sex crimes, forged documents, and death investigations.	Prerequisites: Must be a certified police officer or have permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
LET225AB	2020 Fall	Criminal Investigations Certification II		Review of laws regarding search and seizure. Updated information regarding new laws as they apply to search and seizure.	Prerequisites: Must be a certified police officer or have permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
LET225AC	2020 Fall	Criminal Investigations Certification III		The legal framework for admissible confessions and other information gathered through interviews and interrogations. Prepares law enforcement personnel for obtaining confessions and other incriminating information from suspects used in court.	Prerequisites: Must be a certified police officer or have permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
LET225AD	2020 Fall	Criminal Investigations Certification IV		Emphases on necessity for good reports in criminal investigations. Characteristics of pre-report preparation, preparing the body of the report, and assembling the case report. Process of handling	Prerequisites: Must be a certified police officer or have permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S

				submission of a case report, processing turndowns, and furthers.					
LET225AE	2020 Fall	Criminal Investigations Certification V		Overview of the criminal investigators role in preparing case documents for submittal to the attorney and to prepare for trial.	Prerequisites: Must be a certified police officer or have permission of Department or Division.		Occ	LEC 0.5 0.5 0.5	S
LET225AF	2020 Fall	Criminal Investigations Certification VI		Various types of electronic evidence and the procedures required to be submitted to the court for prosecution.	Prerequisites: Must be a certified police officer or have permission of Department or Division.		Occ	LEC 0.5 0.5 0.5	S
LET225AG	2020 Fall	Criminal Investigations Certification VII		This course is a summative culmination of the investigator courses. Students will assume the investigator's role in a crime scene scenario, securing a crime scene, processing evidence, preparing documentation, and submit a case for trial.	Prerequisites: A grade of C or better in LET225AA, LET225AB, LET225AC, LET225AD, LET225AE, and LET225AF.		Occ	LEC 1.0 1.0 1.0	S
LET226	1999 Summer I	Arrest and Defense Tactics Instructor Training		Techniques for instructing students in arrest and defense tactics. Includes approaching suspects, use of equipment, and officer responsibilities as well as handcuffing and transporting prisoners. Use of force and liability issues, pressure points and impact weapons also covered. Close Quarter Crisis Management and psychological factors emphasized	Prerequisites: Permission of Department or Division.		Occ	LEC 6.0 6.0 6.0	S
LET229	2003 Summer II	High Risk Situations/Instructor Training		Techniques for instructing students in high risk/known risk situations. Includes pre-stop procedures, primary and back-up officer responsibilities, suspect removal, and vehicle positioning	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
LET243	2021 Fall	Search Warrant Preparation		Overview of statutes, constitutional requirements, and case law covering searches, seizures, and detentions relative to the search warrant process. Includes procedures and tactical considerations for obtaining and serving search warrants. Also covers review and documentation of	Prerequisites: Must be Law Enforcement personnel or have permission of Instructor.		Occ	L+L 6.0 6.0 6.0	T

				probable cause related to property, persons, and drug-related crimes within a search warrant affidavit as well as search warrant draft procedures.					
LET250	2019 Fall	DUI Detection		Overview of alcohol-related DUI enforcement and general deterrence, DUI detection and description techniques, legal statutes, Standardized Field Sobriety Test (SFST's) procedures, DUI arrest process, report writing, courtroom testimony techniques and drug detention techniques.	Prerequisites: Permission of Department or Division.		Occ	LEC 2.0 2.0 2.0	S
LET254	2018 Summer	Criminal Investigations Detective I		Advanced training designed to prepare law enforcement officers for transition into investigator positions. Includes Criminal Investigations Division (CID) goals and expectations, the scouting mission techniques and resources, operational plan components and development, and a review of professional writing skills for report writing, in addition to procedures for surveillance. Also covers procedures for preparing and serving search warrants, handling digital evidence, and working human trafficking and smuggling cases.	Prerequisites: Permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
LET255	2018 Summer	Criminal Investigations Detective II		Further advanced training designed to prepare law enforcement officers for transition into investigator positions. Includes Department of Public Safety (DPS) Criminal Investigations Division (CID) policies and procedures, the intelligence mission and cycle, crime scene management and processing, in addition to open source intelligence applications and resources. Also covers procedures for handling informants, interview and interrogation, and courtroom/trial preparation.	Prerequisites: A grade of C or better in LET254.		Occ	LEC 3.0 3.0 3.0	S
LET256	2020 Fall	Law Enforcement Firearm Instructor	AJS256	A train the trainer course for police firearm instructors. Covers	Prerequisites: AzPost (Peace Officer	AJS/LET256 may be	Occ	LEC 5.0	S

				instructional techniques for the pistol, revolver, and shotgun.	Standard and Training) Certified Police General Instructor or permission of Department or Division.	repeated for Credit.		5.0 5.0	
LET256AA	2020 Fall	Law Enforcement Patrol Rifle Instructor	AJS256AA	Techniques on proper manipulation and marksmanship skills needed by a patrol officer/deputy in the use of the patrol rifle, and techniques of teaching those skills to other officers/deputies.	Prerequisites: AzPOST (Peace Officer Standard and Training) certified law enforcement firearms instructor or permission of Instructor.	AJS/LET256AA may be repeated for Credit.	Occ	LEC 3.0 3.0 3.0	S
LET260	2020 Spring	Traffic Accident Investigation		Overview of accident investigation techniques and reports. Physical evidence on the roadway and from the vehicle, human factors and reaction times, measurement and calculations emphasized. Also includes felony collision investigation.	Prerequisites: Permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
LET262	2020 Spring	Active Shooter Procedures		Procedures for response and mitigation of active shooter/active homicide events. Includes policies for decision making, use of appropriate force, tactics for responding to active shooter events, basic structure clearing techniques, and Tactical Combat Casualty Care (TCCC) as well as opportunities for reality-based training.	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 3.0 3.0	T
LET279AA	2018 Fall	Field Training: Phase I		Introduction to the Field Training Program. Overview of standards for officers in training. Also includes vehicle inspection, traffic stops, writing citations, and field interview cards. Use of the radio and Mobil Data Terminal (MDT) covered. Integration of radio and MDT use while driving patrol emphasized.	Prerequisites: Permission of Department or Division.		Occ	L+L 4.0 4.0 4.0	T
LET279AB	2018 Fall	Field Training: Phase II		Field training communication skills. Procedures for interview and interrogation skills, as well as strategies for conflict resolution. Covers standards for effective report	Prerequisites: Permission of Department or Division.		Occ	L+L 4.0 6.0 6.0	T

				writing in addition to requirements for callback, arrest and field reports. Also includes procedures for completing bookings. Standards for officers in training also evaluated.					
LET279AC	2018 Fall	Field Training: Phase III		Continuation of field training. Procedures in arrest of suspects driving under the influence (DUI) and for investigating accidents emphasized. Standards for officers in training also evaluated.	Prerequisites: Permission of Department or Division.		Occ	L+L 5.0 5.0 5.0	T
LET279AD	2018 Fall	Field Training: Phase IV		Culmination of field training. Self initiated field activity, 'On-view' cases emphasized. Integration of recognizing activity that is suspicious in nature or illegal and appropriate action. Standards for officers in training also evaluated.	Prerequisites: Permission of Department or Division.		Occ	L+L 4.0 6.0 6.0	T
MAS101	2023 Fall	Introduction to Medical Assisting		Introduction to professional skills required in the field of medical assisting. Development of professional behaviors and expectations; in addition to but not limited to communication and mathematical calculations used.	Prerequisites: None.	Students must meet all the competencies to continue the Medical Assisting program.	Occ	LEC 3.0 3.0 3.0	S
MAS102	2022 Spring	Fundamentals of Administrative Medical Assisting		Explores fundamental administrative procedures in ambulatory healthcare settings, such as appointment scheduling, telephone etiquette, and patient rights. Emphasis on a basic understanding of medical law and ethics and Health Insurance Portability and Accountability Act (HIPAA) regulations. Provides a basic overview of insurance, coding, billing, and electronic health records (EHR) as they relate to medical assisting.	Prerequisites: A grade of C or better in MAS101.		Occ	LEC 6.0 6.0 6.0	S
MAS103	2023 Fall	Basic Anatomy, Physiology, and Medical Terminology		Provides an overview of medical terminology and the word parts used in building and analyzing terms used in healthcare, including abbreviations and symbols. A body-systems approach is used for terms relating to	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				anatomy, physiology, and pathophysiology.					
MAS104	2023 Fall	Medical Administrative Assisting Practicum		Students will apply the medical administrative concepts learned in previous program courses.	Prerequisites: A grade of C or better in HCC145 or MAS103.	All health and safety documents must remain current and in good standing, especially TB screening and CPR BLS provider, throughout the MAS104 Practicum.	Occ	LAB 4.0 4.0 4.0	T
MAS200	2023 Fall	Medical Conversions and Calculations for Medical Assisting		Introduction to mathematical calculations specific to the clinical practice of medical assistants. Application of skills include conversions of measurements in the metric system, temperature conversions, military-standard time conversions, and medication dosage equivalents and calculations.	Prerequisites: A grade of C or better in MAS104.	MAS104 is graded using the Pass/Fail (P/Z) grading. Students must meet all the competencies to continue the Medical Assisting program. MAS200 may be repeated for a total of four (4) credit hours.	Occ	LEC 2.0 2.0 2.0	S

MAS201	2023 Fall	Fundamentals of Clinical Medical Assisting		Provides a foundation for clinical lab skills related to medical assisting. This hands-on course will explore surgical procedures, vital signs, sterilization, electrocardiogram (EKG), and emergency situations in the ambulatory setting. Includes a review of the steps involved in basic first aid and healthcare provider cardiopulmonary resuscitation (CPR).	Prerequisites: A grade of C or better in MAS200 and acceptance into the Clinical Medical Assisting or Medical Assisting program.		Occ	L+L 6.0 7.5 7.5	T
MAS202	2024 Fall	Laboratory Testing in Ambulatory Healthcare Settings		Introduction to basic Point of Care Testing (POCT), specimen collection, and handling. Theory and practice of basic phlebotomy and application of fundamental phlebotomy procedures and techniques in a clinical ambulatory healthcare setting.	Prerequisites: A grade of C or better in MAS201, or permission of Program Director.	Students must pass all lab competencies and the clinical final exam with a minimum of 85% to pass the course. (MAERB Policy 215)	Occ	L+L 6.0 7.5 7.5	T
MAS203	2021 Fall	Medical Assisting Pharmacology		Explores principles of basic pharmacology and medication administration. Focus on responsibility and appropriate medication protocols as they relate to medical assisting.	Prerequisites: A grade of C or better in MAS201 and MAS202.	Students must pass all dosage calculation tests and the clinical final exam with a 100% to pass the course.	Occ	L+L 6.0 7.5 7.5	T
MAS204	2021 Spring	Clinical Medical Assisting Practicum		Application of clinical medical assisting concepts while interacting with patients at a clinical practicum site.	Prerequisites: A grade of C or better in MAS203.	All health and safety documents must remain current and in good standing, especially	Occ	LAB 4.0 9.0 9.0	T

						TB screening and CPR BLS provider, throughout the MAS204 Practicum.			
MAS205	2021 Spring	Medical Assisting Program Review		Prepares students to apply for the clinical credentialing examination and for entry into the medical assisting industry.	Prerequisites: A grade of C or better in MAS203.		Occ	LEC 2.0 2.0 2.0	S
MAT051	2019 Fall	Number Sense I		Primary emphasis on conceptual understanding of whole numbers, integers and mathematical operations. Use systems of measure and Pythagorean Theorem. Focus on mathematical language, connections, patterns and reasoning.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
MAT052	2019 Fall	Number Sense II		Primary emphasis on conceptual understanding of decimals and fractions, and decimal and fraction addition and subtraction. Solving problems involving decimals and fractions. Focus on mathematical language, connections, patterns and reasoning.	Prerequisites: A grade of C or better in MAT051, OR an appropriate district placement.		Acad	LEC 1.0 1.0 1.0	S
MAT053	2019 Fall	Multiplicative and Proportional Reasoning		Primary emphasis on conceptual understanding of decimals and fractions, and decimal and fraction multiplication and division. Solving problems involving decimals, fractions, and percentages. Focus on additive and multiplicative reasoning including proportionality and similarity.	Prerequisites: A grade of C or better in each of the following courses: (MAT051 and MAT052), OR an appropriate district placement.		Acad	LEC 1.0 1.0 1.0	S
MAT055	2024 Fall	Algebraic Structures		Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S

				mathematical problems and practical application situations.					
MAT056	2024 Fall	Functions I		Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations.	Prerequisites: A grade of C or better in MAT055, or an appropriate district placement.		Acad	LEC 1.0 1.0 1.0	S
MAT057	2024 Fall	Functions II		Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change.	Prerequisites: A grade of C or better in MAT055 and MAT056, or an appropriate district placement.		Acad	LEC 1.0 1.0 1.0	S
MAT081	2019 Fall	Basic Arithmetic		Primary emphasis on conceptual understanding of and solving problems involving whole numbers, integers, mathematical operations, decimals, decimal operations, fractions, percentages, angles and geometric figures. Use of systems of measure, similarity, proportionality and the Pythagorean theorem. Focus on mathematical language, connections, patterns and reasoning, and additive and multiplicative reasoning.	Prerequisites: None.	Student may receive credit for only one of the following: (MAT051 and MAT052 and MAT053) OR MAT081 OR MAT082 OR MAT085.	Acad	LEC 4.0 4.0 4.0	S
MAT082	2019 Fall	Basic Arithmetic		Primary emphasis on conceptual understanding of and solving problems involving whole numbers, integers, mathematical operations, decimals, decimal operations, fractions, percentages, angles and geometric figures. Use of systems of measure, similarity, proportionality and the Pythagorean theorem. Focus on mathematical language,	Prerequisites: None.	Student may receive credit for only one of the following: (MAT051 and MAT052	Acad	LEC 3.0 3.0 3.0	S

				connections, patterns and reasoning, and additive and multiplicative reasoning.		and MAT053), OR MAT081, OR MAT082, OR MAT085.			
MAT090	2024 Fall	Introductory Algebra		Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations. Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change.	Prerequisites: None.	MAT090 students may receive credit for only one of the following: (MAT055 and MAT056 and MAT057), OR MAT090, OR MAT091, OR MAT092, OR MAT095, OR MAT096.	Acad	LEC 5.0 5.0 5.0	S
MAT091	2024 Fall	Introductory Algebra		Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical	Prerequisites: None.	MAT091 students may receive credit for only one of the following: (MAT055 and MAT056	Acad	LEC 4.0 4.0 4.0	S

				application situations. Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change.		and MAT057), OR MAT090, OR MAT091, OR MAT092, OR MAT095, OR MAT096.			
MAT092	2024 Fall	Introductory Algebra		Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations. Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change.	Prerequisites: None.	MAT092 students may receive credit for only one of the following: (MAT055 and MAT056 and MAT057), OR MAT090, OR MAT091, OR MAT092, OR MAT095, OR MAT096.	Acad	LEC 3.0 3.0 3.0	S
MAT095	2019 Fall	Introductory Algebra/College Algebra Prep		Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and	Prerequisites: None.	MAT095 students may	Acad	LEC 5.0	S

				<p>multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations. Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally, and connect the different representations. Model and solve real world problems involving constant rate of change.</p>		<p>receive credit for only one of the following: (MAT055 and MAT056 and MAT057), OR MAT090, OR MAT091, OR MAT092, OR MAT095, OR MAT096. MAT095 is designed to prepare students that do not place into MAT120 or MAT121 or MAT122, but intend to complete College Algebra for their degree path. MAT095 is designed to prepare students to take</p>	<p>5.0 5.0</p>	
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						<p>MAT155 College Algebra/Functions with Review or MAT156 College Algebra/Functions with Review. Additional topics from MAT08+ Basic Arithmetic and MAT12+ Intermediate Algebra will be included to prepare students for MAT155 College Algebra/Functions with Review or MAT156 College Algebra/Functions with Review.</p>			
MAT096	2019 Fall	Introductory Algebra/College Algebra Prep		Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical	Prerequisites: None.	<p>MAT096 students may receive credit for only one of the</p>	Acad	<p>LEC 6.0 6.0 6.0</p>	S

				<p>defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations. Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change.</p>		<p>following: (MAT055 and MAT056 and MAT057), OR MAT090, OR MAT091, OR MAT092, OR MAT095, OR MAT096. MAT096 is designed to prepare students that do not place into MAT120 or MAT121 or MAT122, but intend to complete College Algebra for their degree path. MAT096 is designed to prepare students to take MAT155 College Algebra/F unctions</p>			
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						with Review or MAT156 College Algebra/F unctions with Review. Additional topics from MAT08+ Basic Arithmetic and MAT12+ Intermedia te Algebra will be included to prepare students for MAT155 College Algebra/F unctions with Review or MAT156 College Algebra/F unctions with Review.			
MAT103	2020 Summer	College Mathematics Prep		Foundational knowledge of topics necessary for success in College Mathematics. Emphasis on understanding mathematical concepts and their applications. Topics include number sense, proportional reasoning, numerical and algebraic expressions, linear equations, and representations of data.	Prerequisites: None.	MAT103 students may receive credit for only one of the following: (MAT052 and MAT053	Acad	LEC 3.0 3.0 3.0	S

						and MAT055) or MAT103. This course is designed for students that do not qualify for MAT141 or MAT142, but intend to complete MAT14+ College Mathematics for their degree path. This course covers topics from basic arithmetic and introductory algebra.			
MAT108	2019 Fall	Tutored Mathematics		Structured tutorial assistance and math study skills to help students achieve success in a mathematics course in which they are concurrently enrolled. Mathematics study skills emphasized.	Prerequisites: None. Corequisites: (MAT150 or MAT151 or MAT151AA or MAT151AB or MAT151AC or MAT151AD or MAT152 or MAT155 or MAT156), OR any lower numbered MAT class, OR permission of Department/Division Chair.	MAT108 may be repeated for a total of ten (10) credits.	Acad	LEC 2.0 2.0 2.0	S

MAT108AA	2019 Fall	Tutored Mathematics		Structured tutorial assistance and math study skills to help students achieve success in a mathematics course in which they are concurrently enrolled. Mathematics study skills emphasized.	Prerequisites: None. Corequisites: (MAT150 or MAT151 or MAT151AA or MAT151AB or MAT151AC or MAT151AD or MAT152 or MAT155 or MAT156), OR any lower numbered MAT class, OR permission of Department/Division Chair.	MAT108A A may be repeated for a total of ten (10) credit hours.	Acad	LEC 1.0 1.0 1.0	S
MAT112	2020 Summer	Mathematical Concepts and Applications		A problem solving approach to mathematics as it applies to real-life situations. Development, use and communication of mathematical concepts and applications that relate to measurement, percentage, practical geometry, statistics, finance, and unit conversions.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
MAT114	2020 Summer	College Algebra Prep		Proper use of function notation, average rate of change of functions, and evaluating arithmetic and algebraic expressions. Analysis of linear and quadratic equations, and their applications; graphs of linear and quadratic functions; operations on polynomial expressions.	Prerequisites: None.	MAT114 students may receive credit for only one of the following: MAT114, OR MAT115.	Acad	LEC 4.0 4.0 4.0	S
MAT115	2020 Summer	College Algebra Prep		Proper use of function notation, average rate of change of functions, and evaluating arithmetic and algebraic expressions. Analysis of linear and quadratic equations, and their applications; graphs of linear and quadratic functions; operations on polynomial expressions.	Prerequisites: None.	MAT115 students may receive credit for only one of the following: MAT114, OR MAT115.	Acad	LEC 5.0 5.0 5.0	S
MAT120	2019 Fall	Intermediate Algebra		Analysis of rational, radical, quadratic and exponential equations, functions	Prerequisites: A grade of C or better	MAT120 students	Acad	LEC 5.0	S

				and applications; graphs of radical, quadratic and exponential functions; operations on polynomial, rational, and radical expressions.	in each of the following courses: (MAT055 and MAT056 and MAT057), OR a grade of C or better in (MAT090 or MAT091 or MAT092 or MAT095 or MAT096), OR an appropriate district placement.	may receive credit for only one of the following: MAT120, OR MAT121, OR MAT122 OR MAT126.		5.0 5.0	
MAT121	2019 Fall	Intermediate Algebra		Analysis of rational, radical, quadratic and exponential equations, functions and applications; graphs of radical, quadratic and exponential functions; operations on polynomial, rational, and radical expressions.	Prerequisites: A grade of C or better in each of the following courses: (MAT055 and MAT056 and MAT057), OR a grade of C or better in (MAT090 or MAT091 or MAT092 or MAT095 or MAT096), OR an appropriate district placement.	MAT121 students may receive credit for only one of the following: MAT120, OR MAT121, OR MAT122 OR MAT126.	Acad	LEC 4.0 4.0 4.0	S
MAT122	2019 Fall	Intermediate Algebra		Analysis of rational, radical, quadratic and exponential equations, functions and applications; graphs of radical, quadratic and exponential functions; operations on polynomial, rational, and radical expressions.	Prerequisites: A grade of B or better in each of the following courses: (MAT055 and MAT056 and MAT057), OR a grade of B or better in (MAT090 or MAT091 or MAT092 or MAT095 or MAT096), OR an appropriate district placement.	MAT122 students may receive credit for only one of the following: MAT120, OR MAT121, OR MAT122 OR MAT126.	Acad	LEC 3.0 3.0 3.0	S
MAT126	2019 Summer	Intermediate Algebra with Review		Analysis of rational, radical, quadratic and exponential equations, functions and applications; graphs of radical,	Prerequisites: None.	MAT126 students may	Acad	LEC 6.0	S

				quadratic and exponential functions; operations on polynomial, rational, and radical expressions.		receive credit for only one of the following: MAT120, OR MAT121, OR MAT122, OR MAT126. This course is designed for students that do not qualify for MAT120, MAT121, or MAT122, but need MAT12+ Intermediate Algebra to fulfill a degree requirement OR intend to complete MAT15+ College Algebra for their degree path. Review of MAT08+ Basic Arithmetic and/or MAT09+ Introducto	6.0 6.0	
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						ry Algebra as needed.			
MAT140	2021 Spring	College Mathematics		Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics.	Prerequisites: An appropriate District placement or a grade of C or better in (MAT052, MAT053 and MAT055), or (MAT055, MAT056 and MAT057) or MAT085 or MAT09+ or MAT103 or MAT114 or MAT115 or MAT12+.	Students may receive credit for only one of the following: MAT140, MAT141, MAT142, MAT145, or MAT146. Students do not need to take all MAT classes in numerical order; please consult with an advisor for the appropriate math sequence for student educational goals. Course Attribute(s): General Education Designation: Mathematics - [MA] Arizona Shared Unique	Acad	LEC 5.0 5.0 5.0	S

						Number SUN# MAT 1142			
MAT141	2021 Spring	College Mathematics		Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics.	Prerequisites: An appropriate District placement or a grade of C or better in (MAT052, MAT053 and MAT055) or (MAT055, MAT056 and MAT057) or MAT085 or MAT09+ or MAT103 or MAT114 or MAT115 or MAT12+.	MAT141 students may receive credit for only one of the following: MAT140, MAT141, MAT142, MAT145 or MAT146. Students do not need to take all MAT classes in numerical order; please consult with an advisor for the appropriate math sequence for student educational goals. Course Attribute(s): General Education Designation: Mathematics - [MA] Arizona Shared	Acad	LEC 4.0 4.0 4.0	S

						Unique Number SUN# MAT1142			
MAT142	2021 Spring	College Mathematics		Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics.	Prerequisites: An appropriate District placement or a grade of C or better in (MAT052, MAT053 and MAT055) or (MAT055, MAT056 and MAT057) or MAT085 or MAT09+ or MAT103 or MAT114 or MAT115 or MAT12+.	MAT142 students may receive credit for only one of the following: MAT140, MAT141, MAT142, MAT145 or MAT146. Students do not need to take all MAT classes in numerical order; please consult with an advisor for the appropriate math sequence for student educational goals. Course Attribute(s): General Education Designation: Mathematics - [MA] Arizona	Acad	LEC 3.0 3.0 3.0	S

						Shared Unique Number SUN# MAT1142			
MAT145	2020 Summer	College Mathematics with Review		Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics, along with review of arithmetic and introductory algebra, as needed.	Prerequisites: None.	MAT145 students may receive credit for only one of the following: MAT140, MAT141, MAT142, MAT145, or MAT146. This course is designed for students that do not qualify for MAT141 or MAT142, but intend to complete MAT14+ College Mathematics for their degree path. Review of Basic Arithmetic and Introductory Algebra as needed.	Acad	LEC 5.0 5.0 5.0	S

MAT146	2020 Summer	College Mathematics with Review		Working knowledge of college-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include proportional reasoning, modeling, finance, probability, and statistics, along with review of arithmetic and introductory algebra, as needed.	Prerequisites: None.	MAT146 students may receive credit for only one of the following: MAT140, MAT141, MAT142, MAT145, or MAT146. This course is designed for students that do not qualify for MAT141 or MAT142, but intend to complete MAT14+ College Mathematics for their degree path. Review of Basic Arithmetic and Introductory Algebra as needed.	Acad	LEC 6.0 6.0 6.0	S
MAT150	2022 Fall	College Algebra/Functions		Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power,	Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or	Students may receive credit for only one	Acad	LEC 5.0 5.0 5.0	S

				absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems.	MAT12+, OR an appropriate district placement for MAT15+, OR permission of Department or Division Chair.	of the following: MAT150, OR MAT151, OR MAT152, OR MAT155, OR MAT156.			
MAT151	2022 Fall	College Algebra/Functions		Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems.	Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, OR an appropriate district placement for MAT15+, OR permission of Department or Division Chair.	Students may receive credit for only one of the following: MAT150, OR MAT151, OR MAT152, OR MAT155, OR MAT156.	Acad	LEC 4.0 4.0 4.0	S
MAT152	2022 Fall	College Algebra/Functions		Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems.	Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT114, or MAT115, or MAT12+, OR an appropriate district placement for MAT15+, OR permission of Department or Division Chair.	Students may receive credit for only one of the following: MAT150, OR MAT151, OR MAT152, OR MAT155, OR MAT156.	Acad	LEC 3.0 3.0 3.0	S
MAT155	2022 Fall	College Algebra/Functions with Review		Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-	Prerequisites: A grade of C or better in (MAT055,	Students may receive	Acad	LEC 5.0	S

				order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems.	MAT056, and MAT057), or MAT09+, or MAT114, or MAT115, or an appropriate district placement for MAT120 or MAT121 or MAT122, or permission of Department/Division Chair.	credit for only one of the following: MAT150, OR MAT151, OR MAT152, OR MAT155, OR MAT156. This course is designed for students that do not qualify for MAT150 or MAT151 or MAT152, but intend to complete MAT15+ College Algebra for their degree path. Review of MAT12+ Intermediate Algebra as needed.		5.0 5.0	
MAT156	2022 Fall	College Algebra/Functions with Review		Analysis and interpretation of the behavior and nature of functions including linear, quadratic, higher-order polynomials, rational, exponential, logarithmic, power, absolute value, and piecewise-	Prerequisites: A grade of C or better in each of the following: (MAT055, MAT056, and MAT057), OR	Students may receive credit for only one of the	Acad	LEC 6.0 6.0 6.0	S

				defined functions; systems of equations, using multiple methods including matrices, and modeling and solving real world problems, along with review of intermediate algebra, as needed.	MAT09+ or MAT114 or MAT115, OR an appropriate district placement for MAT120 or MAT121 or MAT122, OR permission of Department or Division Chair.	following: MAT150, OR MAT151, OR MAT152, OR MAT155, OR MAT156. This course is designed for students that do not qualify for MAT150 or MAT151 or MAT152, but intend to complete MAT15+ College Algebra for their degree path. Review of MAT12+ Intermediate Algebra as needed.			
MAT172	2019 Fall	Finite Mathematics		An introduction to the mathematics required for the study of social and behavioral sciences. Includes combinatorics, probability, descriptive statistics, matrix algebra, linear programming and the mathematics of finance. Includes applications of technology in problem-solving.	Prerequisites: A grade of C or better in (MAT150 or MAT151 or MAT151AA or MAT151AB or MAT151AC or MAT151AD or MAT152 or MAT155	Course Attribute(s): General Education Designation: Mathematics - [MA]	Acad	LEC 3.0 3.0 3.0	S

					or MAT156), OR MAT187, OR an appropriate district placement.				
MAT182	2019 Fall	Plane Trigonometry		A study of measures of angles, properties of graphs of trigonometric functions, fundamental identities, addition and half-angle formulas, inverse trigonometric functions, solutions of trigonometric equations, complex numbers and properties of triangle solution. May receive credit for only one of the following: MAT182 or MAT187.	Prerequisites: A grade of C or better in (MAT150 or MAT151 or MAT151AA or MAT151AB or MAT151AC or MAT151AD or MAT152 or MAT155 or MAT156), OR an appropriate district placement. Corequisites: (MAT150 or MAT151 or MAT151AA or MAT151AB or MAT151AC or MAT151AD or MAT152 or MAT155 or MAT156).	MAT182 students may receive credit for only one of the following: MAT182 or MAT187. Course Attribute(s): Course Attribute(s): General Education Designation: Mathematics - [MA] in combination with: MAT150 or MAT151 or MAT152 or MAT155 or MAT156	Acad	LEC 3.0 3.0 3.0	S
MAT187	2024 Fall	Precalculus		Topics in algebra and trigonometry in preparation for calculus.	Prerequisites: A grade of C or better in MAT15+, or an appropriate district placement.		Acad	LEC 5.0 5.0 5.0	S
MAT188	2023 Fall	Precalculus		Topics in algebra and trigonometry in preparation for calculus.	Prerequisites: A grade of C or better in MAT 15+, OR an	Students may receive credit for	Acad	LEC 4.0 4.0 4.0	S

					appropriate district placement.	only one of the following: MAT182 OR MAT187 OR MAT188. Course Attributes: General Education Designation: Mathematics - [MA]			
MAT206	2020 Summer	Elements of Statistics		Basic concepts and applications of statistics, including data description, estimation and hypothesis tests.	Prerequisites: A grade of C or better in MAT14+, or MAT15+, or MAT187, or equivalent, or an appropriate District placement, or permission of Department/Division Chair.	Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS] Course Attribute(s): Arizona Shared Unique Number SUN#: MAT 1160	Acad	LEC 3.0 3.0 3.0	S
MAT212	2020 Summer	Brief Calculus		Introduction to the theory, techniques and applications of the differential and integral calculus of functions with problems related to business, life, and the social sciences.	Prerequisites: A grade of C or better in MAT15+, or MAT187, or an appropriate District placement.	Students may receive credit for only one of the following: MAT212 or MAT213.	Acad	LEC 3.0 3.0 3.0	S

						Course Attribute(s): General Education Designation: Mathematics - [MA] Arizona Shared Unique Number SUN# 2212			
MAT213	2020 Summer	Brief Calculus		Introduction to the theory, techniques, and applications of the differential and integral calculus of functions with problems related to business, life, and the social sciences.	Prerequisites: A grade of C or better in MAT15+, or MAT187, or an appropriate District placement.	Students may receive credit for only one of the following: MAT212 or MAT213. Course Attribute(s): General Education Designation: Mathematics - [MA] Arizona Shared Unique Number SUN# 2212	Acad	LEC 4.0 4.0 4.0	S
MAT217	2021 Fall	Mathematical Analysis for Business		An introduction to the mathematics required for the study of business. Includes multivariable optimization, Lagrange multipliers, linear programming, linear algebra, probability, random variables, discrete and continuous distributions.	Prerequisites: A grade of C or better in MAT212, or MAT213, or MAT220, or MAT221.	Students may receive credit for only one of the following: MAT217	Acad	LEC 3.0 3.0 3.0	S

						or MAT218.			
MAT218	2021 Fall	Mathematical Analysis for Business		An introduction to the mathematics required for the study of business. Includes multivariable optimization, Lagrange multipliers, linear programming, linear algebra, probability, random variables, discrete and continuous distributions.	Prerequisites: A grade of C or better in MAT212, or MAT213, or MAT220, or MAT221.	Students may receive credit for only one of the following: MAT217 or MAT218.	Acad	LEC 4.0 4.0 4.0	S
MAT220	2023 Fall	Calculus with Analytic Geometry I		Limits, continuity, differential and integral calculus of functions of one variable.	Prerequisites: A grade of C or better in MAT187 or MAT188 or an appropriate District placement.	Course Notes: Students may receive credit for only one of the following: MAT220 OR MAT221. Course Attributes: General Education Designation: Mathematics - [MA] Arizona Shared Unique Number SUN# MAT 2220	Acad	LEC 5.0 5.0 5.0	S
MAT221	2023 Fall	Calculus with Analytic Geometry I		Limits, continuity, differential and integral calculus of functions of one variable.	Prerequisites: A grade of C or better in MAT187 or MAT188 or an appropriate District placement.	Students may receive credit for only one of the following: MAT220,	Acad	LEC 4.0 4.0 4.0	S

						or MAT221. Course Attributes: General Education Designatio n: Mathemati cs - [MA] Arizona Shared Unique Number SUN# MAT 2220			
MAT225	2021 Fall	Elementary Linear Algebra		Introduction to matrices, systems of linear equations, determinants, vector spaces, linear transformations and eigenvalues. Emphasizes the development of computational skills.	Prerequisites: A grade of C or better in MAT212 or MAT213 or MAT220 or MAT221, or equivalent.		Acad	LEC 3.0 3.0 3.0	S
MAT227	2020 Spring	Discrete Mathematical Structures		Course emphasizes discrete mathematics connections to computer science by exposing students to foundational concepts of set theory, logic, counting, induction, proof techniques, graph theory, and algorithms.	Prerequisites: A grade of C or better in MAT212, or MAT213, or MAT220, or MAT221, or permission of Department or Division Chair.		Acad	LEC 3.0 3.0 3.0	S
MAT230	2022 Fall	Calculus with Analytic Geometry II		Techniques of integration for both proper and improper integrals with applications to the physical and social sciences, elements of analytic geometry, and the analysis of sequences and series.	Prerequisites: A grade of C or better in MAT220 or MAT221 or equivalent.	Students may receive credit for only one of the following: MAT230 or MAT231 Course Attribute(s): General Education Designatio n:	Acad	LEC 5.0 5.0 5.0	S

						Mathematics - [MA] Arizona Shared Unique Number SUN#: MAT 2230			
MAT231	2022 Fall	Calculus with Analytic Geometry II		Techniques of integration for both proper and improper integrals with applications to the physical and social sciences, elements of analytic geometry, and the analysis of sequences and series.	Prerequisites: A grade of C or better in MAT220 or MAT221 or equivalent.	MAT231 student may receive credit for only one of the following: MAT230 or MAT231. General Education Designation: Mathematics - [MA] Arizona Shared Unique Number SUN# MAT 2230	Acad	LEC 4.0 4.0 4.0	S
MAT240	2008 Fall	Calculus with Analytic Geometry III		Multivariate calculus including vectors, vector-valued functions, partial differentiation, multiple integration, and an introduction to vector fields.	Prerequisites: A grade of C or better in Grade of C or better in MAT230 or MAT231.	MAT240 student may receive credit for only one of the following: MAT240 or MAT241. Course Attribute(s): General Education	Acad	LEC 5.0 5.0 5.0	S

						Designation: Mathematics - [MA]			
MAT241	2011 Fall	Calculus with Analytic Geometry III		Multivariate calculus including vectors, vector-valued functions, partial differentiation, multiple integration and an introduction to vector fields.	Prerequisites: A grade of C or better in MAT230 or MAT231.	Students may receive credit for only one of the following: MAT240 or MAT241. Course Attribute(s): General Education Designation: Mathematics - [MA] Arizona Shared Unique Number SUN#: MAT 2241	Acad	LEC 4.0 4.0 4.0	S
MAT256	2021 Spring	Investigating Quantity: Number, Operations and Numeration Systems		Explore number, numeration systems and operations on numbers. Techniques of problem solving with an emphasis on exploring a variety of strategies. Use a variety of visualization techniques to develop a conceptual understanding of these topics.	Prerequisites: A grade of C or better in (MAT15+ or higher), or (MAT12+ and MAT14+), or [MAT14+ and (MAT114 or MAT115)], or (MAT14+ and an appropriate District placement into MAT150, MAT151, or MAT152), or permission of Department/Division Chair.	MAT256 is designed to meet requirements for prospective elementary education teachers.	Acad	LEC 4.0 4.0 4.0	S
MAT257	2020 Summer	Investigating Geometry,		Explores geometry, measurement, probability and statistics. Uses	Prerequisites: A grade of C or better	MAT257 is	Acad	LEC 4.0	S

		Probability and Statistics		visualization, technologies, problem solving, reasoning and proof to develop a conceptual understanding of these topics.	in MAT256 or permission of Department/Division Chair.	designed to meet the requirements for prospective elementary education teachers.		4.0 4.0	
MAT276	2009 Fall	Modern Differential Equations		Introduces differential equations, theoretical and practical solution techniques with applications. Problem solving using MATLAB.	Prerequisites: A grade of C or better in MAT230 or MAT231 or permission of Department/Division Chair.	Course Attribute(s): General Education Designation: Mathematics - [MA]	Acad	LEC 4.0 4.0 4.0	S
MAT277	2009 Fall	Modern Differential Equations		Introduces differential equations, theoretical and practical solution techniques with applications. Problem solving using MATLAB.	Prerequisites: A grade of C or better in MAT230 or MAT231 or permission of Department/Division Chair.	Course Attribute(s): General Education Designation: Mathematics - [MA]	Acad	LEC 3.0 3.0 3.0	S
MAT280	2022 Fall	Foundational Statistics for Engineers	ECE280	Fundamentals of probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, regression analysis, analysis of variance, and design of experiments.	Prerequisites: A grade of C or better in MAT220, or MAT221, or equivalent.		Acad	L+L 3.0 5.0 5.0	T
MAT282AA	2014 Summer	Service-Learning Experience in Mathematics		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	MAT282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedure	Acad	LAB 1.0 1.0 0.0	L

						s outlined in catalog.			
MAT282AB	2014 Summer	Service-Learning Experience in Mathematics		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	MAT282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L
MAT282AC	2014 Summer	Service-Learning Experience in Mathematics		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	MAT282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
MAT295	2020 Summer	Special Topics in Mathematics		Conceptual and computational aspects of a special topic in modern mathematics.	Prerequisites: Permission of Department/Division Chair.		Acad	LEC 1.0 1.0 1.0	S
MAT298AA	2020 Summer	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Department/Division Chair.		Acad	LAB 1.0 1.0 0.0	Z

				combined to maximize student development.					
MAT298AB	2020 Summer	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Department/Division Chair.		Acad	LAB 2.0 2.0 0.0	Z
MAT298AC	2020 Summer	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Department/Division Chair.	MAT298A C may be repeated for a total of six (6) credit hours.	Acad	LAB 3.0 3.0 0.0	Z
MAT305	2025 Fall	Mathematics for Machine Learning	BAM305	Advanced mathematical concepts essential for understanding and applying techniques in machine learning using Python programming language. Focus on vector-based calculus, probability distributions, continuous optimization, and information theory.	Prerequisites: A grade of C or better in (AIM250 and MAT227) or permission of Program Director.		Acad	L+L 3.0 4.0 4.0	T
MCO120	2022 Fall	Media and Society		Study of historical and contemporary roles of media and its pervasiveness in society as it relates to culture, politics and education.	Prerequisites: Eligibility for ENG101 or ENG107 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
MCO220	2016 Fall	Cultural Diversity and the Media		Images of the diverse cultures and gender issues within the U.S. media. Exploration of racial and gender roles which shape the media as well as media roles which influence U.S. race relations and racial change. Roles,	Prerequisites: A grade of C or better in ENG101 or ENG107.	Course Attribute(s): General Education Designation: Cultural Diversity -	Occ	LEC 3.0 3.0 3.0	S

				contributions, and challenges of the minority press in the United States.		[C] General Education Designatio n: Literacy and Critical Inquiry - [L]			
MCO296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
MCO296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class		Occ	LAB 2.0 10.0 0.0	Z

					which is related to students major or career interest or with permission of Instructor.				
MCO296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
MCO296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with		Occ	LAB 4.0 20.0 0.0	Z

					permission of Instructor.				
MCO298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
MCO298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
MCO298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
MCP100	2022 Fall	Basics of Meat Cutting		Fundamentals of meat department safety and sanitation. Introduction to power and hand tools, equipment breakdown and setup, meat department operations, teamwork, and customer service.	Prerequisites: None.		CLK	146	
MCP101	2022 Fall	Introduction to Meat Clerk		Introduction to the retail meat environment, weight conversions,	Prerequisite: None.		CLK	146	

				meat processing, inventory control, basic knife skills, packaging, stocking, and merchandising skills. Emphasis on accuracy, quality, and productivity.					
MCP103	2022 Fall	Meat Fabrication		Reinforcement of skills for processing cuts of meat, including specialized cuts of meat. Course emphasizes sanitation, accuracy, quality, productivity, retail sales, and customer service.	Prerequisites: None.		CLK	176	
MCP104	2022 Fall	Merchandising		Advanced cutting, wrapping, weighing, and displaying retail cuts of meat. Topics include sanitation, accuracy, quality control, productivity, retail sales, and customer service.	Prerequisites: None.		CLK	176	
MDC103	2024 Fall	Introduction to Medical Assisting		This course develops the foundation of healthcare through an understanding of anatomy and physiology, medical terminology, application of basic pathophysiology as it relates to entry-level medical assisting, emergency preparedness, and demonstration of CPR completion. Medical terminology as it relates to structures, functions, diseases, procedures, and diagnostic testing. Building and analyzing terms using word parts. Medical abbreviations, symbols and correct spelling and pronunciation, Professionalism in healthcare to ensure students are ready to enter the professional workplace including etiquette, image, manners, communication, professional relationships, responsibility and accountability, respectfulness, patient privacy. Empathy, compassion and emotional maturity specific to the healthcare setting. Focus on development of personal and professional communication skills and an understanding of how effective communication skills promote teamwork. Additional focus on	Program admission, and successful completion of RDG100 or higher or appropriate reading placement into CRE101. Health and Safety Documentation uploaded to American DataBank and verified prior to being enrolled in the class.	Health and Safety Documentation Required - Documents listed below should be uploaded into American DataBank at least 3 weeks prior to class start and must be uploaded and verified before enrollment can occur: MMR (measles, mumps, rubella) Varicella	CLK	156	

				intercultural communication strategies.		(chickenpox) TDaP (tetanus, diphtheria, pertussis) Influenza (flu) Two Step TB (tuberculosis) Hep B Series (hepatitis B) Basic Life Support (BLS) Provider CPR certification Level One Fingerprint Clearance Card			
MDC104	2022 Fall	Fundamentals of Administrative Medical Assisting		This course explores fundamental administrative procedures in various healthcare settings. Overview of the daily operations, principles and procedures for administrative skills including: medical record management, introduction to the electronic health record (EHR), and application of insurance, coding and billing. Basic administrative office policies, procedures, appointment scheduling, telephone etiquette, patient reception, financial practices, third party payers, health insurance, and basic understanding of medical billing and coding. Health organization structure, patient rights and quality care. Definition and importance of values, basic understanding of medical law and ethics.	Prerequisites: MDC103.		CLK	159	

MDC105	2022 Fall	Fundamentals of Clinical Medical Assisting I		<p>Overview of the daily operations, principles and procedures for clinical medical assisting, including: compliance with Occupational Safety and Health Administration (OSHA), the Centers for Disease Control and Prevention (CDC), and Clinical Laboratory Improvement Amendments (CLIA). Infection control practices including, proper disposal of biohazardous materials and sharps, aseptic handwashing, appropriate application of personal protective equipment (PPE), blood borne pathogens, fomites, chain of infection, setting up and maintaining a sterile field, surgical instrument identification and sterilization, sterile techniques, and application of sterile gloves. Definition, application and importance of performing vital signs accurately (blood pressure, pulse, respirations, temperature, pulse oximetry, height and weight). Basic understanding of the fundamental concepts of nutrition and diet as they relate to human health and disease.</p>	Prerequisites: A grade of C or better in MDC104.		CLK	141	
MDC106	2020 Fall 1	Fundamentals of Clinical Medical Assisting II		<p>This course explores all aspects of clinical medical assisting skills, concepts, and procedures in a simulated healthcare setting. Topics include medical specialty practices and basic point-of-care testing (POCT), specimen collection and handling while complying with state and federal government agencies. The course also explores principles and procedures for basic dosage calculation and medication administration specific to medical assisting. Theory and practice of basic phlebotomy procedures and equipment. This course prepares students for the medical assisting national credential examination, and</p>	Prerequisites: MDC105.		CLK	205	

				provides tools and strategies for gainful employment.					
MDC106DC	2022 Fall	Fundamentals of Clinical Medical Assisting II		This course explores all aspects of clinical medical assisting skills, concepts, and procedures in a simulated healthcare setting. Topics include medical specialty practices and basic point-of-care testing (POCT), specimen collection and handling while complying with state and federal government agencies. The course also explores principles and procedures for basic dosage calculation and medication administration specific to medical assisting. Theory and practice of basic phlebotomy procedures and equipment. This course prepares students for the medical assisting national credential examination, and provides tools and strategies for gainful employment.	Prerequisites: MDC105.		CLK	174	
MDC130	2023 Fall	Medical Assisting Practicum		This course prepares and engages students in a practicum experience with an opportunity to apply both clinical and administrative skills and concepts which include the application of duties, procedures, and knowledge derived from program coursework.	Prerequisites: A grade of C or better in MDC106 or MDC120 with a P grade. Students are responsible to maintain the requirements of the background check, fingerprint clearance card, and health and safety documentation throughout the practicum experience.	Practicum hours are site-specific. The days of the week are Monday through Friday. The instructor will provide site assignment/location.	CLK	200	
MDL190	2015 Fall	Clinical Laboratory Operations		Overview of laboratory services, laboratory professionals, and the role of a medical laboratory technician (clinical laboratory technician). Understanding of health care reform, reimbursement, cost analysis, coding,	Prerequisites: Acceptance into the Medical Laboratory Science program and permission of Program Director.		Occ	LEC 2.0 2.0 2.0	S

				credentialing, accreditation, and regulatory agencies. Emphasis on process improvement, laboratory mathematics, statistics, documentation, medico-legal implications, education, management and personnel, and specimen integrity. Application of pre-analytical, analytical, and post-analytical principles, infection control, and laboratory safety. Recognition of acceptable quality control and quality management principles, phlebotomy principles, and lab equipment, glassware, labware, and water purification. Includes information systems and information management in laboratories. Importance of professional growth, communicating with the patient and public, and ethical conduct.					
MDL240	2018 Fall	Clinical Urinalysis and Body Fluid Analysis		Examines anatomy and physiology of the renal system, renal diseases, and renal function tests. Emphasis on interpretation, evaluation, and reporting of urinalysis and body fluid results, urine and body fluid collection techniques, types, specimen handling and preservation, and instrument calibration, maintenance, and quality control. Application of body fluid analyses, and chemical and microscopic analysis of urine.	Prerequisites: A grade of C or better in MDL190, acceptance into the Medical Laboratory Science program, and permission of the Program Director.		Occ	L+L 3.0 5.0 5.0	T
MDL241	2015 Fall	Practicum: Clinical Urinalysis and Body Fluid Analysis		Practicum experience in clinical urinalysis and body fluid analysis based in healthcare facilities or reference laboratories. Assessment of anatomy and physiology of the renal system, renal diseases, and renal function tests. Performance of interpretation, evaluation, and reporting of urinalysis and body fluid results, urine and body fluid collection techniques, types, specimen handling and preservation, and instrument calibration, maintenance, and quality	Prerequisites: A grade of C or better in MDL240, acceptance into the Medical Laboratory Science program, and permission of the Program Director.		Occ	LAB 1.0 6.0 0.0	C

				control. Performance of body fluid analyses and chemical and microscopic analysis of urine.					
MDL242	2018 Fall	Clinical Hematology and Hemostasis		Examines the anatomy and physiology of the hematopoietic and hemostasis systems, hematology and hemostasis case studies, anemia categories, and thrombocyte, hemostatic, and malignant and nonmalignant leukocyte disorders. Emphasis on interpreting, evaluating, and reporting hematology and hemostasis results, anticoagulant therapy, morphology, peripheral smear correlation with analyzer results and patient condition, erythrocyte indices, collection techniques, specimen handling, calibration, and quality control. Methods of analysis on hematology and hemostasis analyzers, and preventive maintenance.	Prerequisites: A grade of C or better in MDL240, acceptance into the Medical Laboratory Science program, and permission of the Program Director.		Occ	L+L 6.0 9.0 9.0	T
MDL243	2015 Fall	Practicum: Clinical Hematology and Hemostasis		Practicum experience in clinical hematology and hemostasis based in healthcare facilities or reference laboratories. Assessment of the anatomy and physiology of the hematopoietic and hemostasis systems, hematology case studies, anemia categories, and thrombocyte, malignant and nonmalignant leukocyte disorders. Application of interpreting, evaluating, and reporting hematology results, morphology, peripheral smear correlation with analyzer results, erythrocyte indices, collection techniques, specimen handling, calibration, and quality control. Emphasis on hematology and hemostasis analyzers, and preventive maintenance. Perform hematology and hemostasis analyses.	Prerequisites: A grade of C or better in MDL242, acceptance into the Medical Laboratory Science program, and permission of the Program Director.		Occ	LAB 1.0 6.0 0.0	C
MDL244	2018 Fall	Clinical Immunohematology and Immunology		Principles of immunity and immunologic testing. Causes of disorders of the immune system. Study of blood group antigens,	Prerequisites: A grade of C or better in MDL242, acceptance into the		Occ	L+L 6.0 9.0 9.0	T

				antibodies, and genetics. Understanding of donor blood collection, component preparation, and transfusion therapies. Performance of testing techniques and evaluation of data.	Medical Laboratory Science program, and permission of the Program Director.				
MDL245	2015 Fall	Practicum: Clinical Immunohematology and Immunology		Practicum in immunohematology and immunology in healthcare facilities or reference laboratories. Performance of clinical skills in immunity and immunologic testing, testing for disorders of the immune system, blood group antigens, antibodies, and genetics. Observation of donor blood collection, component preparation, and transfusion therapies. Performance of testing techniques and evaluation of data.	Prerequisites: A grade of C or better in MDL244, acceptance into the Medical Laboratory Science program, and permission of the Program Director.		Occ	LAB 1.0 6.0 0.0	C
MDL246	2018 Fall	Clinical Microbiology		Emphasis on microbial infectious and bioterrorism agents, classification, morphology, phenotyping, diseases, biotechnology and molecular technology, quality assurance and quality control, epidemiological significance, and regulatory standards. Application of antimicrobial, biochemical, and differential testing, drug resistance, selection, inoculation and incubation of culture media, isolation techniques, cell culture and viral detection tests, and macroscopic and microscopic evaluation. Emphasis on staining, rapid and commercial testing methods, safety precautions, specimen collection, handling, storage, and disposal of biological material, pretreatment, decontamination, and concentration techniques, specimen type, source, and common microbial flora, specimen acceptability, and instrumentation.	Prerequisites: A grade of C or better in MDL244, acceptance into the Medical Laboratory Science program, and permission of the Program Director.		Occ	L+L 6.0 9.0 9.0	T
MDL247	2015 Fall	Practicum: Clinical Microbiology		Practicum experience in clinical microbiology based in healthcare facilities or reference laboratories.	Prerequisites: A grade of C or better in MDL246,		Occ	LAB 1.0	C

				Emphasis on microbial infectious and bioterrorism agents, classification, morphology, phenotyping, diseases, biotechnology and molecular technology, quality assurance and quality control, epidemiological significance, and regulatory standards. Application of antimicrobial, biochemical, and differential testing, drug resistance, selection, inoculation and incubation of culture media, isolation techniques, cell culture and viral detection tests, and macroscopic and microscopic evaluation. Procedures for staining, rapid and commercial testing methods, safety precautions, specimen collection, handling, storage, and disposal of biological material, pretreatment, decontamination, and concentration techniques, specimen type, source, and common microbial flora, specimen acceptability, and instrumentation.	acceptance into the Medical Laboratory Science program, and permission of the Program Director.			9.0 0.0	
MDL248	2018 Fall	Clinical Chemistry		Principles and procedures of clinical chemistry and testing for diseases of protein, nonprotein nitrogen compounds, lipid, glucose, bilirubin, liver disease, cardiac and endocrine function, toxicology, therapeutic drug monitoring, acid base balance, electrolytes, and trace elements. Emphasis on quality assurance, quality control, mathematics and statistical analysis, specimen collection, and preanalytical processes. Study of immunoassays, nucleic acid probes, viral and tumor markers, automation of analytical techniques, spectrophotometry, genetic diseases and inborn errors of metabolism, and point-of-care testing. Use of reagents, equipment, supplies, and units of measure.	Prerequisites: A grade of C or better in MDL246, acceptance into the Medical Laboratory Science program, and permission of the Program Director.		Occ	L+L 6.0 9.0 9.0	T

MDL249	2015 Fall	Practicum: Clinical Chemistry		Practicum in clinical chemistry based in healthcare facilities or reference laboratories. Performance of clinical skills in clinical chemistry and testing for diseases of protein, nonprotein nitrogen compounds, lipid, glucose, bilirubin, liver disease, cardiac and endocrine function, toxicology, therapeutic drug monitoring, acid base balance, electrolytes, genetic diseases and inborn errors of metabolism, and trace elements. Application of quality assurance, quality control, mathematics and statistical analysis, specimen collection, and preanalytical processes. Performance of immunoassays, nucleic acid probes, viral and tumor markers, automation of analytical techniques, spectrophotometry, and point-of-care testing. Use of reagents, equipment, supplies, and units of measure.	Prerequisites: A grade of C or better in MDL248, acceptance into the Medical Laboratory Science program, and permission of Program Director.		Occ	LAB 1.0 9.0 0.0	C
MDL252	2018 Fall	Clinical Preparation I		Examines clinical laboratory testing in a simulated laboratory environment. Emphasis on interpretation, evaluation, and reporting of a variety of laboratory results, and includes instrument calibration, maintenance, and quality control.	Prerequisites: A grade of C or better in MDL244, acceptance into the Medical Laboratory Science program, and permission of Program Director.		Occ	L+L 0.5 2.5 2.5	T
MDL263	2018 Fall	Clinical Preparation II		Continuation of examination of clinical laboratory testing in a simulated laboratory environment. Emphasis on interpretation, evaluation, and reporting of a variety of laboratory results, and includes instrument calibration, maintenance, and quality control.	Prerequisites: A grade of C or better in MDL248, acceptance into the Medical Laboratory Science program, and permission of Program Director.		Occ	L+L 0.5 2.5 2.5	T
MDL290	2015 Fall	Medical Laboratory Science Program Review		Preparation for the professional practice national examinations. Topics include methodologies, techniques, and problem solving relative to urinalysis; body fluids, hematology, hemostasis, immunohematology, immunology,	Prerequisites: A grade of C or better in (MDL247 and MDL249), acceptance into the Medical Laboratory Science program and		Occ	LEC 2.0 2.0 2.0	S

				microbiology, and chemistry. Development of a professional practice resume, personalized test taking strategies and examination study plan. Maintenance of professional competency and lifelong learning and enhancing professional practice.	permission of Program Director.				
MDL291	2015 Fall	Medical Laboratory Science Program Capstone		Preparation for the professional practice national examinations. Topics include methodologies, techniques, and problem solving relative to urinalysis; body fluids, hematology, hemostasis, immunohematology, immunology, microbiology, and chemistry. Development of personalized test taking strategies and examination study plan.	Prerequisites: A grade of C or better in (MDL247 and MDL249), acceptance into the Medical Laboratory Science program and permission of Program Director.		Occ	LEC 1.0 1.0 1.0	S
MDL295AA	2011 Fall	Special Topics: Medical Laboratory Science		Explores a special topic related to medical laboratory science. Topics vary and include concepts relevant to those advancing or pursuing careers in medical laboratory science.	Prerequisites: Permission of Program Director.	MDL295A A may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 2.0 1.7	S
MDL295AB	2011 Fall	Special Topics: Medical Laboratory Science		Explores a special topic related to medical laboratory science. Topics vary and include concepts relevant to those advancing or pursuing careers in medical laboratory science.	Prerequisites: Permission of Program Director.	MDL295A B may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 3.0 2.7	S
MDL295AC	2018 Fall	Special Topics: Medical Laboratory Science		Explores a special topic related to medical laboratory science. Topics vary and include concepts relevant to those advancing or pursuing careers in medical laboratory science.	Prerequisites: Permission of Program Director.	MDL295A C may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 4.0 4.0	T
MEC101	2004 Spring	HVAC I: Principles and Trade Calculations		Basic principles of heating, ventilating and air conditioning (HVAC). Trade calculations, algebraic and geometric equations, and scientific notation. Use and maintenance of HVAC trade tools.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S

MEC103	2004 Spring	HVAC II: Piping, Soldering, Brazing and Electrical		Application, preparation and joining of copper and plastic pipe. Soldering and brazing tools, materials, and procedures. Refrigeration cycle, furnace operation and maintenance. Use of multimeter and manometer. Electricity, electrical circuits, and electrical components. Measurement of voltage, current, resistance and circuit continuity. Ohm's Law.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
MEC105	2003 Summer I	Residential and Industrial Plumbing I		Plumbing practices, history, laws, codes, regulations and responsibility to the public. Usage and maintenance of hand and power tools. Workplace safety and Occupational Safety and Health Administration (OSHA) requirements. Application of basic plumbing calculations and principles of science as they relate to plumbing system installation and maintenance. Characteristics, advantages, disadvantages, and uses of pipe and tube. Fittings for cast-iron, glass, clay, concrete, copper, steel, plastic. Special materials and galvanic action. Piping connections	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
MEC106	2005 Spring	HVAC III: Systems		Air distribution systems, measurement instruments and venting and sizing. Gas-fired equipment, furnaces, heating, ventilating, and air conditioning (HVAC) systems, and electric heating systems. Alternating current (AC) motors, circuit components and testing instruments. Maintenance, safety, troubleshooting, and service techniques. Job documentation and customer relations	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
MEC107	2003 Summer I	Residential and Industrial Plumbing II		Application of advanced plumbing calculations to include percentages, conversions, fractions, decimals, square roots, circles, angles, measurement. First aid, personal safety, and Occupational Safety and Health Act (OSHA) guidelines. Materials handling, usage,	Prerequisites: A grade of C or better in MEC105.		Occ	LEC 5.0 5.0 5.0	S

				advantages, and disadvantages. Fixtures I, II, III, fittings, accessories, and valves. Blueprint reading and freehand, finished, and detailed sketching					
MEC108	2004 Spring	Residential and Industrial Plumbing III		Water piping materials. Sources and treatment of public, private, and individual water systems. Water distribution and supply systems. Cross-connection protection and pipe identification. Hot water heaters. Sanitary drainage systems. Plumbing calculations and blueprint reading.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
MEC118	2004 Fall	Residential and Industrial Plumbing IV		Properties of water and plumbing traps. Air, air chamber, and sizing. High and low level pressure measurement. Manometer, gauge selection and use. Vibration, turbulence, and water hammer. Roof, floor and area drains. Oil and gas fuel systems.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
MEC119	2003 Spring	Basic Safety	ABC119	Overview of safety rules and procedures for working on construction job sites	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
MEC120	2020 Fall	Basic Calculations for Construction	ABC120 PNT120	Addition, subtraction, multiplication and division of whole, decimal, fraction and metric numbers. Percentage and fraction conversions. Metric units of length, weight, volume and temperature. Metric system as it relates to the construction trade. Basic algebra and geometry operations and equations. Area and volume calculations of shapes.	Prerequisites: None.		Occ	L+L 1.5 1.5 1.5	T
MEC121	2014 Fall	Introduction to Hand and Power Tools	ABC121 PNT121	Overview of the use, maintenance and safety procedures for common hand and power tools.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
MEC122	2022 Fall	Rigging Safety and Equipment	ABC122	Rigging safety, equipment and inspection. Includes crane hand signals, common rope knots, types of	Prerequisites: Registered apprentice status or		Occ	LEC 1.0	S

				derricks and cranes and safety procedures for rigging and moving materials and equipment	permission of the Apprenticeship Coordinator.			1.0 1.0	
MEC124	2021 Fall	HVAC IV: Equipment, Devices, Compressors and Pumps		Heat transfer and human comfort. Humidifiers and humidity. Air filters and air filter friction loss. Metering devices and expansion valves. Thermal expansion valves. Compressors and heat pumps. Installation, adjustment, replacement, service, troubleshooting. Reverse-cycling. Leak detection, evacuation, recovery, and charging heating, ventilating, and air conditioning (HVAC) systems. Service equipment of HVAC systems.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
MEC201	2023 Fall	HVAC V: Maintenance and Troubleshooting		Tools, instruments, equipment, components, procedures, materials, and tasks for preventative maintenance and troubleshooting of heating, ventilating and air conditioning (HVAC) systems. Microprocessor, gas, electric, and oil heating systems. Furnaces, electric heater packages for cooling, and heat pumps.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
MEC203	2023 Fall	HVAC VI: Troubleshooting Heating and Cooling Systems		Cooling and heating systems; heat pumps, Heating, Ventilation and Air Conditioning (HVAC) systems and accessories. Commercial heating and cooling systems. Air and water balancing systems. Steam systems. Customer relations.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
MEC205	2005 Spring	Residential and Industrial Plumbing V		Gas and plumbing code requirements. Residential, commercial, industrial, institutional plumbing practices. Fixtures, appliances, fixture fittings, valves, and trim. Gas piping installation, pipe sizing, pipe fittings and connections, appliances, regulators, meters, controls, and corrosion. Advanced plumbing calculations. Specific plumbing systems and specialized water systems	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S

MEC206	2023 Fall	HVAC VII: Air Quality and Energy Conservation		Advanced blueprint reading. Architectural, plumbing, mechanical, and electrical drawings. Submittal, transfer and design. Indoor air quality. Heating, Ventilating and Air Conditioning (HVAC) equipment, components, accessories and systems. Introduction to computers and computer networks. Energy conservation and management.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
MEC207	2005 Spring	Residential and Industrial Plumbing VI		Advanced plumbing calculations. Offsets, tank capacities, volume and weight, rations and proportions, sizing, and piping expansion. Energy, temperature, heat transfer, stratification, multiple heaters, and recirculation. Basic electricity and troubleshooting. Safety, current, motors, circuits, humidity and condensation. Plumbing, electrical, heating/ventilation/air conditioning (HVAC), and detail blueprints. Specialized plumbing	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
MEC208	2006 Spring	Residential and Industrial Plumbing VII		General considerations, leaks and drainage. Installation, repair, and service of residential, commercial, industrial, and institutional heating systems. In-ground and above-ground water piping, drainage, waste and vent. Fuel gas piping, lead products, water heaters, waste stoppages, and water hammer. Blueprint reading. Installation of waste systems. Interceptors and backwater valves. Heating systems. Water protection, and conservation in heating systems	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
MEC218	2006 Fall	Residential and Industrial Plumbing VIII		Hydraulic and plumbing theory. Pumps, uses, and design. Pump performance curves, pump installation, and maintenance. Advanced blueprint reading, sketching, and material estimating. Plumbing code. Installation code requirements. Specialty plumbing	Prerequisites: A grade of C or better in MEC208.		Occ	LEC 5.0 5.0 5.0	S

MEC224	2023 Fall	HVAC VIII: Water Treatment and HVAC Design		Water problems, remedies, maintenance, and treatment. Commercial water and steam systems. Inspection and evaluation. System start up and shutdown. Cooling towers; evaporative condensers, boilers, chillers, air handlers and forced air systems. Components, accessories and design factors. Refrigerants and oils. Load calculations. Commercial and industrial refrigeration.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	S
MFC101	2023 Fall	Technical Documentation		Analysis and interpretation of technical drawings (prints) common to manufacturing. Mathematical calculations for determining dimensions. Introduction and application of geometric dimensioning and tolerancing (GD&T).	Prerequisites: None.		CLK	84	
MFC110	2023 Fall	Inspection Techniques		Set-up and use of inspection tools and equipment per current industry standards. Selection, completion and interpretation of information from inspection forms.	Prerequisites: None.		CLK	72	
MFC111	2020 Fall 1	Geometric Dimensioning and Tolerance (GDT)		Controls of geometric dimensioning and tolerance (GDT) including the form, orientation, profile and location. Includes qualifying controls per engineering documentation for the American Society of Mechanical Engineers (ASME) Y14.5 2009 Standard.	Prerequisites: None.		CLK	102	
MFC113	2023 Fall	Coordinate Measuring Machines I		Fundamentals and general aspects of coordinate measuring machines (CMM). Basic measuring techniques and operation, including conformance to geometric dimensioning and tolerancing requirements using both manual and programmable (automatic) coordinate measuring machines.	Prerequisites: None.		CLK	84	
MFC120	2023 Fall	Introduction to Manual Machining		Introduces manual machining operations related to drilling, grinding, sawing, milling, and lathe processes. Development of fundamental skills, practices and safety applications in	Prerequisites: None.		CLK	168	

				working with manual machine tools, hand tools, and related equipment common to manufacturing. Provides theoretical and practical experiences related to the machining of various material types to produce a product to industry standards.					
MFC130	2020 Fall 1	CNC Machine Operator		Designed to provide a fast-track to fundamental knowledge and skills necessary for entry-level, machine operator positions. Introduction to print reading, inspection, and safe startup and operation of multi-axis computer numerical control (CNC) machines. Topics include two and three-axis program interpretation and application, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: None.		CLK	150	
MFC131	2024 Fall	CNC Machining Level I		Introduction to safe startup and operation of multi-axis computer numerical control (CNC) machines. Topics include two and three-axis program interpretation and application, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: None.		CLK	216	
MFC131DC	2023 Fall	CNC Machining Level I		Introduction to safe startup and operation of multi-axis computer numerical control (CNC) machines. Topics include two and three-axis program interpretation and application, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: None.		CLK	216	
MFC140	2020 Fall 1	Manual CNC Programming		Introduction to manual computer numerical control (CNC) programming of word address language (G&M code) for CNC machine tools. Multi-axis CNC programming for CNC controlled machines. Computer based tool path verification, CNC controller tool path verification and CNC machine tool program verification.	Prerequisites: None.		CLK	67	
MFC140DC	2023 Fall	Manual CNC Programming		Introduction to manual computer numerical control (CNC) programming	Prerequisites: None.		CLK	67	

				of word address language (G&M code) for CNC machine tools. Multi-axis CNC programming for CNC controlled machines. Computer based tool path verification, CNC controller tool path verification and CNC machine tool program verification.					
MGT101	1996 Spring	Techniques of Supervision		Overview of the foundations of supervision and how to get things done within an organization through other people. The functions of planning, organizing, staffing, motivating and controlling presented	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
MGT105	2016 Fall	Leadership for Citizenship		Characteristics and types of leaders, responsibilities of leadership, and ethics of leadership as related to citizenship	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
MGT109	2018 Fall	Development of Professional Skills and Standards		Explores the skills and qualities necessary to develop and maintain a successful professional life. Topics include management/leadership skill development, effective job search, image development, career advancement, gender issues, professional conduct, time/financial management, and human relations	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
MGT126	2018 Fall	Customer Service Skills and Strategies		Explores strategies to help improve job performance and develop a service-oriented philosophy. Uses practical training concepts and techniques to demonstrate how superior customer service can lead to competitive advantage and profitability in business. Focuses on both internal and external customers, interactions among people, processes, and systems within the organization and how to integrate these areas into a total quality delivery program	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
MGT147	2003 Fall	Supply Chain Management		Supply chain management, including basic concepts and underlying principles of logistics and inventory management	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
MGT148	2018 Spring	Office Ethics and Culture		Ethical issues and standards in the office; making ethical choices.	Prerequisites: None.		Occ	LEC 2.0	S

				Relationships and attitudes in the office. Office politics.				2.0 2.0	
MGT157	2018 Fall	Introduction to Statistical Analysis of Clinical and Bioscience Data for Managers		Introduction to basic concepts and applications of statistics, including data description, estimation probability as techniques for managing, collecting, summarizing and interpreting data. Includes the use of statistical computer software (e.g., SAS) used for the management, analysis and reporting of clinical and bioscience informatics data.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
MGT160	2018 Fall	Project Management		Examination of concepts and methodologies for effective project management. Project planning and management from contract negotiations through project completion, including communications, human resources, management, and project scheduling as well as risk and financial management	Prerequisites: Permission of Department or Division.		Occ	L+L 3.0 3.0 3.0	T
MGT175	1994 Fall	Business Organization and Management		Covers basic principles of managing quality and performance in organizations. Covers management functions: planning, organizing, leading, and controlling. Emphasizes continual improvement, ethics, and social responsibility	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
MGT180	2015 Fall	Retail Management		The role of management in retailing and retail performance. Challenges and processes of retail management across various institutions.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
MGT227	2011 Spring	Training and Instructional Design for Health Information Technology		Overview of learning management systems, instructional design software tools, teaching techniques and strategies, evaluation of learner competencies, maintenance of training records, and measurement of training program effectiveness.	Prerequisites: Permission of Program Director or Instructor.		Occ	LEC 3.0 3.0 3.0	S
MGT228	2011 Spring	Management, Planning, and Leadership for Health Information Technology		Principles of leadership and effective management of teams for Health Information Technology. Emphasis on the leadership modes and styles best suited to IT deployment. Survey of health care and public health	Prerequisites: A grade of C or better in GBS110 or MGT251 or Corequisites: GBS110 or MGT251.		Occ	LEC 3.0 3.0 3.0	S

				organization and delivery in the United States, with an emphasis on professional roles, legal, ethical, and regulatory issues, and payment systems. Analysis of health reform initiatives in the U.S. Concept of "meaningful use" of electronic health records.					
MGT229	2014 Fall	Management and Leadership I		Covers management concepts and applications for business, industry, and government organizations.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social-Behavioral Sciences [SB]	Occ	LEC 3.0 3.0 3.0	S
MGT230	2017 Spring	Management and Leadership II		Includes practical applications of activities, issues, and problems related to current managerial and supervisory skills and talents.	Prerequisites: A grade of C or better in MGT229 or permission of Department or Division.	Course Attribute(s): General Education Designation: Social-Behavioral Sciences [SB]	Occ	LEC 3.0 3.0 3.0	S
MGT242	2007 Summer I	Project Scope and Procurement Management		Scope management and procurement management in a project environment, including how a project's scope is planned, defined, and verified. Concepts of scope change management. Concepts of procurement management, including procurement planning, supplier solicitation, supplier selection, contract administration, and contract closeout	Prerequisites: A grade of C or better in TQM240 or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
MGT243	2007 Summer I	Project Time and Cost Management		Time management and cost management in a project environment, including activity definition, sequencing and duration estimating. Schedule development and specific tools to support schedule creation and control. Project cost management including resource	Prerequisites: A grade of C or better in TQM240 or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S

				planning, cost estimation, cost budgeting, and cost control					
MGT244	2007 Fall	Project Risk and Quality Management		Risk management and quality management in a project environment, including risk identification, risk aversion, and risk response planning. Presents techniques to perform risk analysis and risk response planning on projects. Concepts of quality management including quality planning, quality assurance and quality control. Concepts of quality systems and their applicability to project management	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
MGT245	2007 Fall	Project, Human Resources and Communications Management		Concepts of human resource management and communications management in a project environment, including project organizational planning, staff acquisition and team development. Concepts of project communications planning, information distribution, performance reporting, and project closeout	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
MGT246	2007 Fall	Principles of Project Management		Project Management principles expected of a Project Management Professional (PMP). Includes an overview of exam format, topics, and study techniques. Focus is on project scope, procurement, time, risk, cost, quality, human resource, communication, and integration management	Prerequisites: A grade of C or better in TQM240 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
MGT247	2024 Fall	Compensation and Benefits		Techniques and methodology for planning, coordinating and monitoring effective compensation and benefits programs within human resources.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
MGT251	1994 Fall	Human Relations in Business		Analysis of motivation, leadership, communications, and other human factors. Cultural differences that may create conflict and affect morale individually and within organizations.	Prerequisites: None. MGT101 or MGT175 or MGT229 suggested but not required.		Occ	LEC 3.0 3.0 3.0	S
MGT253	1994 Fall	Owning and Operating a Small Business		Starting, organizing, and operating a small business, including location, finance management processes,	Prerequisites: None.		Occ	LEC 3.0	S

				advertisement and promotion, credit, inventory control and ethics				3.0 3.0	
MGT270AA	2013 Spring	Management Internship		Management work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	MGT270A A may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 1.0 0.0	C
MGT270AB	2013 Spring	Management Internship		Management work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	MGT270A B may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 2.0 0.0	C
MGT270AC	2013 Spring	Management Internship		Management work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	MGT270A C may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 3.0 0.0	C
MGT276	2022 Fall	Human Resources Management		Human resource planning, staffing, training, compensating, and appraising employees in organizations.	Prerequisites: None. MGT101 or MGT175 or MGT229 suggested, but not required.	MGT101 or MGT175 or MGT229 suggested but not required.	Occ	LEC 3.0 3.0 3.0	S
MGT277	1994 Fall	Labor Relations		Covers the historical, legal, and environmental parameters surrounding current labor/management relations, including contract negotiations and grievance procedures.	Prerequisites: None. MGT101 or MGT175 or MGT229 suggested but not required.		Occ	LEC 3.0 3.0 3.0	S
MGT286	1990 Summer I	Human Resource Employment Management		Techniques and methodology for coordinating and monitoring effective employment selection practices. Includes description of employment functions, staffing analysis, employment recruitment and advertising, applicant screening, interviewing and reference checking,	Prerequisites: A grade of C or better in MGT276 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S

				employee selection and placement within a human resources division					
MGT289	2008 Summer I	Professional in Human Resources Test Preparation		Preparation for testing for Professional in Human Resources (PHR) certification. Includes responsibilities of the PHR in the development, implementation and management of budgets, workforce planning and employee training. Also covers compensation and employee relations issues and responsibilities.	Prerequisites: None.	MGT289 is specifically intended to prepare students to sit for the PHR exam. Students are responsible for knowing the work-related requirements that the Human Resource Certification Institute (HRCI) has for all those who wish to take the certification exam.	Occ	LEC 3.0 3.0 3.0	S
MGT290	2022 Fall	Leadership Through Continuous Improvement: Leading Self		This course focuses on creating a culture of continuous improvement, problem solving and Kaizen thinking. Upon completion of this course the student will be able to create and facilitate a Huddle Board Meeting, conduct Gemba Walks, implement principles of total systems thinking, conduct 5S organizing principles, and problem solving techniques.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
MGT291	2022 Fall	Supervisor Essentials: Aspire to Lead		This course will introduce students to the essential tools and resources needed to be an effective supervisor. Emphasis on the important role	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T

				leaders play in the success of an organization through compliance training, knowledge of work culture, and demonstrating traits of effective leaders.					
MGT292	2022 Fall	Employee Coaching and Development: Leading Others		Upon completion of this course, students will be able to utilize leadership and coaching skills along with ADOT's development tools and resources to cultivate and improve employee skills and team development and reward success.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
MGT293	2023 Fall	Collaborative Leadership: Leading Teams		This course focuses on the framework for how to effectively hire the right people and create a positive, engaging, growth environment that promotes employee retention. Upon completion of this course the student will be able to utilize emotional intelligence and humble inquiry to improve accountability, performance, collegiality and morale among groups to build more effective and productive teams.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
MGT296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z

MGT296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
MGT296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
MGT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
MGT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
MGT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
MHL130	2007 Summer I	Herstory: Women in Popular Music		Overview of the contributions made by women in the evolution of popular music and its industry	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
MHL140	2013 Fall	Survey of Music History		Study of composers, compositions, styles, and periods in music history.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and	Acad	LEC 3.0 3.0 3.0	S

						Design - [HU]			
MHL143	2001 Spring	Music in World Cultures		Non-European musical traditions including the study of music in rituals, musical instruments and the impact of cultures on musical styles	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
MHL145	2014 Spring	American Jazz and Popular Music		The study of cultural and social contributions to the evolution of American jazz and popular music from the mid-1800's to present.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
MHL146	2021 Fall	Survey of Broadway Musicals		Survey of Broadway musicals traced from their origins to the present viewed in their cultural, political, and socioeconomic contexts. Emphasis on stylistic periods, composers, lyricists, directors, and choreographers.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
MHL147	2007 Summer I	Music of African-American Cultures		African-American music traced from its origin in Africa to the present.	Prerequisites: None.		Acad	LEC 3.0	S

				Includes spirituals, blues, gospel, jazz, and classical style.				3.0 3.0	
MHL153	2014 Spring	Rock Music and Culture		History of Rock music and how cultural, social, political, and economic conditions have shaped its evolution.	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
MHL155	2014 Spring	Survey of American Music		History of the music of North America from the earliest American Indian music to the present. Introduction to the musical trends, composers, socioeconomic developments and trends, musical forms and styles that influence our modern American musical sense.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S

MHL156	2021 Fall	Music in Latin America and the Caribbean		To discuss the role of music in Latin and Caribbean cultures and the impact of these cultures on music. To present a historical survey to the evolution and development of musical styles from rumba to reggae. Among the topics, and to include: origins, gender, race, ethnicity, politics, elements of music, instruments, both sacred and secular music, and significant individuals influencing the evolution of many different genres of music in Latin America and Caribbean cultures.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
MHL194	2023 Fall	Music and Culture		Introduction to the study of multicultural music in its social, cultural, historical and economic contexts. Performance of music using percussion, rhythm, and the human body. Historical and social aspects of global cultures' musical expressions.	Prerequisites: A grade of C or better in MTC101 or a higher level MTC course; or Corequisites: MTC105 and MTC106 or permission of Instructor.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
MHL204	2016 Fall	Hip-Hop Music and Culture		A history of Hip-Hop's musical and artistic elements and how cultural, social, political, and economic conditions have shaped its evolution.	Prerequisites: A grade of C or better in ENG101, or ENG107, or permission of Instructor.	Course Attribute(s): General Education Designation: Literacy and Critical Inquiry - [L] General Education Designation: Cultural Diversity -	Acad	LEC 3.0 3.0 3.0	S

						[C] General Education Designatio n: Humanitie s, Arts and Design - [HU]			
MHL241	2011 Spring	Music History and Literature to 1750		In-depth study of music history from the primitive era through the Baroque period.	Prerequisites: A grade of C or better in MTC155 and MTC156 or Corequisites: MTC155 and MTC156 or permission of Instructor.	Course Attribute(s): General Education Designatio n: Humanitie s, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
MHL242	2011 Spring	Music History and Literature 1750 to Present		In-depth study of music history from the Classical period through the Contemporary period	Prerequisites: A grade of C or better in MHL241 or permission of Instructor.	Course Attribute(s): General Education Designatio n: Humanitie s, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
MHL295	2013 Spring	Topics in Music		Exploration of selected topics in music. Focuses on a theme, era, genre, concept, or critical approach. Analysis and interpretation of topic's representation, development, and significance in a variety subjects related to music humanities. Includes reading, listening analysis and interpretation of music and musical texts.	Prerequisites: A grade of C or better in ENG101, or ENG107, or permission of Instructor.	Course Attribute(s): General Education Designatio n: Humanitie s, Arts and Design - [HU] MHL295 may be repeated	Acad	LEC 3.0 3.0 3.0	S

						for a total of nine (9) credit hours.			
MHL298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
MIC101	2021 Fall 1	Fundamentals of Healthcare Interpreting		This course introduces the field of interpreting, interpretation models, cognitive processes associated with interpretation, professional ethical standards, employment opportunities, bilingual customer service, and working conditions. Topics include pronunciation, medical vocabulary, resources, legal issues, code of ethics, standards of practice, certification, interpreter assessments/qualifications, and protocol associated with various settings. Upon completion, students should be able to interpret English/Spanish and Spanish/English simulated health care encounters, explain how to prepare for and manage an interpreted encounter, and apply ethical standards to a variety of working situations.	Prerequisites: 1. Successful completion of RDG100 or higher or appropriate reading placement into CRE101. 2. Receive a 'Pass' on the bilingual oral exam.		CLK	80	
MIC103	2021 Fall 1	Medical and Clinical Development		Basic anatomy, physiology, and medical terminology in Spanish and English for health care settings. Emphasis on pronunciation of commonly used medical abbreviations for medical specialists and branches of medicine. Students will analyze, define, and correctly spell medical terms and	Prerequisites: MIC101 or SPA205 with a C or better, or with Program Manager approval.		CLK	80	

				<p>abbreviations. Systems to be covered are: cardiovascular, respiratory, digestive, musculoskeletal, genitourinary, endocrine, immune, and nervous. Common test procedures for each system. Cancer and first response interpretation roles will also be covered. Students also participate in activities to prepare for clinical externships, taken by in-person simulation or in person at a clinical site. Students will review professional conduct, dress code, bilingual customer service, and downtime activities.</p>					
MIC104	2021 Fall 1	Medical Spanish/English Interpreting		<p>This course covers Spanish/English interpreting in a medical context and setting. The course introduces the field of interpreting, interpretation models, cognitive processes associated with interpretation, professional ethical standards, bilingual customer service and working conditions. Students will focus on pronunciations, medical terminology, resources, legal issues, code of ethics, standards of practice, certification requirements, interpreter assessments/qualifications and protocol associated with various settings. Students will also focus on review of professional conduct and first response interpretation. Upon completion, students should be able to interpret English/Spanish and Spanish/English simulated health care encounters, explain how to prepare for and manage an interpreted encounter, and apply ethical standards to a variety of settings. This course is designed and aligned with the purpose of preparing students to take the Certification Commission for Healthcare Interpreters (CCHI) certification exam and earn their CCHI certification.</p>	<p>Prerequisites: Program admission. Successful completion of RDG100 or higher or appropriate reading placement into CRE101. Receive a 'Pass' on the bilingual oral exam.</p>		CLK	80	

MIC105	2023 Fall	Medical Interpreter Clinical Practicum		<p>Practical training and application of healthcare interpreting under direct supervision of clinical or hospital preceptor. Students will train with staff interpreters or dual-role interpreters. Documentation of daily interpreter attendance logs and a satisfactory performance evaluation are required to successfully complete the clinical. Students must meet the clinical facilities requirements prior to beginning. Clinical hours will vary and students are expected to travel and have reliable transportation.</p>	<p>Prerequisites: 1. A grade of C or better in (MIC101 and MIC103), or (SPA205 and SPA206), or MIC104, or permission of Program Manager. 2. Background check requirements in compliance with the Maricopa County Community College District Supplemental Background Check Policy. 3. Students also must provide a copy of an Arizona Department of Public Safety Level One Fingerprint Clearance Card. Students must maintain current fingerprint clearance throughout the clinical(s). 4. Complete and submit the Allied Health Student Health and Safety Documentation Checklist, with included documentation 5. Students are responsible to meet the requirements of the background check, fingerprint clearance card, and health and safety documentation.</p>	<p>Clinical hours are site specific and may require attendance any day of the week, including during unscheduled days and times. Students must have reliable transportation.</p>	CLK	40	
MIC106	2023 Fall	Medical Interpreter Clinical and Simulated Hybrid Practicum		<p>Practical training and application of healthcare interpreting through simulated clinical experiences. Students will conduct a total of 40</p>	<p>Prerequisites: A grade of C or better in (MIC101 and MIC103), or (SPA205</p>	<p>Simulated clinical hours are campus</p>	CLK	40	

				hours of simulated clinicals where they will interpret on behalf of the patient and healthcare staff. Students will receive daily performance evaluations and must successfully complete all competencies and attendance requirements to successfully complete this course. Students who are enrolled in the Medical Interpreter-Spanish program or the Spanish Interpreting for Healthcare Professionals program are required to either complete a practicum at a clinical site or a simulated clinical interpreting experience as part of the certificate of competency as well as maintain eligibility for the national certification exam through the Commission of Certified Healthcare Interpreters (CCHI).	and SPA206), or MIC104, or permission of Program Manager.	location specific and conducted in a face-to-face or virtual modality. This may require attendance any day of the week, including evenings or weekends.			
MIS101	2017 Fall	Introduction to the United States Army		Introduces the personal challenges and competencies that are critical for effective leadership and communication. Students learn how the personal development of life skills such as cultural understanding, goal setting, time management, stress management and comprehensive fitness relate to leadership, officership and the Army profession. Focuses on developing basic knowledge and comprehension of Army leadership dimensions, attributes and core leader competencies while gaining an understanding of the Army ROTC program, its purpose in the Army, and its advantages for the student. Includes physical training assessments, tactical training, as well as lecture-based instruction.	Prerequisites: None.		Acad	LEC 4.0 3.0 0.0 LAB 0.0 2.0 0.0	Z
MIS102	2018 Spring	Foundation of Agile and Adaptive Leadership		Introduces the professional challenges and competencies that are needed for effective execution of the profession of arms and Army communication. Through this course,	Prerequisites: A grade of C or better in MIS101.		Acad	LEC 4.0 3.0 0.0 LAB	Z

				students learn how ethics and values shape the Army and the specific ways that these ethics are inculcated into Army culture. Explores the seven Army values and the warrior ethos, investigate the profession of arms and Army leadership as well as an overview of the Army, and gains practical experience using critical communication skills. Includes physical training assessments, tactical training, as well as lecture-based instruction.				0.0 2.0 0.0	
MIS201	2017 Fall	Army Leadership and Decision Making		Academically challenging course where students study, practice and apply the fundamentals of Army leadership, officership, Army values and ethics, personal development and small-unit tactics at the platoon level. Requires the student to demonstrate writing skills and present information briefings as preparation for development in becoming a successful future officer. Includes reading assignments, homework assignments, small group assignments, briefings, case studies, practical exercises, a mid-term exam and final exam. Also includes physical training assessments, tactical training, as well as lecture-based instruction.	Prerequisites: A grade of C or better in MIS101 and MIS102.		Acad	LEC 4.0 3.0 0.0 LAB 0.0 2.0 0.0	Z
MIS202	2018 Spring	Army Doctrine and Team Development		Academically challenging course where students study, practice and apply the fundamentals of the leadership, officer skills, Army values and ethics, personal development and tactics at the small-unit level. Focuses on cross-cultural competencies as they relate to Army doctrine and how they apply in a combatant commander's engagement strategies. Stresses Army values, teamwork and warrior ethos and their relationship to the law of land warfare and philosophy of military service. Covers the ability to lead and follow through	Prerequisites: A grade of C or better in MIS101, MIS102 and MIS201.		Acad	LEC 4.0 3.0 0.0 LAB 0.0 2.0 0.0	Z

				team building exercises in small units up to squad level. Requires the student to demonstrate writing skills and present information briefings as preparation for development in becoming a successful future officer. Also includes physical training assessment, tactical training, as well as lecture-based instruction.					
MIT106	2018 Fall	Industrial Safety	GTC106 OSH106	Safety, health management, and accident prevention in industrial work environment. Role of Occupational Safety and Health Administration (OSHA) act, materials handling, electrical safety, machine safety, first response to fire and medical emergencies, safety signs and color codes, recognition of safety and health hazards accident prevention, management responsibilities, and OSHA 10 certification.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
MIT120	2019 Fall	Industrial Technology Fundamentals		Theories and concepts in industrial technology basics and OSHA 10 certification. Introductory concepts in industrial math, hand and power tools, technical drawings, rigging, and materials handling. Emphasis on communication and employability skills. Included labs emphasize and anchor the course material. Safety and management expectations. Defense in depth strategy and conduct of verifications. Maintenance procedures. Work control process. Performance of work standards and documentation including pre-job preparation, pre-job notification, job review, job verification and job close out specific to nuclear power plant operations.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
MIT121	2018 Fall	Industrial Technology I-A		Principles of Industrial Maintenance Technology. Modules include theory and applications in tools of the trade, fasteners and anchors, oxyfuel cutting, gaskets and packing, technical mathematics, and technical	Prerequisites: A grade of C or better in MIT120 or Corequisites: MIT120 or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T

				drawings. Included labs emphasize and anchor the course material.					
MIT122	2018 Fall	Industrial Technology I-B		Principles of Industrial Maintenance Technology. Modules include theory and applications in pumps and valves, test instruments, rigging, mobile and support equipment, and lubrication. Included labs emphasize and anchor the course material.	Prerequisites: A grade of C or better in MIT120 or Corequisites: MIT120 or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
MIT123	2018 Fall	Industrial Mechanical Technology II-A		Basic layout, introduction to piping components, copper and plastic piping practices, introduction to ferrous metal piping practices, identifying, installing and maintaining valves, hydrostatic and pneumatic testing, introduction to bearings, and low-pressure steam systems. Included labs emphasize and anchor the course material.	Prerequisites: A grade of C or better in MIT122 or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
MIT124	2018 Fall	Industrial Mechanical Technology II-B		High pressure steam systems and auxiliaries, distillation towers and vessels, heaters, furnaces, heat exchangers, cooling towers, fin fans, and introduction to tube work. Included labs emphasize and anchor the course material.	Prerequisites: A grade of C or better in MIT122 or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
MIT133	2018 Fall	Industrial Electrical and Instrumentation Technology II-A		Industrial safety for E and I technicians, introduction to the National Electrical Code, electrical theory, alternating current, electrical and instrumentation test equipment, flow, pressure, level, and temperature. Included labs emphasize and anchor the course material.	Prerequisites: A grade of C or better in MIT122 or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
MIT134	2018 Fall	Industrial Electrical and Instrumentation Technology II-B		Process mathematics, hand bending, tubing, clean, purge, and test tubing and piping systems, instrument drawings and documents, conductors and cables, and conductor terminations and splices. Included labs emphasize and anchor the course material.	Prerequisites: A grade of C or better in MIT122 or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
MIT209	2018 Fall	Automated Manufacturing	GTC209	Evolution of automation in manufacturing from fixed (hard) automation to Computer Integrated	Prerequisites: A grade of C or better in ELT131 or ELE131		Occ	L+L 3.0	T

				Manufacturing (CIM) is presented with numerical control (NC) ; computer-aided design/computer-aided manufacturing (CAD/CAM); automated material handling; automation communication protocol. Manufacturing management strategies include statistical process control (SPC); material requirements planning (MRP); manufacturing resource planning (MRPII); and just-in-time (JIT). Hands-on experience with programmable logic controllers (PLC) and robotics included	or GTC/MET206 or equivalent.			6.0 6.0	
MKT101	1994 Fall	Introduction to Public Relations		Emphasizes public relations techniques used both within and outside the business organization, including operation of a PR counseling firm	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
MKT109	2017 Fall	Introduction to Fashion Merchandising	TEC109	Explores the various levels and specialized segment of the fashion industry, the principles of fashion, the fundamentals of merchandising apparel, consumers' influence on demand and marketing activities.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
MKT110	2012 Summer I	Marketing and Social Networking		Theory and practice in the use of social media in marketing. Topics may include a history of social media, preparation for social marketing, the power of collective influence, and how to engage with social media. Reviews social mediums, social networks, platforms and other marketing tools used to create a social media campaigns.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
MKT111	2018 Fall	Applied Marketing and Social Networking		Examination of the strategic use of digital and social media marketing platforms and tools for global communication and networking, including analysis of various digital and social media platforms and tools for developing brands, creating professional networks and creating engaging content. Hands-on use of social media platforms and tools to conduct research, develop strategies	Prerequisites: A grade of C or better in MKT110.		Occ	L+L 3.0 4.0 4.0	T

				for creating, integrating, and evaluating social media marketing campaigns, and development of metrics to measure effectiveness.					
MKT112	1996 Fall	Retail Customer Service		Introduction to the field of retail sales. Emphasis on customer service and sales techniques	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
MKT114	1996 Fall	Retail Inventory Control		Retail inventory control procedures. Emphasis on the role of the professional sales associate within a retail company and in the handling of merchandise	Prerequisites: A grade of C or better in MKT112.		Occ	LEC 1.0 1.0 1.0	S
MKT151	2018 Fall	Display and Visual Merchandising	TEC151	An examination of the principles of design including line, color, balance, and texture as they relate to the display of merchandise. Participation in displays, field trips, and individual projects	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
MKT200	2005 Spring	Retail Buying	TEC200	Examines management/buyer role in investment, pricing, planning, controlling sales and inventories Any BPC/CIS spreadsheet course recommended.	Prerequisites: None. A grade of C or better in any BPC/CIS spreadsheet course recommended.		Occ	LEC 3.0 3.0 3.0	S
MKT263	1995 Fall	Advertising Principles		Introduces the advertising function within business, including media study, creative strategies, and advertising campaigns MKT271 suggested, but not required.	Prerequisites: None. MKT271 suggested but not required.		Occ	LEC 3.0 3.0 3.0	S
MKT267	2018 Fall	Principles of Sales		Analyzes and applies the steps and techniques used in personal selling. Highlights the role of the professional sales representative and his/her functions as they relate to the company's mission and customer expectations.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
MKT268	1991 Fall	Merchandising		Surveys structure and operation of retail organizations. Emphasizes merchandising to include price, location, time promotion and quantity.	Prerequisites: None. MKT271 suggested but not required.		Occ	LEC 3.0 3.0 3.0	S
MKT271	1994 Fall	Principles of Marketing		An analysis of the marketing process and environment with regard to the product, pricing, distribution, and communication in order to satisfy buyer needs	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

MKT273	2004 Spring	Marketing Research		Planning and preparing for a marketing research effort and presentation of research findings in a professional manner. Includes the study of problem definition, sampling methods, statistical analysis, presentation techniques, and evaluation of data	Prerequisites: A grade of C or better in MKT271 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
MKT274AC	2001 Fall	Fashion Merchandising Study Tour	TEC274AC	A tour of the fashion merchandising industry outside the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance awareness of this multifaceted career	Prerequisites: Permission of Department or Division.		Occ	LAB 3.0 15.0 3.0	F
MKT277	2018 Fall	Advanced Sales		Advanced selling and communication techniques.	Prerequisites: A grade of C or better in MKT267 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
MKT280AA	2016 Spring	Marketing Internship		Marketing work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	MKT280A A may be repeated for a total of four (4) credits.	Occ	L+L 1.0 1.0 0.0	C
MKT280AB	2016 Spring	Marketing Internship		Marketing work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	MKT280A B may be repeated for a total of four (4) credits.	Occ	L+L 2.0 2.0 0.0	C
MKT280AC	2016 Spring	Marketing Internship		Marketing work experience in a business or industry. 80 hours of designated work per credit.	Prerequisites: Permission of Department or Division.	MKT280A C may be repeated for a total of six (6) credits.	Occ	L+L 3.0 3.0 0.0	C
MKT296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals		Occ	LAB 1.0 5.0 0.0	Z

					(students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
MKT296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
MKT296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor		Occ	LAB 3.0 15.0 0.0	Z

					Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
MKT296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
MKT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
MKT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
MKT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
MMT184	2023 Fall	Digital Animation I	AVC184	The art of animation (animated sequences, special effects, titles, etc.) using the computer. Construction characters, background graphics, color, scaling, storyboard, cells, timing, editing, and surface rendering. Screening and discussion of selected animated short films and videos.	Prerequisites: A grade of C or better in (ART111 or ART116) or permission of Instructor. Corequisites: AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
MMT185	2023 Fall	3D Modeling and Animation I	AVC185	Basic concepts of 3D modeling. Anatomy of computer geometry; basic elements that make computer models-curves, surfaces, non-uniform rational basis spline (NURBS), and polygons. 3D translation, shading, materials, and rendering.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: AVC100 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
MMT186	2023 Fall	Modeling for Digital Media		Development of 3-D models for multimedia productions. 3-D logos, objects, and advanced animation projects using special effects.	Prerequisites: A grade of C or better in AVC/MMT184 or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
MMT190	2024 Fall	Art of Web Site Design	AVC190	Introduction to design production for websites. Layout, typography and presentation style for HTML (Hyper Text Markup Language). Design of	Prerequisites: A grade of C or better in AVC100, or		Occ	L+L 3.0 6.0 6.0	T

				mock-ups using digital design software to produce artistic form and content for the Web using Hyper Text Markup Language (HTML), digital text, and graphics. Discussion of color, proportion, typography and Web-specific design principles. Emphasizes design of cross-browser compatible interfaces that optimize usability, accessibility and browser interoperability.	permission of Instructor.				
MMT216	2018 Fall	Multimedia Project Management		Interactive video and multimedia project management including defining, analyzing, designing, and validating interactive/multimedia applications; building and managing development and production teams; planning, budgeting, and scheduling; interactive/multimedia authoring; project implementation; and writing RFPs (Request For Proposal).	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
MMT285	2023 Fall	3D Modeling and Animation II	AVC285	Advanced techniques for 3D modeling and computer animation. Creating and applying 2D background and 3D model textures, creating and applying special effects to models and animation, designing, modeling, and animating a digital 3D character from a character study.	Prerequisites: A grade of C or better in AVC/MMT185.		Occ	L+L 3.0 6.0 6.0	T
MMT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
MMT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
MMT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
MNG300	2025 Fall	Management Principles		Overview of the opportunities and challenges involved in the management process. Exploration of the functions of management, business ethics and social responsibility, entrepreneurial mindsets, operations management, decision making, and human resources. Emphasis placed on managing for excellence in both performance and employee satisfaction.	Prerequisites: A grade of C or better in (ACC212, GBS205, GBS221, and GBS233), or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
MNG305	2025 Fall	Organizational Management and Behavior		Overview of management skills and concepts as they relate to organizational culture and behavior. Focus on organizational structure and dynamics. Emphasis on leadership skills, communication, motivating employees, and decision making.	Prerequisites: A grade of C or better in (ACC212, GBS205, GBS221, and GBS233), or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
MNG310	2025 Fall	Accounting for Managers		Examination of financial and managerial accounting concepts relevant to making business decisions based on financial information and for evaluation of company performance. Topics include accounting's conceptual framework, financial	Prerequisites: A grade of C or better in ACC212, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S

				statement analysis, and managerial decision making.					
MNG405	2025 Fall	Applied Human Resource Management		Overview of human resources management, focusing on skills and knowledge necessary to effectively lead employees. Detailed coverage of jobs and labor, talent development, compensation, and employee relations. Emphasis on how human resource management enhances organizational performance and success.	Prerequisites: A grade of C or better in MNG300, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
MNG410	2025 Fall	Project Management Principles		Integrated introduction to Project Management. Examination of fundamental managerial and technical aspects of Project Management activities. Focus on initiating, planning, executing, and assessing projects.	Prerequisites: A grade of C or better in MNG300, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
MNG415	2025 Fall	Change Management		Overview of managing change within organizations. Emphasis on theories, processes, and applications. Explore strategies for leading and implementing change initiatives and managing employees through change.	Prerequisites: A grade of C or better in MNG300, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
MNG425	2025 Fall	Strategic Management		Overview of theory and application of strategic management principles. Exploration of an organization's position, capabilities, and resources used to gain a competitive advantage. Emphasis on the alignment of goals, strategies, and action plans with organizational objectives.	Prerequisites: A grade of C or better in (BUS305, MNG300, MNG305, and MNG310), or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
MNG490	2025 Fall	Management Capstone		Demonstration of acquired knowledge and skills through analysis of complex business cases. Includes the development of a career plan, with a focus on career research, application materials, and the development of a career strategy. Students will present a portfolio featuring their academic works.	Prerequisites: A grade of C or better in (BUS305, BUS310, MNG300, MNG305, and MNG310), or permission of Instructor.		Acad	L+L 3.0 4.0 4.0	T
MNT110	2022 Fall	Nanotechnology: What It Is and Why It Matters		Designed to provide students with a strong fundamental understanding of the scientific principles, processing,	Prerequisites: None.		Occ	LEC 3.0	S

				and applications of nanotechnology. Includes the concepts of chemical bonding, quantum mechanics, and microstructure applied to various nanomaterials and their use in electronic devices, composites, computing, and various other biological, medical, energy-related, and current consumer applications. Introduces analytical techniques used in nanotechnology, as well as possible societal applications.				3.0 3.0	
MNT120	2022 Fall	Introduction to Microelectromechanical Systems (MEMS)		Overview of fundamentals of the scientific principles, processing, and applications of microelectromechanical systems (MEMS). Covers topics in applications, fabrication methods, characterization, and commercialization concepts as well includes surface micromachining, patterning, etching and deposition processes in addition to cleanroom protocol and safety. Also covers research and documentation types and applications.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
MNT130	2022 Fall	Introduction to Light and Lasers		Introduces the fundamentals of light, optics, and lasers. Covers the nature and properties of light (such as energy, amplitude, wavelength, frequency, period, phase, propagation). Addresses geometrical optics (reflection, diffraction, imaging, thin lens formula, lens maker's equation), wave optics (interference, diffraction, polarization), and the basic principles and practical applications of lasers. Covers optical handling and positioning, light sources, laser classifications and safety. Contributes to knowledge and skills required for the Photonics Technician Operator certification exam.	Prerequisites: A grade of C or better in MAT114, or MAT115, or MAT12+, or MAT15+ or higher, OR an appropriate district placement for MAT15+ or higher, OR permission of Instructor or Department/Division Chair.		Occ	L+L 4.0 6.0 6.0	T
MNT140	2022 Fall	Careers and Professional Skills in Nanotechnology		Introduction to professional skills unique to the field of nanotechnology fabrication. Emphasis on teamwork,	Prerequisites: None.		Occ	LEC 1.0	S

				problem solving, cultural diversity in the workplace, communication, and continuous professional development.				1.0 1.0	
MNT201	2022 Fall	Materials, Safety, and Equipment for Nanotechnology		Safety procedures and equipment used in the micro and nanotechnology industries. Covers chemical, biological, and energy safety protocol as well as infrastructure facilities and systems. Also includes an overview of the structural, chemical, and physical classification of materials.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
MNT210	2018 Fall	Basic Nanotechnology Processes		Introduction to basic nanotechnology processes and a comparison of top-down and bottom-up manufacturing processes. Covers characteristics of plasma and its application to additive and subtractive processes. Also includes basic pattern transfer processes, laser ablation, and chemical and physical vapor deposition.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
MNT215	2022 Fall	Micro and Nano Fabrication Tools and Techniques		Introduction to basic micro and nanotechnology tools and processes and a comparison of top-down and bottom-up manufacturing processes. Covers characteristics of plasma and its application to additive and subtractive processes. Also includes basic pattern transfer processes, laser ablation, and chemical and physical vapor deposition. Aligned with materials, synthesis, and processing standards recognized by ASTM International.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
MNT220	2018 Fall	Materials in Nanotechnology		Examination of material used in the field of nanotechnology. Covers colloids, nanoparticles, oxides, and quantum dots in addition to self-assembly applications. Also includes biocompatibility and the dry etch material fabrication process.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
MNT225	2022 Fall	Material Properties and Effects of Size		Examination of materials used in the field of nanotechnology. Covers nanoparticles, oxides, and dielectric materials selection and modification. Also includes biocompatibility and	Prerequisites: A grade of C or better in MNT201 or permission of Instructor.	MNT225 aligns with the Standard Guide for	Occ	L+L 3.0 4.0 4.0	T

				applications for macroscale surfaces and interfaces.		Nanotechnology Workforce Education in Materials Properties and Effects of Size established by ASTM International.			
MNT230	2018 Fall	Patterning for Nanotechnology		Overview of patterning processes in nanotechnology. Includes photolithography techniques, technology, and tools. Covers photoresist applications and unique lithography techniques, including block polymer patterning.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
MNT235	2022 Fall	Nanotechnology Characterization Tools and Techniques		Overview of characterization tools and techniques for nanotechnology structures and materials. Includes procedures for light, physical, and electron beam characterization. Also includes tools and processes for advanced Scanning Probe Microscopy (SPM) and surface analysis. Aligns with ASTM Nano-Characterization standards and its exam. Additional applications enable students to prepare for certification examinations.	Prerequisites: A grade of C or better in MNT201 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
MNT240	2018 Fall	Nanotechnology Applications		An introduction to the practical application of emerging technologies in nanoscience. Includes applications for health sciences, energy, manufacturing, electronics, the food industry, and the environment.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
MNT245	2023 Fall	Advanced Topics in Light and Lasers		Advanced principles and applications of light and lasers. Addresses Photonic Integrated Circuits (PIC) concepts, materials, fabrication technologies, and applications.	Prerequisites: A grade of C or better in MNT130, or OPT105, or permission of		Occ	L+L 3.0 4.0 4.0	T

				Describes silicon PIC and III-V semiconductor devices in addition to completion of applicable calculations. Addresses lasers and PICs in diverse applications in telecommunications, data servers, health and medical, and other fields.	Instructor. MAT182 is recommended but not required.				
MNT250	2018 Fall	Characterization of Nanotechnology Structures and Materials		Overview of characterization tools and techniques for nanotechnology structures and materials. Includes in-situ and ex-situ characterization as well as procedures for light, physical and electron beam characterization. Also includes tools and processes for advanced Scanning Probe Microscopy (SPM) and surface analysis.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
MPT101	2020 Fall	Technical Documentation		Analysis and interpretation of technical drawings (prints) common to manufacturing. Mathematical calculations for determining dimensions. Introduction and application of Geometric Dimensioning and Tolerancing (GD&T).	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
MPT101MP	2020 Fall	Technical Documentation		Analysis and interpretation of technical drawings (prints) common to manufacturing. Mathematical calculations for determining dimensions. Introduction and application of Geometric Dimensioning and Tolerancing (GD&T).	Prerequisites: None.		Occ	LEC 3.0 1.0 1.0 LAB 0.0 4.0 4.0	T
MPT110	2020 Fall	Inspection Techniques		Setup and use of inspection tools and equipment per current industry standards. Selection, completion and interpretation of information from inspection forms.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
MPT110MP	2020 Fall	Inspection Techniques		Setup and use of inspection tools and equipment per current industry standards. Selection, completion and interpretation of information from inspection forms.	Prerequisites: None.		Occ	LEC 3.0 1.0 1.0 LAB 0.0 4.0 4.0	T

MPT111	2023 Fall	Geometric Dimensioning and Tolerance (GDT)		Controls of geometric dimensioning and tolerance (GDT) including the form, orientation, profile and location. Includes qualifying controls per engineering documentation for the American Society of Mechanical Engineers (ASME) Y14.5 2009 Standard.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
MPT111MP	2023 Fall	Geometric Dimensioning and Tolerance (GDT)		Controls of geometric dimensioning and tolerance (GDT) including the form, orientation, profile and location. Includes qualifying controls per engineering documentation for the American Society of Mechanical Engineers (ASME) Y14.5 2009 Standard.	Prerequisites: None.		Occ	LEC 3.0 1.0 1.0 LAB 0.0 4.0 4.0	T
MPT113	2023 Fall	Coordinate Measuring Machines I		Fundamentals and general aspects of Coordinate Measuring Machines (CMM). Basic measuring techniques and operation, including conformance to geometric dimensioning and tolerancing requirements using both manual and programmable (automatic) coordinate measuring machines.	Prerequisites: A grade of C or better in (MPT101 or MPT101MP) and (MPT110 or MPT110MP), or permission of Program Director.		Occ	L+L 3.0 4.0 4.0	T
MPT120	2023 Fall	Introduction to Manual Machining		Introduces manual machining operations related to drilling, grinding, sawing, milling, and lathe processes. Development of fundamental skills, practices and safety applications in working with manual machine tools, hand tools, and related equipment common to manufacturing. Provides theoretical and practical experiences related to the machining of various material types to produce a product to industry standards.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: (MPT101 or MPT101MP) and (MPT111 or MPT111MP), or permission of Program Director.		Occ	L+L 4.0 6.0 6.0	T
MPT120MP	2023 Fall	Introduction to Manual Machining		Introduces manual machining operations related to drilling, grinding, sawing, milling, and lathe processes. Development of fundamental skills, practices and safety applications in working with manual machine tools, hand tools, and related equipment common to manufacturing. Provides theoretical and practical experiences	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: (MPT101 or MPT101MP) and (MPT111 or MPT111MP), or		Occ	LEC 4.0 2.0 2.0 LAB 0.0 4.0 4.0	T

				related to the machining of various material types to produce a product to industry standards.	permission of Program Director.				
MPT130	2020 Fall	CNC Machine Operator		Designed to provide a fast track to fundamental knowledge and skills necessary for entry-level machine operator positions. Introduction to print reading, inspection, and safe start-up and operation of multi-axis Computer Numerical Control (CNC) machines. Topics include two- and three-axis program interpretation and application, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: None.		Occ	L+L 6.0 10.0 10.0	T
MPT130MP	2020 Fall	CNC Machine Operator		Designed to provide a fast track to fundamental knowledge and skills necessary for entry-level machine operator positions. Introduction to print reading, inspection, and safe start-up and operation of multi-axis Computer Numerical Control (CNC) machines. Topics include two- and three-axis program interpretation and application, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: None.		Occ	LEC 6.0 3.0 3.0 LAB 0.0 7.0 7.0	T
MPT131	2023 Fall	CNC Machining Level I		Introduction to safe start-up and operation of multi-axis Computer Numerical Control (CNC) machines. Topics include two- and three-axis program interpretation and application, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: A grade of C or better in MPT120 or MPT120MP or permission of Program Director.		Occ	L+L 6.0 10.0 10.0	T
MPT131MP	2023 Fall	CNC Machining Level I		Introduction to safe start-up and operation of multi-axis Computer Numerical Control (CNC) machines. Topics include two- and three-axis program interpretation and application, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: A grade of C or better in MPT120 or MPT120MP or permission of Program Director.		Occ	LEC 6.0 3.0 3.0 LAB 0.0 7.0 7.0	T
MPT132	2023 Fall	CNC Machining Level II		Safe setup and operation of multi-axis Computer Numerical Control (CNC) machines. Topics include multi-axis	Prerequisites: A grade of C or better in MPT130 or		Occ	L+L 3.0	T

				programming, qualifying tooling, and tool offsets to produce a product to industry standards.	MPT130MP or MPT131 or MPT131MP or permission of Program Director.			5.0 5.0	
MPT132MP	2023 Fall	CNC Machining Level II		Safe setup and operation of multi-axis Computer Numerical Control (CNC) machines. Topics include multi-axis programming, qualifying tooling, and tool offsets to produce a product to industry standards.	Prerequisites: A grade of C or better in MPT130 or MPT130MP or MPT131 or MPT131MP or permission of Program Director.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
MPT140	2020 Fall	Manual CNC Programming		Introduction to Manual Computer Numerical Control (CNC) programming of Word Address Language (G&M Code) for CNC machine tools. Multi-axis CNC programming for CNC controlled machines. Computer based tool path verification, CNC controller tool path verification and CNC machine tool program verification.	Prerequisites: A grade of C or better in (MPT130 or MPT130MP) or (MPT131 or MPT131MP) or machine shop experience or permission of Program Director.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
MPT150	2020 Fall	Introduction to SolidWorks		Introduction to CAD modeling, solid part generation, assembly of parts, and working drawing creation. Applications of CAD/CAM in Computer Integrated Technology (CIM).	Prerequisites: None.	Students interested in taking MPT250 Solid Design II: Advanced Part Modeling: SolidWorks are advised to take MPT151 Solid Design I: SolidWorks.	Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
MPT151	2023 Fall	Solid Design I: SolidWorks		Introduction to solid modeling and parametric design of mechanical components. Use of SolidWorks commands. Creation of single part in two-dimensional (2D) sketch, three-	Prerequisites: A grade of C or better in (MPT101 or MPT101MP) and (MPT111 or		Occ	L+L 3.0 5.0 5.0	T

				dimensional (3D) solid. Feature based components and feature associativity. Initial preparation for the Certified Solid Works Associate (CSWA) exam.	MPT111MP), or permission of Program Director.				
MPT152	2023 Fall	Solid Design: Certified SolidWorks Associate/Certified SolidWorks Professional Test Preparation		Preparation for latest Certified SolidWorks Associate (CSWA) or Certified SolidWorks Professional (CSWP) exam. Includes exam objectives, solid design, assemblies, COSMOSXpress, and technical documentation in current version.	Prerequisites: Permission of Program Director.		Occ	L+L 1.0 2.0 2.0	T
MPT213	2023 Fall	Coordinate Measuring Machines II		Advanced techniques and operation of Coordinate Measuring Machine (CMM). Includes alignments, Computer-Aided Design (CAD) use, program control, scanning, and dimensioning. Offline programming for operation of CMM. Conformance to geometric dimensioning and tolerancing and manufacturing documentation. Implementation of measurement strategies and time-saving techniques for creating measurement routines.	Prerequisites: A grade of C or better in MPT113 or permission of Program Director.		Occ	L+L 3.0 4.0 4.0	T
MPT214	2023 Fall	3D Scanning and Reverse Engineering: Geomagic		Principles of digital 3D Scanning and reverse engineering. Data acquisition of organic and mechanical components. Transformation of data into solid model geometry to create parts of equal or superior quality for machining or 3D printing.	A grade of C or better required in all Prerequisites. Prerequisites: MPT113 or permission of Program Director. Prerequisites or Corequisites: MPT151 or permission of Program Director.		Occ	L+L 3.0 5.0 5.0	T
MPT215	2020 Fall	Workplace Quality Systems		History of quality systems and procedures. Benefits of ISO 9000 procedures. The twenty elements of ISO 9000. Components and requirements of the International Organization for Standardization (ISO) 9000 quality and periodic audits.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T

MPT216	2023 Fall	Applied Statistical Process Control Methods		Identification of quality characteristics derived from variable and attribute data. Usage of statistical rules for interpretation of control charts. Analysis and recommendation of appropriate actions on factors affecting process variation.	Prerequisites: A grade of C or better in MPT215 or permission of Program Director.		Occ	L+L 3.0 4.0 4.0	T
MPT217	2020 Fall	Lean and Six Sigma Applied Concepts		Lean manufacturing and Six Sigma methodologies and application to an organization. Identification of waste and application of cost to poor quality process within an organization. Quality System tools and implementation. Emphasis on organizational buy in.	Prerequisites: A grade of C or better in MPT215 or permission of Program Director.		Occ	L+L 3.0 3.0 3.0	T
MPT218	2023 Fall	Advanced Quality Process Methods		High-level quality improvement process applied to manufacturing. Specific emphasis on experimental methods focused on waste reduction and general quality and process improvement. Understanding key process variables and decision-making methods based on established procedures. Applying statistical methods to process improvement.	Prerequisites: A grade of C or better in (MPT101, MPT110, MPT111, and MPT113), or permission of Program Director.		Occ	L+L 3.0 4.0 4.0	T
MPT220	2023 Fall	Manual Machining: NIMS Level I Certification		Preparation for latest National Institute for Metalworking Skills (NIMS) Machining Level I certification in Drill Press, Manual Milling, Turning, and Grinding.	Prerequisites: A grade of C or better in MPT120, or MPT120MP, or permission of Program Director.		Occ	L+L 6.0 6.0 6.0	T
MPT221	2023 Fall	Manual Machining: NIMS Level II Certification		Preparation for current National Institute for Metalworking Skills (NIMS) Machining Level II certification in Manual Milling, Turning, and Grinding.	Prerequisites: A grade of C or better in MPT220, or (Level I NIMS Certifications in: Drill Press, Lathe Between centers, Lathe Chucking, Mill, and Surface Grinding), or permission of Program Director.		Occ	L+L 3.0 5.0 5.0	T
MPT250	2023 Fall	Solid Design II: Advanced Part		Creating mechanical assemblies using SolidWorks design tools. Advanced feature tools including	Prerequisites: A grade of C or better in MPT151 or		Occ	L+L 3.0	T

		Modeling: SolidWorks		constraints and motion. Skill enhancement in the creation of advanced assemblies and part design, standard and advanced mates, and performing mass properties analysis.	permission of Program Director.			5.0 5.0	
MPT251	2023 Fall	Solid Design: Documentation/G D&T: SolidWorks		Creation of engineering drawings. Parts and assemblies using associative mechanical design software. Principles and applications presented in accordance with the American Society of Mechanical Engineers (ASME) Y14 series of standards. Drawing sheets and templates, views, projections, dimensions and annotations, Geometric Dimensioning and Tolerancing (GD&T), assembly drawings, Bill of Materials (BOM), and assembly configurations.	Prerequisites: A grade of C or better in MPT151 or permission of Program Director.		Occ	L+L 3.0 5.0 5.0	T
MPT252	2023 Fall	Solid Design: Simulation: SolidWorks		Principles of Finite Element Analysis (FEA), stress and gap analysis, and the Finite Element Method (FEM). Application of fixtures, loads, and connections to assemblies and models. Conducting static and dynamic simulation studies. Evaluation of simulation results and determination of Factor of Safety (FOS).	Prerequisites: A grade of C or better in MPT250 or permission of Program Director.		Occ	L+L 3.0 5.0 5.0	T
MPT253	2023 Fall	Solid Design: Surface Modeling: SolidWorks		Creation and manipulation of freeform shapes and surfaces using SolidWorks mechanical design software. Surface body design using 3D sketch geometry and solid features. Verification of surface integrity and quality.	Prerequisites: A grade of C or better in MPT250 or permission of Program Director.		Occ	L+L 3.0 4.0 4.0	T
MPT254	2023 Fall	Solid Design: Sheet Metal: SolidWorks		Design of sheet metal parts and assemblies. Creation of sheet metal production drawings. Conversion of solid models to sheet metal. Creation of welded structures with standard structural members using SolidWorks Weldments feature. Design of weld beads and weld joints.	Prerequisites: A grade of C or better in MPT250 or permission of Program Director.		Occ	L+L 3.0 4.0 4.0	T

MPT255	2023 Fall	Solid Design 3D Printing		3D printing/additive manufacturing with various additive manufacturing materials. Model orientation for optimal printing and 3D layer slicing, infill control, and orientation. Foundation and support structure design. Fused Deposition Modeling (FDM), Stereolithography Apparatus (SLA), and metal 3D printing.	Prerequisites: A grade of C or better in [(MPT111 or MPT111MP) and MPT250], or permission of Program Director.		Occ	L+L 4.0 5.0 5.0	T
MPT260	2023 Fall	Computer Aided Manufacturing (CAM) I		Introduction to Computer-Aided Manufacturing (CAM) system programming for Computer Numerical Control (CNC) machines using computer graphics for programming and tool path geometry. Computer programming for simultaneous 3-axis CNC machines, fourth and fifth positioning machining centers, and 2-axis turning centers.	Prerequisites: A grade of C or better in MPT130, or MPT130MP, or MPT131, or MPT131MP, or permission of Program Director.		Occ	L+L 3.0 5.0 5.0	T
MPT260MP	2023 Fall	Computer Aided Manufacturing (CAM) I		Introduction to Computer-Aided Manufacturing (CAM) system programming for Computer Numerical Control (CNC) machines using computer graphics for programming and tool path geometry. Computer programming for simultaneous 3-axis CNC machines, fourth and fifth positioning machining centers, and 2-axis turning centers.	Prerequisites: A grade of C or better in MPT130, or MPT130MP, or MPT131, or MPT131MP, or permission of Program Director.		Occ	LEC 3.0 1.0 1.0 LAB 0.0 4.0 4.0	T
MPT261	2023 Fall	MasterCam Certified Programmer Mill Level I: Test Preparation: CPgM1		Review of the latest Certified Programmer Mill Level I (CPgM1) exam in preparation for exam. Competency of geometry construction, tool plane and work plane construction, Computer Numerical Control (CNC), milling tool path generation, and tool path verification with core Mastercam software.	Prerequisites: Permission of Program Director.		Occ	L+L 1.0 2.0 2.0	T
MPT262	2023 Fall	Computer Aided Manufacturing (CAM) II		Advanced Computer-Aided Manufacturing (CAM) system programming for Computer Numerical Control (CNC) machines using computer graphics for programming and tool path geometry. Computer	Prerequisites: A grade of C or better in MPT260, or MPT260MP, or permission of Program Director.		Occ	L+L 3.0 5.0 5.0	T

				programming for mill turns and five axis simultaneous machining centers.					
MPT262MP	2023 Fall	Computer Aided Manufacturing (CAM) II		Advanced Computer-Aided Manufacturing (CAM) system programming for Computer Numerical Control (CNC) machines using computer graphics for programming and tool path geometry. Computer programming for mill turns and five-axis simultaneous machining centers.	Prerequisites: A grade of C or better in MPT260, or MPT260MP, or permission of Program Director.		Occ	LEC 3.0 1.0 1.0 LAB 0.0 4.0 4.0	T
MPT270	2023 Fall	Tooling, Fixtures, and Gauges		Various types of tools, fixtures, and gauges and their function as related to manufacturing processes. Clamping and workholding principles as well as use of appropriate hardware.	Prerequisites: A grade of C or better in [(MPT120, or MPT120MP, or four National Institute of Metalworking Skills (NIMS) in CNC Machining or Manual Machining) and (MPT150 or MPT151)], or CAD101, or CAD201, or Certified SolidWorks Associate (CSWA), or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
MPT282AA	2020 Fall	Volunteerism for Manufacturing: A Service Learning Experience		Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Program Director.	MPT282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog. Repeats 6.0 6.0	Occ	LAB 1.0 1.0 0.0	L

MPT282AB	2020 Fall	Volunteerism for Manufacturing: A Service Learning Experience		Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Program Director.	MPT282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog. Repeats 3.0 6.0	Occ	LAB 2.0 2.0 0.0	L
MPT282AC	2020 Fall	Volunteerism for Manufacturing: A Service Learning Experience		Service-learning field experience within private/public agencies and citizen volunteer groups.	Prerequisites: Permission of Program Director.	MPT282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog. Repeats 2.0 6.0	Occ	LAB 3.0 3.0 0.0	L
MPT290AA	2020 Fall	Manufacturing Production Internship		Construction internship office/field experience with private/public agencies or citizen volunteer groups. Eighty (80) hours of designated work experience.	Prerequisites: Permission of Program Director.		Occ	LAB 1.0 6.0 0.0	C
MPT290AB	2020 Fall	Manufacturing Production Internship		Construction internship office/field experience with private/public agencies or citizen volunteer groups. One hundred and sixty (160) hours of designated work experience.	Prerequisites: Permission of Program Director.		Occ	LAB 2.0 12.0 0.0	C

MPT290AC	2020 Fall	Manufacturing Production Internship		Construction internship office/field experience with private/public agencies or citizen volunteer groups. Two hundred and forty (240) hours of designated work.	Prerequisites: Permission of Program Director.		Occ	LAB 3.0 18.0 0.0	C
MPT296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Program Director. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of Program Director.		Occ	LAB 1.0 5.0 0.0	C
MPT296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Program Director. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with		Occ	LAB 2.0 10.0 0.0	C

					permission of Program Director.				
MPT296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Program Director. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of Program Director.		Occ	LAB 3.0 15.0 0.0	C
MPT296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to student's academic or career goals (student's present job may qualify) or permission of Program Director. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of Program Director.		Occ	LAB 4.0 20.0 0.0	C

MPT298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director.		Occ	LAB 1.0 1.0 0.0	Z
MPT298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director.		Occ	LAB 2.0 2.0 0.0	Z
MPT298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director.		Occ	LAB 3.0 3.0 0.0	Z
MRT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				combined to maximize student development.					
MRT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
MRT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
MSP101	2024 Fall	Mortuary Science: Orientation and History		Designed to orient prospective students to the roles, functions, and responsibilities of funeral service professionals. Overview of the requirements, governing agencies, and employment outlook in the field. Includes a historical overview of funeral service with emphasis on individuals, events, and forces that have influenced contemporary funeral principles and practices.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
MSP105	2024 Fall	Cremation for Mortuary Science		Overview of cremation topics, including proper procedures, legal considerations, services, merchandise, trends, and the history of cremation.	Prerequisites: Permission of Instructor.	MSP105 is aligned with American Board of Funeral Service Education (ABFSE)	Occ	LEC 1.0 1.0 1.0	S

						standards. Does not meet the requirements for Arizona Department of Health Services crematory operator training.			
MSP201	2024 Fall	Mortuary Science, Sociology, and Religion		Survey of basic principles of sociology as they relate to funeral service. Emphasis on family structures, social structures, and social factors. Exploration of cultural and religious funeral customs.	Prerequisites: Admission to the Mortuary Science program.		Occ	LEC 3.0 3.0 3.0	S
MSP202	2024 Fall	Embalming		Study of the disinfection, temporary preservation and restoration of the deceased human body by physical and chemical means for the specific purpose to delay organic decomposition and apply practices for reverent care of the deceased.	Prerequisites: Admission to the Mortuary Science program.		Occ	LEC 3.0 3.0 3.0	S
MSP202LL	2024 Fall	Embalming Lab		Field experience involving observation and practice of embalming processes in a laboratory setting. Includes writing case study reports. Study of anatomical considerations for mortuary science students.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: MSP202 and admission to the Mortuary Science program.		Occ	LAB 1.0 2.0 2.0	T
MSP203	2024 Fall	Microbiology for Mortuary Science		Survey of basic principles of microbiology. Emphasis on sanitation, disinfection, public health, and embalming practice.	Prerequisites: Admission to the Mortuary Science program.		Occ	LEC 3.0 3.0 3.0	S
MSP204	2024 Fall	Chemistry for Mortuary Science		Survey of the basic principles of chemistry as they relate to funeral service. Emphasis on the chemical principles and precautions involved in the preservation and disinfection of the deceased human body.	Prerequisites: Admission to the Mortuary Science program.		Occ	LEC 3.0 3.0 3.0	S

MSP205	2024 Fall	Funeral Directing I		Funeral directing, documentation procedures, and regulatory compliance from time of death to disposition. Includes establishing professional relationships with family members and funeral profession and allied colleague.	Prerequisites: Admission to the Mortuary Science program.		Occ	LEC 3.0 3.0 3.0	S
MSP206	2024 Fall	Funeral Directing II		Operation of the established funeral home, including principles and product knowledge in the area of funeral service management and merchandising.	Prerequisites: A grade of C or better in MSP205.		Occ	LEC 3.0 3.0 3.0	S
MSP207	2024 Fall	Mortuary Science Restorative Art		Care and restoration of the deceased human body to create natural form and appearance. Includes anatomical aspects and color theory.	Prerequisites: Admission to the Mortuary Science program.		Occ	LEC 3.0 3.0 3.0	S
MSP207LL	2024 Fall	Mortuary Science Restorative Art Lab		Care and restoration of the deceased human body to create natural form and appearance. Includes anatomical aspects and color theory.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: MSP207 and admission to the Mortuary Science program.		Occ	LAB 1.0 2.0 2.0	T
MSP208	2024 Fall	Funeral Service Law: Legal, Ethical, and Regulatory Considerations		Exploration of funeral service regulation by state and federal government agencies. Includes cemetery code, dispositions, Federal Trade Commission (FTC), licensing, and crematory law. Examination of torts, wills, estates, contract law, liability, and probate considerations for the funeral service practitioner. Includes ethical considerations, rights, duties, and responsibilities for the funeral service practitioner.	Prerequisites: Admission to the Mortuary Science program.		Occ	LEC 3.0 3.0 3.0	S
MSP209	2024 Fall	Pathology for Mortuary Science		Study of disease processes and their impact on the human body, with emphasis on those conditions which relate to or affect the handling of human remains.	Prerequisites: Admission to the Mortuary Science program.		Occ	LEC 3.0 3.0 3.0	S
MSP210	2024 Fall	Psychology and Counseling for Mortuary Science		Survey of the basic principles of psychology and counseling, as they relate to funeral service. Includes psychological concepts in the areas of	Prerequisites: Admission to the Mortuary Science program.		Occ	LEC 2.0 2.0 2.0	S

				grief, bereavement, mourning, aftercare and crisis intervention with emphasis in the role of the funeral service practitioner.					
MSP211	2024 Fall	Compendium for Mortuary Science		Comprehensive review of exam skills and coursework prior to taking the National Board Exam for Mortuary Science. Analysis of skills and tasks an entry-level funeral practitioner would possess. This course develops skills for recall, application, and analysis of content in the domains of funeral service arts and funeral service sciences.	Prerequisites: Admission to the Mortuary Science program.		Occ	LEC 3.0 3.0 3.0	S
MSP282AA	2013 Fall	Service-Learning Experience in Mortuary Science		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	MSP282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 1.0 1.0 0.0	L
MSP282AB	2013 Fall	Service-Learning Experience in Mortuary Science		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	MSP282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 2.0 2.0 0.0	L

MSP282AC	2013 Fall	Service-Learning Experience in Mortuary Science		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	MSP282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 3.0 3.0 0.0	L
MSP296WA	2003 Spring	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
MSP296WB	2003 Spring	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job		Occ	LAB 2.0 10.0 0.0	Z

					may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
MSP296WC	2003 Spring	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
MSP296WD	2003 Spring	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be		Occ	LAB 4.0 20.0 0.0	Z

					concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
MST140	2018 Fall	Microsoft Networking Essentials		Emphasis on local area network with overview of wide area networks. Includes terminology, hardware and software components, connectivity, network architecture, packet structure, topologies, communication standards and protocols, and security issues. Preparation for Microsoft certification examination.	Prerequisites: None. (BPC110 or CIS105 and CIS121AB) suggested but not required.		Occ	L+L 3.0 4.0 4.0	T
MST141	2018 Fall	Enterprise Desktop Support Technician		Troubleshooting and repairing problems with Microsoft Windows desktop operating systems. Basic knowledge of system architecture and security as needed to provide skills required to support users.	A grade of C or better required in all Prerequisites. Prerequisites: (CIS102 or any CIS102++ course) and CIS105 or permission of Instructor. Prerequisites or Corequisites: Any MST150++ course or permission of Instructor.	MST141 is preparation for the Microsoft Certified IT Professional: Enterprise Desktop Support Technician 7 (MCITP) certification examination, 70-685.	Occ	L+L 3.0 4.0 4.0	T
MST150EI	2020 Fall	Configuring Windows 8		In-depth exploration of how to effectively install and configure Windows 8. Includes features of Windows 8, virtualization with Hyper-V, network connectivity, access to resources, monitor and maintain Windows clients and backup and recovery. Designed to prepare students for the Microsoft Windows 8 certification examination (70-687).	Prerequisites: None. MST140 or CNT140++ recommended.		Occ	L+L 3.0 4.0 4.0	T

MST150SV	2021 Fall	Microsoft Windows 7 Configuration		Knowledge and skills necessary to perform installation and day-to-day administration and support of the Microsoft Windows 7 operating system. Preparation for the Microsoft certification examination.	Prerequisites: None. CIS190 or MST140 suggested but not required.		Occ	L+L 3.0 4.0 4.0	T
MST150WT	2020 Fall	Installing and Configuring Microsoft Windows 10		In-depth exploration of how to effectively install and configure Windows 10. Includes features of Windows 10, virtualization improvements, network connectivity, access to resources, monitor and maintain Windows clients and backup and recovery. Designed to prepare students for the Microsoft Windows 10 certification examination.	Prerequisites: None. CIS190 or CNT140AB suggested but not required.		Occ	L+L 3.0 4.0 4.0	T
MST152	2018 Fall	Microsoft Windows Server		Knowledge and skills necessary to install, configure, customize, optimize, network, integrate, and troubleshoot Windows Server. Preparation for Microsoft certification examination.	Prerequisites: A grade of C or better in any MST150 course or Corequisites: any MST150 course or permission of Instructor.		Occ	L+L 4.0 5.0 5.0	T
MST155DA	2018 Fall	Windows Server Network Infrastructure Configuration		Information and skills necessary to design a Microsoft Windows networking services infrastructure design. Includes network foundation design, Internet and private networks connectivity, in addition to functionality security and performance features of networking services.	Prerequisites: A grade of C or better in MST150, or any MST150++ course, or permission of Instructor.		Occ	L+L 4.0 5.0 5.0	T
MST155DB	2018 Fall	Configuring Advanced Windows Server Services		In-depth exploration of how to effectively install and configure Windows Server. Designed to prepare students for the Microsoft Configuring Advanced Windows Server Services examination (70-412).	Prerequisites: A grade of C or better in MST158DA or MST158DB or permission of Instructor.	Recommend that prerequisite course completed was for the same version of Windows server as will be taught in MST155DB.	Occ	L+L 4.0 5.0 5.0	T

MST155DC	2018 Fall	Installation, Storage, and Compute with Windows Server		This course focuses primarily on the installation, storage, and compute features and their functionality that is available within Windows Server. As Information Technology pushes towards more cloud based solutions and makes our classic approach obsolete, this course will help students prepare for a career within an Information Technology enterprise and help distinguish themselves in today's competitive job market. This course covers various topics like Windows Server installation, Hyper-V deployments and storage options in relation to this new cloud based reality.	Prerequisites: A grade of C or better in MST150++ or permission of Instructor.		Occ	L+L 4.0 5.0 5.0	T
MST157DA	2018 Fall	Active Directory Windows Server Configuration		Information and skills necessary to install, configure and administer Active Directory service. Covers tasks required to create users and groups, and to implement Group Policies which provide centralized management of users and computers.	Prerequisites: Any MST course or permission of Instructor.	MST157D A is a preparation for the Microsoft 70-640 professional certification test.	Occ	L+L 4.0 5.0 5.0	T
MST157DB	2018 Fall	Administering Windows Server		In-depth exploration of how to effectively manage Windows Server. Designed to prepare students for the Administering Microsoft Windows Server examination (70-411).	Prerequisites: A grade of C or better in MST158DA or MST158DB or permission of Instructor.	Recommend that prerequisite course completed was for the same version of Windows server as will be taught in MST157D B.	Occ	L+L 4.0 5.0 5.0	T
MST157DC	2018 Fall	Networking with Windows Server		This course focuses on the networking features and their functionality available within Windows Server. It builds upon the skills from the Installation, Storage, and	Prerequisites: A grade of C or better in MST155DC or permission of Instructor.		Occ	L+L 4.0 5.0 5.0	T

				Compute with Windows Server course (MST155DC) and will develop skills related to Software-Defined Networking (SDN) solutions within Hyper-V, remote connectivity with VPN and Direct Access, and providing Internet connectivity with Domain Name System (DNS), Dynamic Host Configuration Protocol (DHCP), and Internet Protocol Address Management (IPAM). This course helps prepare for the 70-741 industry certification test.					
MST158DA	2018 Fall	Windows Server Administration		Knowledge and skills necessary to install, configure, customize, optimize, network, integrate, and troubleshoot Windows Server.	Prerequisites: A grade of C or better in (MST155 or any MST155++ course) and (MST157 or any MST157++ course), or permission of Instructor.		Occ	L+L 4.0 5.0 5.0	T
MST158DB	2018 Fall	Installing and Configuring Windows Server		In-depth exploration of how to effectively install and configure Windows Server. Includes roles and features of Server, virtualization with Hyper-V, core network services, Active Directory, and Group Policy. Designed to prepare students for the corresponding Microsoft Windows Server Installation and Configuration examination (70-410).	Prerequisites: A grade of C or better in (MST140 or CNT140 or CNT140AA) and (MST150 or MST150SV or MST150VI or MST150XP) or permission of Instructor.		Occ	L+L 4.0 5.0 5.0	T
MST158DC	2019 Fall	Identity Management with Windows Server 2016		Prepares students to manage Windows Server 2016 tasks. Configure and manage multiple services, such as Identity Management and Active Directory. Learn how to install and configure domain controllers and create and manage users, groups, and computers within Organizational Units. Prepares students for the Microsoft exam, Identity with Windows Server 2016-70-742.	Prerequisites: A grade of C or better in MST157DC.		Occ	L+L 4.0 5.0 5.0	T
MST160	2022 Fall	Azure Administrator		Teaches IT professionals how to manage Azure subscriptions, secure	Prerequisites: A grade of C or better		Occ	L+L 4.0	T

				identities, administer the infrastructure, configure virtual networking, connect Azure and on-premises sites, manage network traffic, implement storage solutions, create and scale virtual machines, implement web apps and containers, backup and share data, and monitor solutions.	in MST150WT, or permission of Instructor.			5.0 5.0	
MST260	2022 Fall	Microsoft Azure Cloud Development and Operations		Designed to provide technical information and skills required to develop and operate Microsoft Azure cloud infrastructure environments. Describes the design processes and implementation strategies for application and infrastructure that enable continuous integration, testing, and delivery, as well as infrastructure as code and process monitoring. Emphasizes processes, and technologies required to increase software delivery velocity and improve service reliability. Helps to prepare students for the Microsoft AZ-400, Azure DevOps Engineer or DevOps Institute, DevOps Foundation exams.	Prerequisites: A grade of C or better in (CIS156 and MST160) or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
MST280CA	2018 Fall	Current Topics in Microsoft Computing		Critical inquiry of current topics in Microsoft Technology computing. Application of Microsoft Technology trends to solve problems and/or investigate issues.	Prerequisites: Permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
MTC098	2010 Fall	Music Theory Boot Camp		Intensive review of music theory fundamentals to develop and/or refresh skills necessary for advanced study.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
MTC101	1994 Spring	Introduction to Music Theory		Designed to develop written and aural skills necessary for advanced study of music theory and skills. Recommended for music majors	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
MTC103	2018 Fall	Introduction to Aural Perception		An introduction to the aural skills necessary to hear relationships of intervals, rhythms, melody, and harmony in music.	Prerequisites: None.	MTC103 may be repeated for a total of two (2) credit hours.	Acad	L+L 1.0 2.0 2.0	T

MTC105	2021 Summer	Music Theory I		The chronological study of music theory including: harmony, melody, texture, structure and timbre through analysis, original compositions and basic exercises to demonstrate musical concepts.	Prerequisites: A grade of C or better in MTC101 or permission of Instructor. Corequisites: MTC106.		Acad	LEC 3.0 3.0 3.0	S
MTC106	2018 Fall	Aural Perception I		The development of listening and performing skills through dictation, sight singing and keyboard harmony	Prerequisites: None. Corequisites: MTC105.		Acad	L+L 1.0 2.0 2.0	T
MTC110	2000 Fall	Music Notation for Songwriting		Basic musical notational system with emphasis on note reading, staff placement, meter, rhythmic patterns, basic harmonic patterns, chords and chord symbols, lead sheet forms, scales and keys	Prerequisites: None.		Acad	LEC 2.0 2.0 2.0	S
MTC122	2021 Summer	Fretboard Harmony		An in-depth study of functional and theoretical practice as applied to the fretboard of the guitar through understanding of chord symbols, intervals and rhythm	Prerequisites: A grade of C or better in MTC101.		Acad	LEC 3.0 3.0 3.0	S
MTC130	2010 Fall	Jazz Theory		Develop written and aural theory skills necessary in the jazz idiom.	Prerequisites: A grade of C or better in (MTC101 and MTC103), or permission of Instructor.	MTC130 is recommended for students taking jazz improvisation, jazz composition and jazz combo.	Acad	LEC 2.0 2.0 2.0	S
MTC155	1995 Fall	Music Theory II		A continuation of Music Theory I with emphasis on harmony and part-writing procedures	Prerequisites: A grade of C or better in MTC105. Corequisites: MTC156.		Acad	LEC 3.0 3.0 3.0	S
MTC156	2021 Fall	Aural Perception II		A continuation of Aural Perception I, including harmonic practices.	Prerequisites: A grade of C or better in MTC106. Corequisites: MTC155.		Acad	L+L 1.0 2.0 2.0	T
MTC180	2019 Fall	Computer Literacy for Musicians		Instruction in basic computer literacy, including generic applications and	Prerequisites: A grade of C or better	General Education	Acad	L+L 3.0	T

				music-specific programs with hands-on experience. Ability to read music notation required.	in MTC101, or MTC105, or Corequisites: MTC105, or permission of Instructor.	Designation: Computer/Statistics/Quantitative Applications - [CS]		4.0 4.0	
MTC190	2018 Fall	Computer-Aided Music Notation		Introduction to computer-aided music notation, culminating in editing and producing publication-quality music scores. Ability to read music notation required	Prerequisites: Permission of Instructor.		Acad	L+L 3.0 4.0 4.0	T
MTC203	2008 Spring	Jazz Composition		Composition and analysis of standard song forms as well as other standard compositional practices and forms idiomatic to jazz	Prerequisites: A grade of C or better in MTC155 or MUP165 or permission of Instructor.		Acad	L+L 3.0 3.0 0.0	L
MTC205	2011 Fall	Music Theory III		The study of chromatic harmony and melody, modulation techniques and expanded chords. The analysis of formal structure	Prerequisites: A grade of C or better in MTC155. Corequisites: MTC206.	Course Attribute(s): Arizona Shared Unique Number SUN#: MUS 2222	Acad	LEC 3.0 3.0 3.0	S
MTC206	2021 Fall	Aural Perception III		A development of listening and performing skills, including an introduction of chromatic harmonic techniques and concepts of style.	Prerequisites: A grade of C or better in MTC156. Corequisites: MTC205.		Acad	L+L 1.0 2.0 2.0	T
MTC240	1990 Fall	Composition		Introduction to the basics of music composition, stressing techniques and procedures for developing original ideas.	Prerequisites: A grade of C or better in (MTC105 and MTC106 or equivalent) and permission of Instructor.	MTC240 may be repeated for a total of twelve (12) credit hours.	Acad	L+L 3.0 0.6 0.0	Z
MTC255	2011 Fall	Music Theory IV		A continuation of Music Theory III, including 20th century theories and techniques	Prerequisites: A grade of C or better in MTC205. Corequisites: MTC256.	Course Attribute(s): Arizona Shared Unique Number	Acad	LEC 3.0 3.0 3.0	S

						SUN#: MUS 2223			
MTC256	2021 Fall	Aural Perception IV		A continuation of Aural Perception III, including extended chords.	Prerequisites: A grade of C or better in MTC206. Corequisites: MTC255.		Acad	L+L 1.0 2.0 2.0	T
MTC298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
MTC298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
MTC298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
MUC109	2020 Fall	Music Business: Content Creation and Copyright		Designed to provide an overview of content creation and copyright considerations within the Music	Prerequisites: None.		Occ	LEC 3.0	S

				Industry. Topics include songwriting and music creation, copyright, publishing and licensing, studio production, media applications of music, business ownership and operations, and emerging technologies.				3.0 3.0	
MUC110	2020 Fall	Music Business: Marketing and Monetization		Designed to provide an overview of the marketing and monetization of music. Topics include music label operations; contracts; marketing, promotion, and merchandising; agents, managers, and attorneys; concert promotion and touring; and unions and guilds.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
MUC111	2020 Fall	Digital Audio Workstation I (DAW I)		Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management.	Prerequisites: A grade of C or better in MUC195 or MUC195AA or FMP105 or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
MUC112	2018 Fall	Digital Audio Workstation II (DAW II)		Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management.	Prerequisites: A grade of C or better in MUC111, and (MUC195 or MUC195AA).		Occ	L+L 3.0 5.0 5.0	T
MUC114	2019 Spring	Song Publishing and Marketing		Publishing and marketing of songs including services that publishers provide and what to consider when choosing one, a summary of various aspects and types of contracts, working as a staff writer, publisher marketing, self marketing, and additional markets.	Prerequisites: None.		Occ	LEC 1.0 1.0 0.0	C
MUC115	2019 Spring	Song Copyrighting and Demos		Terms involved with copyright laws. Clarification of when copyright begins, ownership of copyright and registration, limitations of copyright, and when works become public domain. Phases of making a demonstration tape or CD. Promotion and presentation of a demo.	Prerequisites: None.		Occ	LEC 1.0 1.0 0.0	C
MUC120	2023 Fall	Introduction to Sound Design for Film and Video	FMT120	Basic principles of recording and mixing sound for film and video. Includes voice-over, automatic dialog	Prerequisites: A grade of C or better in (FMT100 and		Occ	LEC 3.0	S

				replacement (ADR), foley, ambience, special effects and music. Emphasis on analog and digital recording techniques in the field as well as in a controlled environment.	FMT136) or permission of Instructor.			3.0 3.0	
MUC122	2020 Fall	Sound Design I		Introduction to Sound Design and Audio Post-Production for Multimedia. Includes creating and editing Sound Effects, ADR, Foley, Music, and Ambience, such as Film, TV, Video Gaming, Theatre, and Dance. Emphasis on computer assisted production using Digital Audio Workstations and sound design techniques using industry-standard equipment.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
MUC135	2018 Fall	Introduction to Disc Jockey Techniques		Development of beginning level live-performance disc jockey techniques. Emphasis on understanding the construction of industry-formatted dance songs, cueing, segueing/mixing methods, the relationship of beats per minute to segueing, and programming songs to entertain a live audience. Covers the history of the live performance DJ and strategies for soliciting employment in the field.	Prerequisites: None.	MUC135 may be repeated for a total of six (6) credits.	Occ	L+L 3.0 3.0 3.0	T
MUC136	2018 Fall	Turntablism: The Art of the Scratch DJ		Covers the skills required in vinyl manipulation; examines the development of turntable techniques and the contributions made by individual turntable artists.	Prerequisites: None.	MUC136 may be repeated for a total of six (6) credits.	Occ	L+L 3.0 4.0 4.0	T
MUC137	2018 Fall	Digital DJ Performance Techniques		Covers the skills required for live performance employing digital media with an emphasis on programs such as Serato Scratch Live and Ableton Live.	Prerequisites: None.	MUC137 may be repeated for a total of six (6) credits.	Occ	L+L 3.0 4.0 4.0	T
MUC138	2018 Summer	Disc Jockey Laboratory		Operation, scope, roles and responsibilities in the commercial music production process.	Prerequisites: None.	MUC138 may be repeated for a total of six (6)	Occ	LAB 1.0 1.0 0.0	L

						credit hours.			
MUC139	2018 Fall	Introduction to Emcee-Rapping Techniques		Development of beginning level live-performance and recording emcee-rap techniques. Emphasis on understanding rhyme, structure, breath control, stage presence, and performance. Covers the history of the DJ/emcee and origins of the rapper, song structure, enunciation, vocal delivery, breath control, melody, and pacing while staying on beat.	Prerequisites: None.	MUC139 may be repeated for a total of six (6) credits.	Occ	L+L 3.0 4.0 4.0	T
MUC140	2023 Fall	Songwriting		An introduction to the art and craft of songwriting through the study and analysis of diverse songwriters and musical styles, and creation of original songs.	Prerequisites: A grade of C or better in MTC101, or MTC105, or permission of Instructor.	MUC140 may be repeated for a total of six (6) credits.	Occ	LEC 3.0 3.0 3.0	S
MUC145	2012 Summer II	Recording Studio Business Operations		Operation, scope, roles and responsibilities in the commercial music production process. Focuses on the business aspects and daily management of the professional recording studio. Includes strategies for project management, client service, marketing, equipment acquisition, staffing and employment.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
MUC180	2020 Spring	Computer Literacy for the Music Business		Basic computer literacy, including business applications used in the Music Industry, with hands-on experience.	Prerequisites: A grade of C or better in MUC109 or permission of Instructor or Department or Division Chair.	Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]	Occ	L+L 3.0 3.0 0.0	L
MUC181	2023 Fall	Popular Music Orchestration and Arranging		Basic orchestration and arranging techniques as used in popular music genres including jazz, pop, and rock music for vocal and instrumental music performance ensembles. Idiomatic uses of harmony, melodic	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: (MTC155 or higher		Occ	LEC 3.0 3.0 3.0	S

				rhythm, voicing, tonal color and notation.	level of MTC music theory) and MTC180.				
MUC191	2023 Fall	Electronic Music I		An introduction to creating music with computers, utilizing the Musical Instrument Digital Interface (MIDI) protocol, synthesizers, digital audio software/hardware, and MIDI controllers.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
MUC192	2023 Fall	Electronic Music II		Continued study of creating music with computers, utilizing the Musical Instrument Digital Interface (MIDI) configurations, audio editing, and music software/hardware at the intermediate level. Emphasis on more complex configurations and their applications in compositions.	Prerequisites: A grade of C or better in MUC191.		Occ	L+L 3.0 4.0 4.0	T
MUC193	2023 Fall	Computer-Based Sound Synthesis		Principles of sound synthesis using computer-based methods. Synthesis methods include subtractive, additive, frequency modulation, sample and synthesis, and hybrid. Emphasis on synthesis techniques for use in electronic music.	Prerequisites: A grade of C or better in MUC191 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
MUC194	2021 Fall	Audio Mixing Techniques		Approaches in final mixing for different musical genres. Develop critical listening skills, and applying these techniques to students' projects. Professional-type facilities and equipment available for student use.	Prerequisites: A grade of C or better in MUC111 and MUC196, or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
MUC195	2020 Fall	Studio Music Recording I		Basic principles of studio sound recording. Emphasis on musical acoustics, operation of recording equipment, studio setups, and multitrack recording. Includes studio session process and musical production decisions.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
MUC195AA	2020 Fall	Studio Music Recording I		Basic principles of studio sound recording. Emphasis on musical acoustics, operation of recording equipment, studio setups, and multitrack recording. Includes studio session process and musical production decisions.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0	T

MUC196	2020 Fall	Studio Music Recording II		Emphasis on signal-processing equipment, mixing consoles, and advanced musical recording session procedures, production, and engineering. Includes mix-down and resultant master tape of a musical recording session.	Prerequisites: A grade of C or better in MUC195 or MUC195AA.		Occ	L+L 3.0 5.0 5.0	T
MUC196AA	2020 Fall	Studio Music Recording II		Emphasis on signal-processing equipment, mixing consoles, and advanced musical recording session procedures, production, and engineering. Includes mix-down and resultant master tape of a musical recording session.	Prerequisites: A grade of C or better in MUC195 or MUC195AA.		Occ	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0	T
MUC197	2020 Fall	Live Sound Reinforcement I		Basic principles of live sound engineering. Emphasis on signal flow, acoustic, sound reinforcement set-ups and installation, signal processing, microphone selections and placement. Includes setting up sound systems and mixing live music.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
MUC198	2020 Fall	Live Sound Reinforcement II		Emphasis on musical production decisions. Front-of-house and monitor console placement, loudspeaker arrangements, power considerations, program material and sound pressure levels. Includes setting up of sound system and mixing live performances with various styles of music. In addition to mixing at alternate locations.	Prerequisites: A grade of C or better in MUC197.		Occ	L+L 3.0 4.0 4.0	T
MUC209	2011 Fall	Music Industry Entrepreneurship		Operation, scope, and career opportunities in the music business. Focuses on music in the areas of entrepreneurship, visionary development and the collaboration process.	Prerequisites: A grade of C or better in MUC109 and MUC110 or permission of Instructor.		Occ	LEC 3.0 3.0 0.0	L
MUC210	2012 Summer I	Advanced Industry Topics: Concert Promotion and Touring		Operation, scope, and career opportunities in the music business. Focuses on advanced aspects of concert promotion, touring and festival production. Areas of focus include marketing, planning, operations, talent buying, and budgeting for profitable and	Prerequisites: A grade of C or better in MUC109 or permission of Instructor or Department or Division Chair.		Occ	LEC 3.0 3.0 0.0	L

				successful music-performance stage shows.					
MUC211	2012 Summer I	Advanced Industry Topics: Artist Management and Development		Operation, scope, and career opportunities in the music business. Focus on advanced aspects of artist management and development. Include roles and responsibilities of an Artist Manager, the nature and structure of the relationship between an Artist and Artist Manager, and the development of business, and career management techniques for Artist Managers.	Prerequisites: A grade of C or better in MUC109 or permission of Instructor or Department or Division Chair.		Occ	LEC 3.0 3.0 0.0	L
MUC215	2019 Spring	Music Industry Seminar: Innovation in Music Technology		Seminar in Music Industry technology with an emphasis on current product and service innovations. Emphasis on marketing and promotional uses of new technology.	Prerequisites: None.	MUC215 may be repeated for credit.	Occ	LEC 1.0 1.0 0.0	C
MUC216	2021 Spring	Music Workshop/Seminar		Workshop seminar in commercial music disciplines.	Prerequisites: None.	MUC216 may be repeated for credit.	Occ	LEC 1.0 1.0 0.0	C
MUC220	2023 Fall	Advanced Sound Design for Film and Video	FMT220	Explores techniques and advanced applications used in designing sound using original student footage on a non-linear editing system.	Prerequisites: A grade of C or better in FMT/MUC120 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0 LAB 0.0 2.0 2.0	T
MUC222	2023 Fall	Sound Design II		Intermediate level Sound Design and Audio Post-Production for Multimedia.	A grade of C or better required in all Prerequisites. Prerequisites: MUC122. Prerequisites or Corequisites: MUC191 or MUC111 or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
MUC237	2023 Fall	Electronic Dance Music Production		Process and skills required for music production employing digital media, with an emphasis on producing music on digital audio workstations.	Prerequisites: A grade of C or better in MUC191 or permission of Instructor.	MUC237 may be repeated for a total of six (6) credits.	Occ	L+L 3.0 4.0 4.0	T

MUC240	2023 Fall	Creative Music Production		Operation, scope, roles and responsibilities in the commercial music production process. Focuses on creative aspects of commercial music production, including song selection, realization of artistic vision, studio selection, musician and vocal staff selection, coaching for optimal performance, analyzing song structure and sound quality and trouble-shooting problems in the overall artistic impression of the finished music product. Lab work includes creation and execution of a finished professional-quality music production.	Prerequisites: A grade of C or better in [(MTC101 and MTC103) or (MTC105 and MTC106)], and (MUC112, MUC192, and MUC295), or permission of Instructor.		Occ	L+L 4.0 5.0 0.0	L
MUC241	2017 Fall	Business Principles of Music Production		Operation, scope, roles and responsibilities in the commercial music production process. Focuses on business aspects of commercial music production, including project management, budgeting, production personnel, deal structures, revenue sources, copyright, publishing percentages and career strategies.	Prerequisites: A grade of C or better in (MUC109 and MUC110) or permission of Instructor.		Occ	LEC 3.0 3.0 0.0	L
MUC242	2017 Fall	Music Genres and Styles		Operation and development of creative skills in the commercial music production process. Geared towards music producers and emphasizing analysis and comprehension of commercial music styles and genres, including: pop, country, rock, soul, rhythm and blues, funk, and hip-hop. Study of the thematic organization of popular musical styles.	Prerequisites: None.		Occ	LEC 2.0 2.0 0.0	L
MUC261	2023 Fall	Modern Arranging I		Basic arranging techniques as used in jazz and rock idioms for combo and special ensembles. Idiomatic uses of harmony, melodic rhythm, voicing, tonal color and notation.	Prerequisites: A grade of C or better in MUP164 and MUP165 or permission of Instructor.	MUC261 may be repeated for a total of six (6) credit hours.	Occ	LEC 3.0 3.0 3.0	S
MUC262	2023 Fall	Modern Arranging II		Arranging for larger ensembles, including strings, jazz ensemble, woodwinds and synthesizers.	Prerequisites: A grade of C or better in MUC261 or	MUC262 may be repeated	Occ	LEC 3.0	S

				Detailed study of harmony, form and orchestration.	permission of instructor.	for a total of six (6) credit hours.		3.0 3.0	
MUC274	2017 Fall	Music Industry Study Tour		A tour of the music industry outside the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance awareness of professional opportunities and careers.	Prerequisites: None.	Additional expenses will apply students responsible for travel expenses. MUC274 may be repeated for a total of ten (10) credit hours.	Occ	LAB 2.0 2.0 0.0	L
MUC280	2018 Fall	Recording Studio Maintenance		Introduction to the techniques, electronics, and tools used to perform basic recording studio, live sound, and electronic musical instrument equipment maintenance	Prerequisites: A grade of C or better in MUC195AA or MUC111 or permission of instructor.		Occ	L+L 3.0 3.0 3.0	T
MUC281	2023 Fall	Electronic Music III		Continued study of the production of music using electronic processes. Emphasis on more complex configurations and their applications in live performance or studio use.	Prerequisites: A grade of C or better in MUC192.		Occ	L+L 3.0 4.0 4.0	T
MUC289	2020 Fall	Live Sound Reinforcement III		Focus on audio engineering and media production for performances and events. The course will cover advanced audio concepts and techniques, basic lighting, rigging, and media. Students will apply their knowledge assisting as part of productions, events, advanced projects or other activities related to the course material.	Prerequisites: A grade of C or better in MUC198.		Occ	L+L 3.0 6.0 6.0	T
MUC290AA	2017 Fall	Music Business Internship		Music Business Internship work experience. Perform a variety of activities, to fulfill the routines and responsibilities of the department or business where the internship is served. Eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division.	MUC290A A may be repeated for a total of twelve (12) credit hours.	Occ	L+L 1.0 1.0 0.0	C

MUC291AA	2014 Fall	Disc Jockey Internship		Disc Jockey (DJ) internship work experience, which may include emcee-rapping and/or electronic dance music production, under the supervision of an experienced industry professional. Perform a variety of activities to fulfill the routines and responsibilities of the department or business where the internship is served.	Prerequisites: Permission of Department or Division.	MUC291A A requires a minimum of eighty (80) hours of designated work per credit. MUC291A A may be repeated for a total of twelve (12) credit hours.	Occ	L+L 1.0 1.0 0.0	C
MUC292	2020 Fall	Sound Design III		Advanced Sound Design Production for Multimedia: Designed to provide an atmosphere of team research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use.	Prerequisites: A grade of C or better in MUC222, or permission of Instructor.		Occ	L+L 3.0 6.0 6.0	T
MUC293	2020 Fall	Self Promotion for Music		Designed to provide the skills and knowledge required for effective self-promotion. Focus on career goal development, market analysis, communication and networking skills, and the development of a self-promotional campaign.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
MUC294	2017 Fall	Portfolio for Music		Includes developing a portfolio that demonstrates music related skills and marketing of songs, recordings, and musical performances.	Prerequisites: A grade of C or better in MUC293.		Occ	LEC 1.0 1.0 0.0	L
MUC295	2018 Fall	Studio Music Recording III		Producing and engineering a recording project. Covers how recording studios work and how recording projects are organized from pre-production through delivery of the final mix.	Prerequisites: A grade of C or better in MUC196 and (MUC111 or permission of Instructor).		Occ	L+L 3.0 6.0 6.0	T
MUC296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average		Occ	LAB 1.0 5.0 0.0	Z

					and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
MUC296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
MUC296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals		Occ	LAB 3.0 15.0 0.0	Z

					(students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
MUC296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
MUC297AA	2020 Fall	Audio Production Internship		Music Internship work experience in a business or industry. Eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division.	MUC297A A may be repeated for a total of twelve (12) credit hours.	Occ	L+L 1.0 1.0 0.0	C
MUC297AB	2020 Fall	Audio Production Internship		Music Internship work experience in a business or industry eighty (80) hours of designated work per credit.	Prerequisites: A grade of C or better in MUC110.	MUC297A B may be repeated for a total of twelve	Occ	L+L 2.0 2.0 0.0	C

						(12) credit hours.			
MUC297AC	2020 Fall	Audio Production Internship		Music Internship work experience in a business or industry eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division.	MUC297A C may be repeated for a total of twelve (12) credit hours.	Occ	L+L 3.0 3.0 0.0	C
MUC298AA	2017 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
MUC298AB	2017 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
MUC298AC	2017 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z

MUE107	2019 Fall	Woodwinds Methods I		Practical class with emphasis on techniques of playing and teaching woodwind instruments including embouchure, breath control, tone, mouthpiece selection, and literature.	Prerequisites: None.		Acad	L+L 1.0 3.0 3.0	T
MUE108	2019 Fall	Percussion Methods I		Practical class with emphasis on techniques of playing and teaching percussion instruments including hand position, rudiments, stick control, and elements of reading rhythms.	Prerequisites: None.		Acad	L+L 1.0 3.0 3.0	T
MUE109	2019 Fall	Brass Methods I		Practical class with emphasis on techniques of playing and teaching brass instruments including embouchure, breath control, tone, and literature.	Prerequisites: None.		Acad	L+L 1.0 3.0 3.0	T
MUE110	2019 Fall	Strings Methods I		Practical class with emphasis on techniques of playing and teaching string instruments including tone control and literature.	Prerequisites: None.		Acad	L+L 1.0 3.0 3.0	T
MUE111	2019 Fall	Guitar Methods		Practical class with emphasis on both classical and popular techniques, methods, materials, solo/ensemble literature and repertoire used in all levels of guitar. Instructional approaches to the guitar as both a harmonizing instrument and in an ensemble setting.	Prerequisites: None.		Acad	L+L 1.0 3.0 3.0	T
MUE207	2019 Fall	Woodwinds Methods II		Continuation of Woodwinds Methods I with additional emphasis on skills including ensemble performance, transposition, increasing range and literature.	Prerequisites: A grade of C or better in MUE107 or permission of Instructor.		Acad	L+L 1.0 3.0 3.0	T
MUE208	2019 Fall	Percussion Methods II		Continuation of Percussion Methods I with additional emphasis on ensemble techniques and representative literature.	Prerequisites: A grade of C or better in MUE108 or permission of Instructor.		Acad	L+L 1.0 3.0 3.0	T
MUE209	2023 Fall	Brass Methods II		Continuation of Brass Methods I with additional focus on skills including ensemble performance, transposition, increasing range and solo literature.	Prerequisites: A grade of C or better in MUE109 or permission of Instructor.		Acad	L+L 1.0 3.0 3.0	T
MUE210	2019 Fall	Strings Methods II		Continuation of String Methods I with additional focus on skills including	Prerequisites: A grade of C or better in MUE110 or		Acad	L+L 1.0	T

				fingering and bowing techniques, and solo/ensemble literature.	permission of Instructor.			3.0 3.0	
MUE240	2019 Fall	Introduction to Choral Methods		Overview of techniques, methods, materials, style characteristics, and repertoire used in directing choral music at the secondary level including simulated teaching, conducting, and the demonstration of vocal and choral performance practices.	Prerequisites: None.		Acad	L+L 1.0 3.0 3.0	T
MUE250	2023 Fall	Vocal Pedagogy/Voice Methods		Study of the anatomy, physiology, and acoustics of singing as applied to healthy vocal function and the teaching of singing. Topics include: overview of techniques, materials, and literature used in teaching singing.	Prerequisites: None.		Acad	L+L 1.0 3.0 3.0	T
MUE296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
MUE296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals		Acad	LAB 2.0 10.0 0.0	Z

					(students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
MUE296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
MUE296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor.		Acad	LAB 4.0 20.0 0.0	Z

					Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
MUE298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
MUE298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
MUE298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

MUP100	2021 Fall	Introduction to Digital Musicianship		A music performance class that provides foundational skills in the use of digital concepts, tools, software applications, and technology to improve performance ability and music making concepts that align with current trends in the music industry.	Prerequisites: None.	MUP100 may be repeated for credit.	Occ	LEC 2.0 2.0 2.0	S
MUP101AA	2020 Fall	Private Instruction: Voice		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101A A may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101AD	2017 Fall	Private Instruction: Piano		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101A D may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101AG	2017 Fall	Private Instruction: Harpsichord		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101A G may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

MUP101AJ	2017 Fall	Private Instruction: Organ		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101A J may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101AM	2017 Fall	Private Instruction: Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101A M may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101AP	2017 Fall	Private Instruction: Trumpet		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101A P may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101AS	2017 Fall	Private Instruction: French Horn		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano,	Prerequisites: None.	MUP101A S may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				harpichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP101AV	2017 Fall	Private Instruction: Trombone		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101A V may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101AY	2017 Fall	Private Instruction: Euphonium		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101A Y may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101BB	2017 Fall	Private Instruction: Tuba		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101B B may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

MUP101BE	2017 Fall	Private Instruction: Flute		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101B E may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101BH	2017 Fall	Private Instruction: Oboe		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101B H may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101BK	2017 Fall	Private Instruction: Clarinet		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101B K may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101BN	2017 Fall	Private Instruction: Bassoon		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano,	Prerequisites: None.	MUP101B N may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				harpichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP101BQ	2017 Fall	Private Instruction: Saxophone		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101B Q may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101BT	2017 Fall	Private Instruction: Violin		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101B T may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101BW	2017 Fall	Private Instruction: Viola		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101B W may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

MUP101BZ	2017 Fall	Private Instruction: Violoncello		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101B Z may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101CC	2017 Fall	Private Instruction: Contrabass		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101C C may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101CF	2020 Fall	Private Instruction: Popular Music Bass Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	MUP101C F may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101CI	2017 Fall	Private Instruction: Percussion		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements.	Prerequisites: None.	MUP101C I may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP101CJ	2017 Fall	Private Instruction: Harp		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP101C J may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101CK	2020 Fall	Private Instruction: Popular Music Voice		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	MUP101C K may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101CL	2020 Fall	Private Instruction: Popular Music Piano		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion,	Prerequisites: None.	MUP101C L may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				harp, turntablism and electronic music.					
MUP101CM	2020 Fall	Private Instruction: Popular Music Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	MUP101C M may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101CN	2020 Fall	Private Instruction: Popular Music Drum		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	MUP101C N may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101CO	2020 Fall	Private Instruction: Popular Music Production		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	MUP101C O may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP101CP	2020 Fall	Private Instruction: Popular Electronic		Private Instruction emphasizing developmental improvement of	Prerequisites: None.	MUP101C P may be	Occ	L+L 1.0	Z

		Music Performance		musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.		repeated for credit.		0.6 0.0	
MUP101CQ	2020 Fall	Private Instruction: Popular Music Turntablism		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	MUP101C Q may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP102AA	2020 Fall	Private Instruction: Voice		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102A A may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102AD	2017 Fall	Private Instruction: Piano		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone,	Prerequisites: None.	MUP102A D may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP102AG	2017 Fall	Private Instruction: Harpichord		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102A G may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102AJ	2017 Fall	Private Instruction: Organ		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102A J may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102AM	2017 Fall	Private Instruction: Guitar		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102A M may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102AP	2017 Fall	Private Instruction: Trumpet		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102A P may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

MUP102AS	2017 Fall	Private Instruction: French Horn		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102A S may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102AV	2017 Fall	Private Instruction: Trombone		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102A V may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102AY	2017 Fall	Private Instruction: Euphonium		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102A Y may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102BB	2017 Fall	Private Instruction: Tuba		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102B B may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102BE	2017 Fall	Private Instruction: Flute		Private Instruction emphasizing musicianship, literature, technique	Prerequisites: None.	MUP102B E may be	Occ	L+L 2.0	Z

				and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.		repeated for credit.		1.2 0.0	
MUP102BH	2017 Fall	Private Instruction: Oboe		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102B H may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102BK	2017 Fall	Private Instruction: Clarinet		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102B K may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102BN	2017 Fall	Private Instruction: Bassoon		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102B N may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102BQ	2017 Fall	Private Instruction: Saxophone		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university	Prerequisites: None.	MUP102B Q may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP102BT	2017 Fall	Private Instruction: Violin		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102B T may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102BW	2017 Fall	Private Instruction: Viola		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102B W may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102BZ	2017 Fall	Private Instruction: Violoncello		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102B Z may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102CC	2017 Fall	Private Instruction: Contrabass		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord,	Prerequisites: None.	MUP102C C may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP102CF	2020 Fall	Private Instruction: Popular Music Bass Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	MUP102C F may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102CI	2017 Fall	Private Instruction: Percussion		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102C I may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102CJ	2017 Fall	Private Instruction: Harp		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: None.	MUP102C J may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102CK	2020 Fall	Private Instruction: Popular Music Voice		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors	Prerequisites: None.	MUP102C K may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.					
MUP102CL	2020 Fall	Private Instruction: Popular Music Piano		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	MUP102C L may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102CM	2020 Fall	Private Instruction: Popular Music Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	MUP102C M may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102CN	2020 Fall	Private Instruction: Popular Music Drum		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn,	Prerequisites: None.	MUP102C N may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.					
MUP102CO	2020 Fall	Private Instruction: Popular Music Production		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	MUP102C O may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102CP	2020 Fall	Private Instruction: Popular Electronic Music Performance		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: None.	MUP102C P may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP102CQ	2020 Fall	Private Instruction: Popular Music Turntablism		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion,	Prerequisites: None.	MUP102C Q may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				harp, turntablism and electronic music.					
MUP110	2017 Fall	Concert Music		Attendance at concerts, recitals and music lectures on and off campus. Required each semester for all music majors	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
MUP127	2019 Fall	Class Guitar I		Emphasis on note-reading and folk-style harmonic accompaniment. Includes finger-style playing. Stresses development of efficient practice techniques and proper sitting and hand positions.	Prerequisites: None.		Occ	L+L 1.0 3.0 3.0	T
MUP128	2019 Fall	Class Guitar II		Note-reading range including second position and parts of higher positions. Classical, popular, Latin, and other styles of music. Theory including scales, keys, and chord construction. Technical exercises of both hands.	Prerequisites: A grade of C or better in MUP127 or permission of Instructor.		Occ	L+L 1.0 3.0 3.0	T
MUP130	2023 Fall	Introduction to Class Piano		Basic introduction to piano techniques and fundamentals of music including hand position, sight-reading of both melodic and harmonic materials, and the introduction of scale patterns. Designed for those with little or no piano experience.	Prerequisites: None.		Occ	L+L 1.0 3.0 3.0	T
MUP131	2023 Fall	Class Piano I		Development of beginning piano techniques and the fundamentals of music including basic hand position, music-reading skills of melodic and harmonic material, major scales, transposition, and harmonizations including the I, IV, V7 chords.	Prerequisites: None.		Occ	L+L 1.0 3.0 3.0	T
MUP132	2023 Fall	Class Piano II		Continuation of Piano I with emphasis on elementary piano techniques including major and minor scales, transposition, improvisation, and sight reading.	Prerequisites: A grade of C or better in MUP131 or permission of Instructor.		Occ	L+L 1.0 3.0 3.0	T
MUP133	2019 Fall	Class Voice I		Introduction to the fundamentals of vocal production. Emphasis on breathing techniques, tone production and performances in class of solo vocal literature.	Prerequisites: None.		Occ	L+L 1.0 3.0 3.0	T
MUP134	2019 Fall	Class Voice II		Continuation of Class Voice I including the elements of stage presence and diction.	Prerequisites: A grade of C or better in MUP133 or		Occ	L+L 1.0 3.0 3.0	T

					permission of Instructor.				
MUP135	2018 Fall	Class Native American Flute I		Practical class with emphasis on playing, including embouchure, breath control, finger control, reading from printed score and improvising songs.	Prerequisites: None.	MUP135 may be repeated for up to six (6) credits.	Occ	L+L 2.0 3.0 3.0	T
MUP140	2024 Fall	Elementary Piano Pedagogy		An overview of instructional methods, techniques, materials, and repertoire, intended for teaching piano students at the elementary level. Includes creating studio documents, teaching functional skills, peer piano teaching, and observing piano instruction.	Prerequisites: Permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
MUP141	2024 Fall	Intermediate Piano Pedagogy		Overview of techniques, methods, materials, stylistic characteristics, and repertoire used in teaching piano students at the intermediate and early advanced levels including peer piano teaching, performance and competition preparation, and observation of piano instruction.	Prerequisites: Permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
MUP149	2018 Fall	Gospel Chorus		A mixed chorus with emphasis on college/community participation and preparation of a variety of Gospel Music for public performance. Auditions may be required.	Prerequisites: None.	MUP149 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
MUP150	2018 Fall	Community Chorus		A mixed chorus with emphasis on college/community participation and preparation of a variety of choral literature for public performance. Auditions may be required.	Prerequisites: None.	MUP150 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
MUP151AA	2020 Fall	Private Instruction: Voice		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AA.	MUP151A A may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

MUP151AD	2017 Fall	Private Instruction: Piano		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AD.	MUP151A D may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151AG	2017 Fall	Private Instruction: Harpsichord		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AG.	MUP151A G may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151AJ	2017 Fall	Private Instruction: Organ		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AJ.	MUP151A J may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151AM	2017 Fall	Private Instruction: Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano,	Prerequisites: A grade of C or better in MUP101AM.	MUP151A M may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				harpichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP151AP	2017 Fall	Private Instruction: Trumpet		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AP.	MUP151A P may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151AS	2017 Fall	Private Instruction: French Horn		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AS.	MUP151A S may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151AV	2017 Fall	Private Instruction: Trombone		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101AV.	MUP151A V may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

MUP151AY	2017 Fall	Private Instruction: Euphonium		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, and percussion.	Prerequisites: A grade of C or better in MUP101AY.	MUP151A Y may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151BB	2017 Fall	Private Instruction: Tuba		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BB.	MUP151B B may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151BE	2017 Fall	Private Instruction: Flute		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BE.	MUP151B E may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151BH	2017 Fall	Private Instruction: Oboe		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano,	Prerequisites: A grade of C or better in MUP101BH.	MUP151B H may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				harpichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP151BK	2017 Fall	Private Instruction: Clarinet		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BK.	MUP151BK may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151BN	2017 Fall	Private Instruction: Bassoon		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BN.	MUP151BN may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151BQ	2017 Fall	Private Instruction: Saxophone		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BQ.	MUP151BQ may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

MUP151BT	2017 Fall	Private Instruction: Violin		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BT.	MUP151B T may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151BW	2017 Fall	Private Instruction: Viola		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BW.	MUP151B W may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151BZ	2017 Fall	Private Instruction: Violoncello		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101BZ.	MUP151B Z may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151CC	2017 Fall	Private Instruction: Contrabass		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano,	Prerequisites: A grade of C or better in MUP101CC.	MUP151C C may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				harpichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP151CF	2020 Fall	Private Instruction: Popular Music Bass Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP101CF.	MUP151C F may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151CI	2017 Fall	Private Instruction: Percussion		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101CI.	MUP151C I may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151CJ	2017 Fall	Private Instruction: Harp		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP101CJ.	MUP151C J may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

MUP151CK	2020 Fall	Private Instruction: Popular Music Voice		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP101CK.	MUP151C K may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151CL	2020 Fall	Private Instruction: Popular Music Piano		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP101CL.	MUP151C L may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151CM	2020 Fall	Private Instruction: Popular Music Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP101CM.	MUP151C M may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151CN	2020 Fall	Private Instruction: Popular Music Drum		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course	Prerequisites: A grade of C or better in MUP101CN.	MUP151C N may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.					
MUP151CO	2020 Fall	Private Instruction: Popular Music Production		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP101CO.	MUP151C O may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151CP	2020 Fall	Private Instruction: Popular Electronic Music Performance		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP101CP.	MUP151C P may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP151CQ	2020 Fall	Private Instruction: Popular Music Turntablism		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet,	Prerequisites: A grade of C or better in MUP101CQ.	MUP151C Q may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.					
MUP152AA	2020 Fall	Private Instruction: Voice		Private Instruction emphasizing musicianship, literature, technique and performance. Four-course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AA.	MUP152A A may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152AD	2017 Fall	Private Instruction: Piano		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AD.	MUP152A D may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152AG	2017 Fall	Private Instruction: Harpsichord		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AG.	MUP152A G may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152AJ	2017 Fall	Private Instruction: Organ		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn,	Prerequisites: A grade of C or better in MUP102AJ.	MUP152A J may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP152AM	2017 Fall	Private Instruction: Guitar		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AM.	MUP152A M may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152AP	2017 Fall	Private Instruction: Trumpet		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AP.	MUP152A P may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152AS	2017 Fall	Private Instruction: French Horn		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AS.	MUP152A S may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152AV	2017 Fall	Private Instruction: Trombone		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone,	Prerequisites: A grade of C or better in MUP102AV.	MUP152A V may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP152AY	2017 Fall	Private Instruction: Euphonium		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102AY.	MUP152A Y may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152BB	2017 Fall	Private Instruction: Tuba		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BB.	MUP152B B may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152BE	2017 Fall	Private Instruction: Flute		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BE.	MUP152B E may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152BH	2017 Fall	Private Instruction: Oboe		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BH.	MUP152B H may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

MUP152BK	2017 Fall	Private Instruction: Clarinet		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BK.	MUP152BK may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152BN	2017 Fall	Private Instruction: Bassoon		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BN.	MUP152BN may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152BQ	2017 Fall	Private Instruction: Saxophone		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BQ.	MUP152BQ may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152BT	2017 Fall	Private Instruction: Violin		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BT.	MUP152BT may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

MUP152BW	2017 Fall	Private Instruction: Viola		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BW.	MUP152B W may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152BZ	2017 Fall	Private Instruction: Violoncello		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102BZ.	MUP152B Z may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152CC	2017 Fall	Private Instruction: Contrabass		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102CC.	MUP152C C may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152CF	2020 Fall	Private Instruction: Popular Music Bass Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion,	Prerequisites: A grade of C or better in MUP102CF.	MUP152C F may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				harp, turntablism and electronic music.					
MUP152CI	2017 Fall	Private Instruction: Percussion		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102CI.	MUP152C I may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152CJ	2017 Fall	Private Instruction: Harp		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP102CJ.	MUP152C J may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152CK	2020 Fall	Private Instruction: Popular Music Voice		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP102CK.	MUP152C K may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152CL	2020 Fall	Private Instruction: Popular Music Piano		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet,	Prerequisites: A grade of C or better in MUP102CL.	MUP152C L may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.					
MUP152CM	2020 Fall	Private Instruction: Popular Music Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP102CM.	MUP152C M may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152CN	2020 Fall	Private Instruction: Popular Music Drum		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP102CN.	MUP152C N may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152CO	2020 Fall	Private Instruction: Popular Music Production		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion,	Prerequisites: A grade of C or better in MUP102CO.	MUP152C O may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				harp, turntablism and electronic music.					
MUP152CP	2020 Fall	Private Instruction: Popular Electronic Music Performance		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP102CP.	MUP152C P may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP152CQ	2020 Fall	Private Instruction: Popular Music Turntablism		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP102CQ.	MUP152C Q may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP153	2019 Fall	Concert Choir		A mixed choir designed to emphasize choral techniques and performance of all styles of choral literature. Public performances are scheduled each semester.	Prerequisites: None.	MUP153 may require auditions. MUP153 may be repeated for credit.	Occ	L+L 1.0 5.0 5.0	T
MUP154AA	2018 Fall	Jazz Vocal Ensemble		Practical and performing experience in vocal jazz. Includes music from the 1920's through the present.	Prerequisites: Auditions required or permission of Instructor.	MUP154A A may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
MUP154AB	2018 Fall	Jazz Vocal Ensemble		Practical and performing experience in vocal jazz. Includes music from the 1920's through the present. Requires participation in various public	Prerequisites: Auditions required and two semesters in A Cappella Choir or	MUP154A B may be repeated for credit.	Occ	L+L 2.0 5.0 5.0	T

				performances on campus and in the community throughout the semester.	permission of Instructor.				
MUP155	2018 Fall	Handbell Choir (Bell Canto)		Emphasis on practical and performing skills in bell ringing. Preparation of all styles of bell literature. Scheduled public performances during the year.	Prerequisites: None.	MUP155 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
MUP157	2021 Summer	Treble Choir		A high voice chorus designed to emphasize choral technique and performance of all styles of appropriate choral literature. Public performances are scheduled during the year. Auditions may be required.	Prerequisites: None.	MUP157 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
MUP158	2018 Fall	Rock Band		Emphasizes instrumental and vocal techniques and the preparation of all styles of rock band literature. Introduces music business. Requires participation in public and private performances throughout the semester.	Prerequisites: Auditions are required.	MUP158 may be repeated for a total of four (4) credits.	Occ	L+L 1.0 3.0 3.0	T
MUP159	2018 Fall	Community Orchestra		Emphasis on college/community participation and the preparation of orchestral literature for public performance. Auditions may be required.	Prerequisites: None.	MUP159 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
MUP160	2019 Fall	Orchestra		A class designed to emphasize orchestral ensemble techniques and the preparation of all styles of orchestral literature. Public performances are scheduled during the year. Auditions may be required.	Prerequisites: None.	MUP160 may be repeated for credit.	Occ	L+L 1.0 5.0 5.0	T
MUP161	2018 Fall	Community Band		Emphasis on college/community participation and the preparation of band literature for public performance. Auditions may be required.	Prerequisites: None.	MUP161 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
MUP162	2019 Fall	Band		Designed to emphasize instrumental techniques and the preparation of all styles of band literature for ensemble performance. Includes public performances.	Prerequisites: None.	MUP162 may require auditions. MUP162 may be repeated for credit.	Occ	L+L 1.0 5.0 5.0	T
MUP163	2018 Fall	Jazz Ensemble		Practical and performance experience in various jazz styles. Open to all students on the basis of auditions.	Prerequisites: None.	MUP163 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T

						Open to all students on the basis of auditions. Auditions may be required.			
MUP164	2019 Fall	Jazz Improvisation I		Theoretical and performance skills in many styles of jazz improvisation.	Prerequisites: None.	MUP164 may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 3.0 3.0	T
MUP165	2019 Fall	Jazz Improvisation II		Intermediate theoretical and performance skills in many styles of jazz improvisation.	Prerequisites: A grade of C or better in MUP164 or permission of Instructor.	MUP165 may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 3.0 3.0	T
MUP166	2018 Fall	Jazz Piano I		Introduction to basic jazz piano skills, including chord construction, chord voicings, accompanying and solo piano arrangements.	Prerequisites: A grade of C or better in MUP131 or permission of Instructor.	MUP166 may be repeated for a total of four (4) credit hours.	Occ	L+L 1.0 2.0 2.0	T
MUP167	2018 Fall	Jazz Piano II		Continued development of jazz piano techniques with emphasis on voicing formulas for ninth, eleventh, thirteenth, and altered dominant chords	Prerequisites: A grade of C or better in MUP166 or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
MUP168	2018 Fall	Mariachi Band		Emphasis on college and community participation and the preparation of mariachi band literature for public performance. Auditions may be required.	Prerequisites: None.	MUP168 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
MUP169	2023 Fall	Guitar Ensemble		Ensemble of the entire guitar family that may include standard, requinto, alto, bass, and contrabass guitars that emphasizes guitar techniques and the preparation of all styles of guitar ensemble literature. Literature will	Prerequisites: None.	Auditions may be required. MUP169 may be	Occ	L+L 1.0 3.0 3.0	T

				include modern and historical guitar ensemble repertoire, new works, arrangements, and transcriptions from various musical periods and traditions as well as guitar literature from a diverse number of world musical traditions. Guitar techniques are studied and refined as they relate to the literature performed. Emphasis placed on reading and listening skills, rehearsal and preparation, conducting and performance cues, and performance experience in various guitar styles. Concerts presented throughout the semester.		repeated for credit.			
MUP171	2018 Fall	Opera Workshop		A workshop in the study and performance of operatic literature.	Prerequisites: None.	MUP171 may be repeated for credit. Open to all students on the basis of auditions. Auditions may be required.	Occ	L+L 2.0 5.0 5.0	T
MUP181	2018 Fall	Chamber Music Ensembles		Practical and performance experience in instrumental, vocal, and mixed ensembles.	Prerequisites: None.	MUP181 may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
MUP182	2018 Fall	Chamber Singers		Practical and performance experience in various styles of vocal music.	Prerequisites: None.	MUP182 may be repeated for credit. Open to all students on the basis of auditions. Auditions may be required.	Occ	L+L 1.0 3.0 3.0	T

MUP183	2021 Fall	Jazz Combo		Jazz Combo participation provides an opportunity for students to develop improvisational skills in a variety of styles from historical and contemporary jazz practice, while offering a creative outlet for composers and arrangers.	Prerequisites: None.	MUP183 may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
MUP185	2021 Fall	Flute Choir		Ensemble of the entire flute family that may include piccolo, E flat flute, C flutes, alto flutes, and bass flute. Literature will include commissioned works, original works for standard flute choir, and transcriptions from various musical periods.	Prerequisites: None.	Auditions may be required. MUP185 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
MUP190	2021 Fall	Percussion Ensemble		Practical and performance experience in various percussion styles. Percussion literature from a diverse number of world musical traditions. Western European art music, various African traditions, Indian music, Japanese music, Indonesian music, Mexican, Central, and South American music, and percussion compositions from the American Experimental Tradition rehearsed and performed. Concerts presented throughout the semester. Percussion techniques are studied and refined as they relate to the literature performed. Emphasis placed on reading and listening skills, increased aesthetic discrimination. Informed performance practice and skills on all percussion instruments and traditions.	Prerequisites: None.	MUP190 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
MUP201AA	2017 Fall	Private Instruction: Voice		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello,	Prerequisites: A grade of C or better in MUP151AA.	MUP201A A may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				contrabass, bass guitar, harp and percussion.					
MUP201AD	2017 Fall	Private Instruction: Piano		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151AD.	MUP201A D may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201AG	2017 Fall	Private Instruction: Harpsichord		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151AG.	MUP201A G may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201AJ	2017 Fall	Private Instruction: Organ		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151AJ.	MUP201A J may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201AM	2017 Fall	Private Instruction: Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors	Prerequisites: A grade of C or better in MUP151AM.	MUP201A M may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP201AP	2017 Fall	Private Instruction: Trumpet		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151AP.	MUP201A P may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201AS	2017 Fall	Private Instruction: French Horn		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151AS.	MUP201A S may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201AV	2017 Fall	Private Instruction: Trombone		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello,	Prerequisites: A grade of C or better in MUP151AV.	MUP201A V may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				contrabass, bass guitar, percussion, and harp.					
MUP201AY	2017 Fall	Private Instruction: Euphonium		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151AY.	MUP201A Y may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201BB	2017 Fall	Private Instruction: Tuba		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BB.	MUP201B B may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201BE	2017 Fall	Private Instruction: Flute		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BE.	MUP201B E may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201BH	2017 Fall	Private Instruction: Oboe		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors	Prerequisites: A grade of C or better in MUP151BH.	MUP201B H may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP201BK	2017 Fall	Private Instruction: Clarinet		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BK.	MUP201BK may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201BN	2017 Fall	Private Instruction: Bassoon		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BN.	MUP201BN may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201BQ	2017 Fall	Private Instruction: Saxophone		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello,	Prerequisites: A grade of C or better in MUP151BQ.	MUP201BQ may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				contrabass, bass guitar, percussion, and harp.					
MUP201BT	2017 Fall	Private Instruction: Violin		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BT.	MUP201B T may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201BW	2017 Fall	Private Instruction: Viola		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BW.	MUP201B W may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201BZ	2017 Fall	Private Instruction: Violoncello		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151BZ.	MUP201B Z may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201CC	2017 Fall	Private Instruction: Contrabass		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors	Prerequisites: A grade of C or better in MUP151CC.	MUP201C C may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP201CF	2020 Fall	Private Instruction: Popular Music Bass Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CF.	MUP201C F may be repeated for credit. Repeats 99.0 99.0	Occ	L+L 1.0 0.6 0.0	Z
MUP201CI	2017 Fall	Private Instruction: Percussion		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP151CI.	MUP201C I may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201CJ	2017 Fall	Private Instruction: Harp		Private Instruction emphasizing developmental improvement of musicianship, and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello,	Prerequisites: A grade of C or better in MUP151CJ.	MUP201C J may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				contrabass, bass guitar, percussion, percussion, and harp.					
MUP201CK	2020 Fall	Private Instruction: Popular Music Voice		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CK.	MUP201C K may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201CL	2020 Fall	Private Instruction: Popular Music Piano		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CL.	MUP201C L may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201CM	2020 Fall	Private Instruction: Popular Music Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CM.	MUP201C M may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

MUP201CN	2020 Fall	Private Instruction: Popular Music Drum		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CN.	MUP201C N may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201CO	2020 Fall	Private Instruction: Popular Music Production		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CO.	MUP201C O may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201CP	2020 Fall	Private Instruction: Popular Electronic Music Performance		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP151CP.	MUP201C P may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP201CQ	2020 Fall	Private Instruction: Popular Music Turntablism		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course	Prerequisites: A grade of C or better in MUP151CQ.	MUP201C Q may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.					
MUP202AA	2017 Fall	Private Instruction: Voice		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AA.	MUP202A A may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202AD	2017 Fall	Private Instruction: Piano		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AD.	MUP202A D may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202AG	2017 Fall	Private Instruction: Harpsichord		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AG.	MUP202A G may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202AJ	2017 Fall	Private Instruction: Organ		Private Instruction emphasizing musicianship, literature, technique and performance. Four course	Prerequisites: A grade of C or better in MUP152AJ.	MUP202A J may be	Occ	L+L 2.0	Z

				sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.		repeated for credit.		1.2 0.0	
MUP202AM	2017 Fall	Private Instruction: Guitar		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AM.	MUP202A M may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202AP	2017 Fall	Private Instruction: Trumpet		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AP.	MUP202A P may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202AS	2017 Fall	Private Instruction: French Horn		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AS.	MUP202A S may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202AV	2017 Fall	Private Instruction: Trombone		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction	Prerequisites: A grade of C or better in MUP152AV.	MUP202A V may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP202AY	2017 Fall	Private Instruction: Euphonium		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152AY.	MUP202A Y may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202BB	2017 Fall	Private Instruction: Tuba		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BB.	MUP202B B may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202BE	2017 Fall	Private Instruction: Flute		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BE.	MUP202B E may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202BH	2017 Fall	Private Instruction: Oboe		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn,	Prerequisites: A grade of C or better in MUP152BH.	MUP202B H may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP202BK	2017 Fall	Private Instruction: Clarinet		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BK.	MUP202BK may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202BN	2017 Fall	Private Instruction: Bassoon		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BN.	MUP202BN may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202BQ	2017 Fall	Private Instruction: Saxophone		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BQ.	MUP202BQ may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202BT	2017 Fall	Private Instruction: Violin		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone,	Prerequisites: A grade of C or better in MUP152BT.	MUP202BT may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP202BW	2017 Fall	Private Instruction: Viola		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BW.	MUP202B W may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202BZ	2017 Fall	Private Instruction: Violoncello		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152BZ.	MUP202B Z may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202CC	2017 Fall	Private Instruction: Contrabass		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152CC.	MUP202C C may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202CF	2020 Fall	Private Instruction: Popular Music Bass Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello,	Prerequisites: A grade of C or better in MUP152CF.	MUP202C F may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				contrabass, bass guitar, percussion, harp, turntablism and electronic music.					
MUP202CI	2017 Fall	Private Instruction: Percussion		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152CI.	MUP202C I may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202CJ	2017 Fall	Private Instruction: Harp		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP152CJ.	MUP202C J may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202CK	2020 Fall	Private Instruction: Popular Music Voice		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP152CK.	MUP202C K may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202CL	2020 Fall	Private Instruction: Popular Music Piano		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano,	Prerequisites: A grade of C or better in MUP152CL.	MUP202C L may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				harpichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.					
MUP202CM	2020 Fall	Private Instruction: Popular Music Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP152CM.	MUP202C M may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202CN	2020 Fall	Private Instruction: Popular Music Drum		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP152CN.	MUP202C N may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202CO	2020 Fall	Private Instruction: Popular Music Production		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello,	Prerequisites: A grade of C or better in MUP152CO.	MUP202C O may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				contrabass, bass guitar, percussion, harp, turntablism and electronic music.					
MUP202CP	2020 Fall	Private Instruction: Popular Electronic Music Performance		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP152CP.	MUP202C P may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP202CQ	2020 Fall	Private Instruction: Popular Music Turntablism		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP152CQ.	MUP202C Q may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP209	2017 Fall	Elements of Conducting		Essentials of conducting techniques used in choral and instrumental ensembles including terminology, interpretation, and styles	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
MUP217	2020 Spring	Music Theatre: Broadway Solos		Study and in-class performance of scenes and solos from Broadway musical literature.	Prerequisites: None.	MUP217 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
MUP218	2018 Fall	Audition Techniques: Music Theater		Practice in the techniques of auditioning for musical theater. Identification and illustration techniques of the vocal and acting music theater audition.	Prerequisites: None.		Occ	L+L 1.0 3.0 3.0	T

MUP227	2019 Fall	Class Guitar III		Additional fingerboard positions. Ensemble techniques and performance.	Prerequisites: A grade of C or better in MUP226 or permission of Instructor.		Occ	L+L 1.0 3.0 3.0	T
MUP228	2019 Fall	Class Guitar IV		Advanced fingerboard positions. Duet and trio performances. Advanced ensemble techniques.	Prerequisites: A grade of C or better in MUP227 or permission of Instructor.	MUP228 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
MUP231	2023 Fall	Class Piano III		Development of intermediate piano techniques including selected solo literature, transposition of harmonic patterns, and secondary dominants.	Prerequisites: A grade of C or better in MUP132 or permission of Instructor.		Occ	L+L 1.0 3.0 3.0	T
MUP232	2023 Fall	Class Piano IV		Continuation of Piano III including modulation techniques, improvisation of piano accompaniments, advanced chromatic harmony, and sight reading of advanced literature.	Prerequisites: A grade of C or better in MUP231 or permission of Instructor.	MUP232 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
MUP233	2019 Fall	Class Voice III		Interpretive singing through a closer examination of coloring, tone production, dynamics, and tempo indications.	Prerequisites: A grade of C or better in MUP134.		Occ	L+L 1.0 3.0 3.0	T
MUP234	2019 Fall	Class Voice IV		Emphasis on the preparation of solo vocal literature for the purpose of evaluation and the integration of the music with the drama of the music.	Prerequisites: A grade of C or better in MUP233 or permission of Instructor.	MUP234 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
MUP240	2024 Fall	Piano Literature		A chronological study and analysis of the repertoire for piano and other keyboard instruments from the late sixteenth century to the twenty-first century. Emphasis on the evolution of the piano, musical periods, and characteristics of the musical forms found in keyboard repertoire. Includes historical and biographical context related to major piano composers.	Prerequisites: A grade of C or better in MUP140 or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
MUP241	2010 Spring	Piano Artistry		Overview of topics and issues including practice skills, rhythm, technique, musicianship such as dynamics, ornamentation, pedaling, touch, phrasing, articulation, voicing, balance, and the manipulation of time, necessary for pianists and piano	Prerequisites: A grade of C or better in MUP240 or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S

				teachers in working for expression, finesse and artistry.					
MUP250AA	2023 Fall	Survey of Diction for Singers (English)		Introduction to the use of phonetics in the study of English song literature.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
MUP250AB	2023 Fall	Survey of Diction for Singers (Italian/Latin)		Introduction to the use of phonetics in the study of Italian/Latin song literature	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
MUP250AC	2023 Fall	Survey of Diction for Singers (German)		Introduction to the use of phonetics in the study of German song literature.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
MUP250AD	2023 Fall	Survey of Diction for Singers (French)		Introduction to the use of phonetics in the study of French song literature.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
MUP251AA	2017 Fall	Private Instruction: Voice		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AA.	MUP251A A may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251AD	2017 Fall	Private Instruction: Piano		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AD.	MUP251A D may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

MUP251AG	2017 Fall	Private Instruction: Harpichord		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AG.	MUP251A G may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251AJ	2017 Fall	Private Instruction: Organ		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AJ.	MUP251A J may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251AM	2017 Fall	Private Instruction: Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AM.	MUP251A M may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251AP	2017 Fall	Private Instruction: Trumpet		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano,	Prerequisites: A grade of C or better in MUP201AP.	MUP251A P may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				harpichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP251AS	2017 Fall	Private Instruction: French Horn		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AS.	MUP251A S may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251AV	2017 Fall	Private Instruction: Trombone		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AV.	MUP251A V may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251AY	2017 Fall	Private Instruction: Euphonium		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201AY.	MUP251A Y may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

MUP251BB	2017 Fall	Private Instruction: Tuba		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BB.	MUP251B B may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251BE	2017 Fall	Private Instruction: Flute		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BE.	MUP251B E may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251BH	2017 Fall	Private Instruction: Oboe		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BH.	MUP251B H may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251BK	2017 Fall	Private Instruction: Clarinet		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano,	Prerequisites: A grade of C or better in MUP201BK.	MUP251B K may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				harpichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP251BN	2017 Fall	Private Instruction: Bassoon		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BN.	MUP251B N may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251BQ	2017 Fall	Private Instruction: Saxophone		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BQ.	MUP251B Q may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251BT	2017 Fall	Private Instruction: Violin		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BT.	MUP251B T may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

MUP251BW	2017 Fall	Private Instruction: Viola		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BW.	MUP251B W may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251BZ	2017 Fall	Private Instruction: Violoncello		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201BZ.	MUP251B Z may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251CC	2017 Fall	Private Instruction: Contrabass		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201CC.	MUP251C C may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251CF	2020 Fall	Private Instruction: Popular Music Bass Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano,	Prerequisites: A grade of C or better in MUP201CF.	MUP251C F may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				harp, turntablism and electronic music.					
MUP251CI	2017 Fall	Private Instruction: Percussion		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP201CI.	MUP251C I may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251CJ	2017 Fall	Private Instruction: Harp		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202CJ.	MUP251C J may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251CK	2020 Fall	Private Instruction: Popular Music Voice		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion,	Prerequisites: A grade of C or better in MUP201CK.	MUP251C K may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

				harp, turntablism and electronic music.					
MUP251CL	2020 Fall	Private Instruction: Popular Music Piano		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP201CL.	MUP251C L may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251CM	2020 Fall	Private Instruction: Popular Music Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP201CM.	MUP251C M may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251CN	2020 Fall	Private Instruction: Popular Music Drum		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP201CN.	MUP251C N may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z

MUP251CO	2020 Fall	Private Instruction: Popular Music Production		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP201CO.	MUP251C O may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251CP	2020 Fall	Private Instruction: Popular Electronic Music Performance		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP201CP.	MUP251C P may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP251CQ	2020 Fall	Private Instruction: Popular Music Turntablism		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP201CQ.	MUP251C Q may be repeated for credit.	Occ	L+L 1.0 0.6 0.0	Z
MUP252AA	2017 Fall	Private Instruction: Voice		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university	Prerequisites: A grade of C or better in MUP202AA.	MUP252A A may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP252AD	2017 Fall	Private Instruction: Piano		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AD.	MUP252A D may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252AG	2017 Fall	Private Instruction: Harpsichord		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AG.	MUP252A G may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252AJ	2017 Fall	Private Instruction: Organ		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AJ.	MUP252A J may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252AM	2017 Fall	Private Instruction: Guitar		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord,	Prerequisites: A grade of C or better in MUP202AM.	MUP252A M may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP252AP	2017 Fall	Private Instruction: Trumpet		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AP.	MUP252A P may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252AS	2017 Fall	Private Instruction: French Horn		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AS.	MUP252A S may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252AV	2017 Fall	Private Instruction: Trombone		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202AV.	MUP252A V may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252AY	2017 Fall	Private Instruction: Euphonium		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, euphonium, tuba, flute,	Prerequisites: A grade of C or better in MUP202AY.	MUP252A Y may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP252BB	2017 Fall	Private Instruction: Tuba		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BB.	MUP252B B may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252BE	2017 Fall	Private Instruction: Flute		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BE.	MUP252B E may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252BH	2017 Fall	Private Instruction: Oboe		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BH.	MUP252B H may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252BK	2017 Fall	Private Instruction: Clarinet		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone,	Prerequisites: A grade of C or better in MUP202BK.	MUP252B K may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP252BN	2017 Fall	Private Instruction: Bassoon		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BN.	MUP252B N may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252BQ	2017 Fall	Private Instruction: Saxophone		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BQ.	MUP252B Q may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252BT	2017 Fall	Private Instruction: Violin		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BT.	MUP252B T may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252BW	2017 Fall	Private Instruction: Viola		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BW.	MUP252B W may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

MUP252BZ	2017 Fall	Private Instruction: Violoncello		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202BZ.	MUP252B Z may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252CC	2017 Fall	Private Instruction: Contrabass		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202CC.	MUP252C C may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252CF	2020 Fall	Private Instruction: Popular Music Bass Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP202CF.	MUP252C F may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252CI	2017 Fall	Private Instruction: Percussion		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone,	Prerequisites: A grade of C or better in MUP202CI.	MUP252C I may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.					
MUP252CJ	2017 Fall	Private Instruction: Harp		Private Instruction emphasizing musicianship, literature, technique and performance. Four course sequence designed for university transfer equivalency. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, and harp.	Prerequisites: A grade of C or better in MUP202CJ.	MUP252C J may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252CK	2020 Fall	Private Instruction: Popular Music Voice		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP202CK.	MUP252C K may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252CL	2020 Fall	Private Instruction: Popular Music Piano		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP202CL.	MUP252C L may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252CM	2020 Fall	Private Instruction: Popular Music Guitar		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors	Prerequisites: A grade of C or better in MUP202CM.	MUP252C M may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.					
MUP252CN	2020 Fall	Private Instruction: Popular Music Drum		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP202CN.	MUP252C N may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252CO	2020 Fall	Private Instruction: Popular Music Production		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP202CO.	MUP252C O may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP252CP	2020 Fall	Private Instruction: Popular Electronic Music Performance		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn,	Prerequisites: A grade of C or better in MUP202CP.	MUP252C P may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z

				tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.					
MUP252CQ	2020 Fall	Private Instruction: Popular Music Turntablism		Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four-course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, baritone horn, tuba, flute, oboe, clarinet, bassoon, saxophone, violin, viola, violoncello, contrabass, bass guitar, percussion, harp, turntablism and electronic music.	Prerequisites: A grade of C or better in MUP202CQ.	MUP252C Q may be repeated for credit.	Occ	L+L 2.0 1.2 0.0	Z
MUP270	2023 Fall	Musical Theatre Workshop	THO270	Workshop in the study and performance of Musical Theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance.	Prerequisites: None.	MUP/THO 270 may be repeated for credit.	Occ	L+L 2.0 5.0 5.0	T
MUP270AA	2023 Fall	Musical Theatre Workshop	THO270AA	Workshop in the study and performance of musical theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance.	Prerequisites: None.	MUP/THO 270AA may be repeated for a total of two (2) credits.	Occ	LAB 1.0 3.0 3.0	T
MUP273	2020 Fall	Musical Theatre Production	THP273	Principles and techniques for musical theatre production performance. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance.	Prerequisites: By audition.		Acad	LAB 1.0 5.0 5.0	T
MUP282AA	2017 Fall	Volunteerism for Music: A Service		Service-learning field experience within private/public agencies, citizen volunteer groups, and on-campus	Prerequisites: None.	MUP282A A may be repeated	Occ	LAB 1.0	L

		Learning Experience		sites. 50 hours of designated work per credit. Standard grading available according to procedures outlined in catalog.		for a total of six (6) MUP282 credit hours; may not repeat specific agency assignment for more than four (4) credit hours.		1.0 0.0	
MUP282AB	2017 Fall	Volunteerism for Music: A Service Learning Experience		Service-learning field experience within private/public agencies, citizen volunteer groups, and on-campus sites. 50 hours of designated work per credit. Standard grading available according to procedures outlined in catalog.	Prerequisites: None.	MUP282A B may be repeated for a total of six (6) MUP282 credit hours; may not repeat specific agency assignment for more than four (4) credit hours.	Occ	LAB 2.0 2.0 0.0	L
MUP282AC	2017 Fall	Volunteerism for Music: A Service Learning Experience		Service-learning field experience within private/public agencies, citizen volunteer groups, and on-campus sites. 50 hours of designated work per credit. Standard grading available according to procedures outlined in catalog.	Prerequisites: None.	MUP282A C may be repeated for a total of six (6) MUP282 credit hours; may not repeat specific agency assignment	Occ	LAB 3.0 3.0 0.0	L

						nt for more than four (4) credit hours.			
MUP288	2017 Fall	Basics of Piano Accompanying Vocal		Introduction to piano accompanying with emphasis on basic skills needed to accompany solo voice, choral singing, and congregational singing.	Prerequisites: A grade of C or better in MUP151AD or MUP231 or permission of Instructor.	MUP288 may be repeated for a total of four (4) credit hours.	Occ	LEC 2.0 2.0 2.0	S
MUP289	2017 Fall	Basics of Piano Accompanying Instrument		Introduction to piano accompanying with emphasis on basic skills needed to accompany solo instruments, chamber music and musicals.	Prerequisites: A grade of C or better in MUP151AD or MUP231 or permission of Instructor.	MUP289 may be repeated for a total of four (4) credit hours.	Occ	LEC 2.0 2.0 2.0	S
MUP296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
MUP296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain		Occ	LAB 2.0 10.0 0.0	Z

					<p>a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.</p>				
MUP296WC	2002 Fall	Cooperative Education		<p>Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.</p>	<p>Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.</p>		Occ	LAB 3.0 15.0 0.0	Z
MUP296WD	2002 Fall	Cooperative Education		<p>Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.</p>	<p>Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job</p>		Occ	LAB 4.0 20.0 0.0	Z

					may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
MUP298AA	2017 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
MUP298AB	2017 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
MUP298AC	2017 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z

				combined to maximize student development.					
MWR101	2021 Fall	Introduction to Millwrighting		Fundamental millwright trade skills, employee/employer roles and responsibilities, and safe work practices needed for entry-level performance in the construction industry. Emphasis on attaining standard industry safety credentials, practical experience using terminology and basic measuring techniques. Response to environmental and energy efficient building concepts through green construction methods. Training for job site hazard recognition, accident prevention, and safe tool and equipment operation.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR102	2021 Fall	Millwrighting Safety and Health Certifications		Construction hazard awareness and individual responsibility for workplace safety and health, including assessing danger, employing prevention measures, and responding to emergencies. Safe and proper use of hand and power tools, first aid, and cardiopulmonary resuscitation (CPR), and Occupational Safety and Health Administration (OSHA) regulations.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR103	2021 Fall	Machinery Installation and Erection I		Fundamental machinery installation skills including industry standard practices such as general and assembly drawing interpretation, site inspection criteria, communication skills, pre-installation inspection, storage, and staging. Includes tools and techniques for moving, lifting, elevating machines, and equipment placement. Emphasis on measuring and layout accuracy. Jobsite safety and following instructions will be stressed.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR104	2021 Fall	Machinery Installation and Erection II		Machinery installation skills used in manufacturing applications. Disassembling machinery for inspection and maintenance. Review equipment manufacturers' operating	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T

				and maintenance guides and assembly instructions. Identification of component locations; measurements and tolerances; installation requirements; and alignment of parts using machine drawings. Review of safety, precision measuring tools, rigging tasks, and following instructions.					
MWR105	2021 Fall	Millwrighting General Skills		Overview of hand and power tools, and stationary machinery general skills used in millwright trade. In-depth review of standard tools including identification, safe operating, inspection, and manufacturer guidelines. Routine cutting, shaping and smoothing of materials with emphasis on measuring and layout accuracy in precision bench skills and field operations. Review of project drawings to promote development of job planning, preparation, and math skills. Shop safety during bench layout, drill press, band saw, and grinder operation.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR106	2018 Fall	Math for Millwrighting, Hand, Power and Precision Tools		Fundamental operations with whole numbers, common fractions, decimals, percentages, and ratio and proportion. Measurement tools. Fundamentals of Algebra, linear equations, includes applied math problems. Use, maintenance and safety procedures for common hand and power tools used in the construction industry.	Prerequisites: A grade of C or better in (MWR103 and registered apprentice status) or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR107	2021 Fall	Drives, Pulleys and Belts		Identification, application, and installation skills for typical power drive systems. Demonstrations and practice exercises on the belt, chain and gear drives. Review of safety, rigging tasks, machinery fastening methods, and mechanical shop drawings.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR108	2021 Fall	Reading Mechanical Prints		Types of blueprints, sketching, and basic print reading. Symbols for materials, construction details,	Prerequisites: Apprentice status or permission of the		Occ	L+L 2.0	T

				standards, and specifications. Interpretation of two-dimensional views to convey shape, characteristics, construction, and scope of project. Standard drawing methods and how to read visual and verbal cues. Recognizing shop drawings, locating machinery, calculating dimensions, equipment layout, and views.	Apprenticeship Coordinator.			2.0 2.0	
MWR109	2021 Fall	Turbine Familiarization		Function and performance of a General Electric Frame 5 Gas Turbine. Component descriptions and machine drawings, assembly/disassembly tasks and key bolting procedures.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR110	2021 Fall	Cutting and Burning		Overview of cutting and burning skills using oxygen/acetylene torch equipment. In-depth review of torch cutting principles will cover parts identification, gas characteristics, torch accessories and tips, safe operating and inspection criteria, and manufacturers' guidelines for use and care.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR111	2021 Fall	Tools and Equipment Applications		Discuss the safe and appropriate use of fall protection and emergency response procedures. Tool applications to provide opportunities for tool skill mastery and equipment operation.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR115	2021 Fall	Millwright General Skills B - Millwright Apprenticeship		Hand and power tools, shop equipment, and precision instruments to complete various machining operations. Provides millwright skills and experience using stationary machining equipment.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR121	2021 Fall	Structural Welding A - Millwright Apprenticeship		Careful examination of applicable codes. Includes terminology, shielded metal arc welding (SMAW) processes, equipment and safety requirements, electrode identification and applications, welding positions and deposits. Practical experience to include symbol identification, print interpretation, code citation, safe	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T

				equipment setup and operation, and recognition/remediation of welding flaws. Course will focus on the written examination and production of practical test plates required for American Welding Society (AWS) D1.1 certification.					
MWR131	2021 Fall	Structural Welding B - Millwright Apprenticeship		Provides practical experience for structural welding skills used in commercial and industrial construction. Review of welding terminology, welding processes, welding equipment, and safety requirements. Discusses electrode characteristics and metal inert gas/tungsten inert gas (MIG/TIG) welding applications. Course focuses on the written examination and production of practical test plates required for American Welding Society (AWS) D1.1 certification.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR201	2021 Fall	Shaft Alignment I		Terms, characteristics, and operating principles for the transit and laser levels. Procedures for establishing machinery and equipment elevation and alignment using precision optical instruments and installation procedures. Topics include transit and jig transit characteristics, instrument increments of measurement and accuracy, site inspection, setting up levels, determining benchmarks, and taking and recording elevation readings.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR202	2021 Fall	Conveyor Systems		Proper layout and component alignment of machinery, equipment, and conveyor systems. Identification of proper alignment procedures. Belt splicing. Analysis of effects of improper installation on maintenance and lifespan of equipment and conveyor systems.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR203	2005 Spring	Speciality Machinery I		Fundamentals and theory of hydraulics and pneumatics. Types, components, construction, and assembly of pumps and compressors.	Prerequisites: (Registered apprentice status and a grade of C or better		Occ	LEC 5.0 5.0 5.0	A

				Inner workings of industrial pumps and compressors. Auxiliary equipment and accessories.	in MWR202) or permission of the Apprenticeship Coordinator.				
MWR204	2005 Spring	Speciality Machinery II		Design, terminology, installation and operation of centrifugal and axial draft fans, monorail systems, steam turbines and generators. Layout and fabrication of monorail hangers, turns, and dips	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 5.0 5.0 5.0	A
MWR205	2021 Fall	Shaft Alignment II		Terms, characteristics, and methods for aligning machine shafts. Comprehensive review of alignment principles including conventional dial indicator and computer-aided. Setting up indicators, taking and recording indicator readings, and determining alignment correction.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR206	2021 Fall	Rigging Hardware and Procedures		Lifting theory and practical rigging methods and procedures. Rigging attachment procedures, lifting equipment, limits of operation, and communication practices. United Brotherhood of Carpenters (UBC) rigging qualification cards.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR207	2018 Fall	Advanced Precision Alignment Instruments		Computer aided transit and laser levels. Procedures for using Computer-aided Design (CAD), Global Positioning System (GPS) and Satellite instruments and computer programs using metric circle, GPS coordinates, degrees, minutes, and seconds on veneer scales. Utilization of computer programs for layout.	Prerequisites: A grade of C or better in (MWR201 and registered apprentice status) or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR208	2021 Fall	Compressor Theory and Maintenance		Fundamentals and theory of hydraulics and pneumatics. Types, components, construction, and assembly of pumps and compressors. Inner workings of industrial pumps and compressors. Design and installment of auxiliary equipment and accessories.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR209	2018 Fall	Introduction to Wind Turbines		Design, function and installation of wind turbine equipment. Methods, sequences and procedures for housings, bolting, power, drive	Prerequisites: A grade of C or better in (MWR109 and registered apprentice		Occ	L+L 2.0 2.0 2.0	T

				assembly and other components. Jobsite safety, print interpretation, material identification, and use of system devices and maintenance criteria. Completion of hands-on component installation projects.	status) or permission of the Apprenticeship Coordinator.				
MWR210	2021 Fall	Solar Installer		Characteristics, design, and installation of concentrated photovoltaic (CPV) components. Methods, sequences, and procedures for layout, assembly, mounting, and elevating/positioning for solar array construction. Includes industry overview and outlook for renewable energy production.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR218	2021 Fall	Compressor Theory and Maintenance - Millwright Apprenticeship		Operating theory and components of types of positive displacement compressors. Compressor configuration, operating parameters, safety, and maintenance procedures are examined.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR219	2021 Fall	Turbine Maintenance - Millwright Apprenticeship		Explores the machines and auxiliary equipment used in the power production industry. Highlights the function and performance of a typical gas turbine, and includes hydraulic bolting procedures.	Prerequisites: Apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
MWR298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
MWR298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
MWR298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
NAV101	2005 Fall	Elementary Navajo I		Basic grammar, pronunciation, and vocabulary of the Navajo language. Practice of listening, speaking, reading, and writing skills. Includes the study of the Navajo culture with participation in an off-campus Navajo cultural event	Prerequisites: None.		Acad	LEC 4.0 4.0 4.0	S
NAV102	2014 Fall	Elementary Navajo II		Continued study of grammar, pronunciation, and vocabulary of the Navajo language. Emphasis on listening, speaking, reading, and writing skills.	Prerequisites: A grade of C or better in NAV101 or permission of Department or Division. Completion of prerequisites within the last three years is required.	NAV102 includes the study of the Navajo culture with participation in an off-campus Navajo cultural event.	Acad	LEC 4.0 4.0 4.0	S
NAV115	2007 Fall	Beginning Navajo Conversation I		Beginning conversational Navajo with emphasis on basic listening and speaking skills, including basic pronunciation, vocabulary, sentence structure, and cultural awareness	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
NAV116	2014 Fall	Beginning Navajo Conversation II		Continued development of speaking and listening skills for effective communication in Navajo. Focuses on	Prerequisites: A grade of C or better in NAV115 or		Acad	LEC 3.0	S

				vocabulary for home, community, schools, and businesses	permission of Department or Division. Completion of prerequisites within the last three years is required.			3.0 3.0	
NAV201	2014 Fall	Intermediate Navajo I		Continued study of the Navajo language. Continued practice and development of listening, speaking, reading, and writing skills. Emphasis on fluency and accuracy of the Navajo language. Includes continued study of Navajo people and cultures.	Prerequisites: A grade of C or better in NAV102 or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Cultural Diversity - [C]	Acad	LEC 4.0 4.0 4.0	S
NAV202	2014 Fall	Intermediate Navajo II		Continued study of the Navajo language. Continued practice and development of listening, speaking, reading, and writing skills. Emphasis on fluency and accuracy of the Navajo language. Includes continued study of Navajo people and cultures.	Prerequisites: A grade of C or better in NAV201 or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Cultural Diversity - [C]	Acad	LEC 4.0 4.0 4.0	S
NAV298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
NAV298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z

				combined to maximize student development.					
NAV298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
NCE101	2013 Spring	Introduction and Overview of Cancer Disease		Introduction and overview of the disease and treatment of cancer including cancer origin, development, pathology, staging, hematopoiesis, epidemiology, diagnosis modalities, treatment options, cancer research and differentiation of solid tumors versus nonsolid tumors. Effective analysis, synthesis, and evaluation of topics through written discourse.	Prerequisites: Health care professional or permission of Department or Division.	Under the terms and conditions as specified in a legal agreement between GateWay Community College and Banner Health Systems, instructors of NCE101 must be an Oncology Certified Nurse and employed by Banner Health Systems.	Occ	LEC 2.0 2.0 2.0	S
NCE102	2016 Spring	Exploring the World of Nursing for the High School Student (Summer Camp)		Overview of the philosophy, core values, policies, competencies and curricular components of the Maricopa Community College District Nursing Program (MCCDNP).	Prerequisites: None. Corequisites: HCC/RES109.	NCE102 is designed for High	Occ	LAB 1.5 4.5 4.5	G

				Introduce the use of the nursing process, utilization of critical thinking skills, and sound decision-making principles in the clinical setting. Examine the communication process, time management, stress reduction, and the transition in role expectations between High school and College Students. Explore the roles of Licensed Practical Nurse (LPN), Registered Nurse (RN) and advance practice nursing. Clinical experience (job shadowing) will be held in participating hospitals.		School students.			
NCE103	2024 Fall	Behavioral Health Technician		Students learn to care for patients with a wide variety of mental illnesses to include anxiety, mood, personality and psychotic disorders, as well as post-traumatic stress syndrome and behavioral issues. Behavioral health technicians follow physician/nurse instructions and hospital procedures. Identification of modalities to monitor patient's mental and emotional status, physical symptoms related to mental disorders, and recognition of medication side effects. A variety of therapies will be covered to include rehabilitation and treatment programs, as well as recreational activities used as treatment options.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: NUR158, or NCE150, or permission of Division or Department Chair.		Occ	LEC 4.0 4.0 4.0	S
NCE105	2011 Spring	Job Preparation for the Health Care Professional		Designing and creating resumes/curriculum vitae, job interview skills, electronic portfolio, and job searching in the health care market. Appearance, dress, and questioning skills emphasized. Role-playing exercises of correct interviewing techniques.	Prerequisites: None.	NCE105 may be repeated for a total of two and one-half (2.5) credits.	Occ	LEC 0.5 0.5 0.5	S
NCE110	1996 Spring	Basic First Aid		Basic first aid principles and interventions for the lay person. Topics include lacerations and bleeding control, seizures, chest pain, heat related problems, orthopedic injuries, and treatment of bites, stings, and burns	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S

NCE112	2001 Spring	Wilderness First Aid		Knowledge and skills to care for an injured or suddenly ill person in remote locations. Treatment of wounds, bone, joint and soft-tissue injuries. Treatment and immobilization for head and neck injuries. Signs, symptoms and treatment for a seizure and animal bites and stings. Assessment and treatment of patients with chest pain, diabetes and asthma. Treatment for specific environmental emergencies	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
NCE115	2014 Summer	Nursing Healthcare Transition and Safe Passage		Overview of American nursing practice, including historical and current perspectives. Key components of transitioning to Registered Nurse role in the United States. Contrasting Registered Nurse roles in US and in other countries. Career development and successful transitioning to role of nurse in the United States.	Prerequisites: Permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
NCE118	2005 Spring	Ventilator Management for Nurses		Nursing care and management of the mechanically ventilated patient. Adjuncts to airway management including types and indications for use. Initiation, management and weaning of mechanical ventilation.	Prerequisites: Registered nurse or licensed practical nurse or respiratory therapist.		Occ	LEC 0.5 0.5 0.5	S
NCE131	2014 Summer	Recognizing Skin Rashes in the School Aged Child		Recognition of common childhood rashes, identify allergic rash manifestations, communicable rashes and infectious rashes.	Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
NCE150	2020 Fall	Advanced Placement: Nurse Assisting		Prepares the advanced placement nursing assistant student for the Certified Nursing Assistant (CNA) certification or Licensed Nursing Assistant (LNA) examination. The student will care for clients across the wellness/illness continuum within the scope of practice of the CNA/LNA. Includes basic problem solving processes specific to meeting the basic and holistic needs of clients,	Prerequisites: One year full-time employment OR two years part-time employment of direct patient care within the past five years OR students who have successfully completed course work that included		Occ	L+L 2.0 4.4 4.0	R

				therapeutic communication skills, as well as interventions to ensure the needs and safety of the client. Provides opportunity for the student to show proficiency in the performance of basic nursing assistant skills and procedures through laboratory activities and participation in the care of clients. Licensing is the exclusive responsibility of the Arizona State Board of Nursing.	direct patient care experiences in allied health, medicine or nursing in the past five years, OR permission of the Division Chairperson.				
NCE153	2021 Spring	Restorative Nursing Assistant		Additional skills for nurse assisting in restorative care settings, such as reinforcing client performance of Activities of Daily Life and assistive efforts for optimizing client independence.	Prerequisites: Permission of Department or Program Director, or a grade of C or better in NCE150 or NUR158 or current CNA certificate. CNA certificate must remain in active status throughout the term of the course.	NCE153 may be repeated for credit.	Occ	L+L 1.75 1.75 1.75	T
NCE161	2013 Fall	Foundation in Patient Advocacy		Foundational knowledge and skills needed for the emerging profession of patient Advocacy. Role of the patient advocate, health care delivery methods, best practices, consumer and provider perspectives, insurance benefits and costs, and legal implications.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
NCE165	2010 Fall	Legal Aspects of Nursing		Principles of legal aspects in nursing, rules of liability, negligent conduct and principles of malpractice. Review of the scope of nursing practices, and other legal matters.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
NCE168	2009 Summer I	End of Life Care Training		Nursing care at the end of life, pain management, symptom management, ethical issues, communication, cultural considerations, loss, grief and bereavement. Achievement of quality palliative care and preparation for and care at the time of death	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
NCE170	1994 Summer I	Pharmacology for Nurses		Review and update of selected pharmacological classifications.	(Current license as Practical Nurse or Registered Nurse) or		Occ	LEC 3.0	S

				Includes dosages, administration methods and reactions	registered as student nurse or permission of Instructor.			3.0 3.0	
NCE173	2019 Summer	Venipuncture		Development of clinical skills for venipuncture. Emphasis on review of anatomy and physiology of vasculature of the arm, medical asepsis, and procedure.	Prerequisites: Permission of Instructor.		Occ	LEC 1.0 0.5 0.5 LAB 0.0 24.0 1.5	T
NCE175	2018 Fall	Licensed Practical Nurse Update		Role and responsibilities of the Licensed Practical Nurse. Application of nursing care for medical-surgical patients, use of the nursing process and administration of medications. Includes expanded role of the Licensed Practical Nurse, principles of safe nursing practice, legal/ethical issues, human growth and development, therapeutic communication and physical assessment skills. For Licensed Practical Nurses returning to active nursing in the acute care setting.	Prerequisites: Current license as a Practical Nurse.		Occ	LEC 10.0 6.0 6.0 LAB 0.0 12.0 12.0	T
NCE200	2011 Spring	Contemporary Leadership Concepts for Health Care		Introduction to leadership and management concepts for work-readiness in health care fields. Professional role development of the beginning registered nurse. Includes organizational design and governance as well as leadership and management theories and qualities for the health care employee.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	NCE200 may be repeated for a total of five (5.0) credits.	Occ	LEC 1.0 1.0 1.0	S
NCE201	1995 Fall	Physical Assessment		Basic health assessment by collecting health histories and performing physical examinations. Relationship of sciences and humanities to holistic aspects of health. Assessment for normal, variations of normal, and deviations from normal findings	Current Practical Nurse (PN) or Registered Nurse (RN) license or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
NCE202	2012 Fall	Overview of Physical Assessment of the Adult Client		Overview of interviewing techniques and approaches to documenting a comprehensive health history and physical examination assessment techniques. Emphasis on the nursing	(Current Nursing or Allied Health student, or current Arizona Registered Nurse (RN) license, or		Occ	LEC 1.0 1.0 1.0	S

				process and health assessment skills. Performance of beginning level physical assessment.	Licensed Practical Nurse (LPN) license, or recent graduate of an accredited nursing program) and permission of Instructor.				
NCE203	2002 Spring	Interpretation of Laboratory Diagnostic Examinations		Utilization of laboratory diagnostic examination results for evaluation of patient conditions. Normal results for selected body fluids. Abnormal results related to pathophysiological conditions of adults. Incorporation of results of examinations to assess, modify, and evaluate therapy for patients with specific conditions.	Prerequisites: Registered Nurse or Licensed Practical Nurse Nursing students or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
NCE204	2000 Summer I	Hemodynamics		Events of the cardiac cycle related to normal hemodynamic waveforms and pressures. Purpose, procedure and potential complications related to hemodynamic invasive lines. Trouble shooting and preventative procedures for hemodynamic invasive lines. Normal and abnormal pressure forms related to various forms of pathophysiology. Treatments and interventions for specific cardiac diseases. Impact of paced rhythms, and intraaortic balloon pumps on normal hemodynamic waveforms. Safe removal procedure for hemodynamic devices.	Prerequisites: Registered nurse (RN) respiratory therapist or cardiovascular technician with knowledge of dysrhythmia recognition.		Occ	LEC 1.0 1.0 1.0	S
NCE205	2000 Spring	Emergency Room Nursing		Roles of emergency health team. Medical/legal issues specific to emergency room care. Triage classifications for specific emergency room/department situations, nursing care for selected conditions, trauma, and disease processes. Organ donation issues, discharge procedures and client education.	Prerequisites: Registered Nurse (RN) or Licensed Practical Nurse (LPN) or currently enrolled in a nursing program or permission of Instructor.		Occ	LEC 4.0 4.0 4.0	S
NCE207	2016 Spring	Recognition and Nursing Management of the Deteriorating Patient		This course will provide a scenario/simulation-based problem solving approach to recognize and manage the patient who has the potential for a deteriorating status in a	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical		Occ	LEC 0.5 0.5 0.5	S

				wide variety of concept-oriented conditions. The ultimate goal is to prevent or reverse the clinical deterioration and achieve optimum patient outcomes.	Nurse (LPN) license or registered as student nurse or permission of Instructor.				
NCE208	2004 Summer I	Neonatal Pathophysiology		Pathophysiology and physiologic adaptations of the neonate to include assessment and management of respiratory, cardiac, hematological, immunological, neurological and fluid and electrolyte disorders. Acid-base regulation and hemodynamic dysfunction.	Prerequisites: Registered therapist registered nurse (RN) or pharmacist with neonatal experience.		Occ	LEC 3.0 3.0 3.0	S
NCE209	1998 Fall	SCHOOL HEALTH ASSISTING		The role of the school health assistant. Legal issues related to the school health setting. Performance of vision, hearing, and scoliosis screenings. Documentation, vital signs, triage guidelines in the school health setting. Common diseases that affect school-age children. Child abuse issues and protocol. Common medications and their side effects. Documentation and procedures related to drug administration	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
NCE210	1995 Summer I	School Nurse Emergency Assessment Skills		Update of emergency assessment in the school setting. Includes emergency assessment of seizures, asthma, head and neck injuries, heat-related problems, bites, stings, and burns, and orthopedic injuries	School nurse school health aide other health professionals or permission of Instructor.		Occ	LEC 1.0 1.0 1.0	S
NCE211	2025 Fall	Advanced Mental Health Assessment Skills for Healthcare		Comprehensive study of mental health first aid, trauma-informed care, and motivational interviewing. Preparation for certifications in motivational interviewing and mental health first aid.	Prerequisites: Healthcare professional license or certification, or permission of Instructor.	NCE211 may be repeated for credit.	Occ	LEC 1.0 1.0 1.0	S
NCE212	2011 Spring	Patient Education		Current concepts relevant to planning and implementing a teaching plan, and the role the nurse has in patient education. Patient education instructional methods, educational theories, nursing process and case management in patient education. Focus on patient advocacy through education.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	NCE212 may be repeated for a total of five (5.0) credits.	Occ	LEC 0.5 0.5 0.5	S

NCE213ND	1999 Fall	Long-Term Care Nursing Update		Medicare and insurance documentation procedures for the long-term care patient. Medical-legal issues that pertain to the long-term care patient. Specific nursing procedures performed for the long-term care patient.	Prerequisites: Registered nurse (RN) licensed practical nurse (LPN) or health worker currently employed in a long-term care setting.		Occ	LEC 0.5 0.5 0.5	S
NCE214CA	2019 Summer	Basic Electrocardiogram Interpretation		Focuses on recognition of common cardiac rhythms. Includes major and minor reportable occurrences which affect a patient's status and priority interventions.	Prerequisites: Permission of Instructor.		Occ	LEC 1.0 1.0 1.0	S
NCE214ME	1996 Spring	Advanced Metrology and IV Drug Therapy		Advanced course in intravenous and pediatric calculations. Preparation for NCLEX-RN exam and Registered Nurse review of complex medication calculations. Emphasis on safe clinical practice using the nursing process to analyze and calculate pediatric fractional doses and critical care medications.	Prerequisites: Registered nurse or current student in Associate Degree Nursing program.		Occ	LEC 1.0 1.0 1.0	S
NCE214MF	2006 Fall	Advanced IV Drug Therapy		Advanced course in drug calculation and administration using the ratio/proportion and dimensional analysis methods. Focus on intravenous medications and titrations for critical care, pediatric and high risk obstetric medications	Current student in Associate Degree Nursing program or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
NCE214MI	2007 Summer I	Math and Medications for Intermediate Nursing Students		Focus on basic mathematical concepts to calculate metric-apothecary conversion, dosage problems, intravenous flow rates using the ratio/proportion and dimensional analysis methods. These calculations will focus application to acute care, long-term care, and pediatric specialty areas	Current student in Nursing program or permission of Department or Division.		Occ	LEC 0.5 0.5 0.5	S
NCE214MM	1995 Fall	Math/Methods of Drug Calculation		Focuses on basic mathematical concepts using decimals and fractions to calculate fractional and metric-apothecary conversion dosage problems and intravenous flow rates. Emphasis on the dimensional analysis problem solving method	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S

NCE214MO	2006 Fall	Math/Methods for Beginning Nursing Students		Focus on basic mathematical concepts to calculate metric-apothecary conversion, dosage problems and intravenous flow rates. Includes calculation problems with oral, parenteral, and reconstitution medications. Emphasis on the ratio/proportion and dimensional analysis problem solving methods	Current student in Associate Degree Nursing program or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
NCE214ND	1997 Summer I	Nursing Developmental Skills for Health Providers		Updating specific nursing areas in order to enhance success in nursing courses and/or employment.	Prerequisites: Previous coursework or experience in nursing related skills or permission of Instructor.	NCE214N D may be repeated for a total of ten (10) credit hours.	Occ	LEC 1.0 1.0 1.0	S
NCE214OP	2023 Summer	Orientation to Nursing Program		Overview of the philosophy, mission, vision, Nurse of the Future Competencies, student learning outcomes, and the constructivist framework of the Maricopa Nursing program. Student expected to be prepared with basic concepts of therapeutic communication, the nursing process, pharmacology, introductory concepts of intravenous therapy and knowledge of fundamental concepts. Primary content areas: nursing process, with emphasis on the use of the nursing process to develop a plan of care; utilization of critical thinking skills; problem-solving strategies, the communication process; psychiatric nursing competencies and role transition between LPN and RN scope of practice.	Prerequisites: Designee/advanced placement into the Nursing Program or permission of the Nursing Director.	NCE214O P designed for advanced placement students (i.e., transfer students, returning students, and/or Practical Nurses).	Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
NCE214PO	2009 Fall	Tutored NCLEX Review For Nursing Students		Brief review of nursing care by systems using an NCLEX review book. Focus on nursing process, prioritizing, and critical thinking related to application of nursing care in case study situations. Also practice multiple-choice questions.	Prerequisites: Currently enrolled nursing student, or permission of Instructor.	NCE214P O may be repeated for a total of six (6) credit hours.	Occ	LEC 2.0 2.0 2.0	S
NCE215AA	2002 Fall	Nursing Update: Pain Management		Comprehensive pain assessment and pain management. Pharmacological	Prerequisites: Registered Nurse or	NCE215A A may be	Occ	LEC 0.5	S

				agents, treatment modalities, and delivery systems. Regulatory agency policies, standards of care, and documentation guidelines.	Licensed Practical Nurse or currently enrolled in a nursing program or permission of Instructor.	repeated for a total of five (5) credit hours.		0.5 0.5	
NCE215AB	2002 Fall	Nursing Update: Wound and Skin Care		Wound and skin assessment and documentation guidelines. Skin care protocols and interventions to prevent pressure ulcers and promote optimal healing. Wound care products and treatment options.	Prerequisites: Registered Nurse or Licensed Practical Nurse or currently enrolled in a nursing program or permission of Instructor.	NCE215A B may be repeated for a total of five (5) credit hours.	Occ	LEC 0.5 0.5 0.5	S
NCE215AC	2002 Fall	Nursing Update: Stoma Care		Care of the patient with fecal and urinary diversions. Appliance selection, stoma care, and management of potential complications. Includes nutritional, psychological, and educational aspects of care.	Prerequisites: Registered Nurse or Licensed Practical Nurse or currently enrolled in a nursing program or permission of Instructor.	NCE215A C may be repeated for a total of five (5) credit hours.	Occ	LEC 0.5 0.5 0.5	S
NCE215AD	2005 Spring	Nursing Update: Advances in Diabetes Management		Diabetes management and implications. Risk factors of diabetes and lifestyle modifications. Medication updates and new technological advances for the treatment of Type I and Type II diabetes.	Prerequisites: None.	NCE215A D may be repeated for a total of five (5) credit hours.	Occ	LEC 0.5 0.5 0.5	S
NCE215AE	2006 Spring	Nursing Update: Cardiac Care		Provides nurses with up-to-date information on prevention, diagnosis, and treatment of cardiovascular and related diseases.	Prerequisites: Registered Nurse (RN) or Licensed Practical Nurse (LPN) or other licensed personnel working with cardiac patients.	NCE215A E may be repeated for a total of ten (10) credit hours.	Occ	LEC 0.5 0.5 0.5	S
NCE215ND	1997 Summer I	Nursing Skills Update		Enhancement and reinforcement of specific nursing skills. Special needs patients, patient assessment techniques, medicolegal responsibilities, and diagnostic procedures.	Prerequisites: None.	NCE215N D may be repeated for a total of ten (10) credit hours.	Occ	LEC 0.5 0.5 0.5	S
NCE216AA	2002 Fall	School Health Update: Assessment Skills		Assessment skills for the school health setting. Assessment and management of selected school	Prerequisites: Registered Nurse or Licensed Practical	NCE216A A may be repeated	Occ	LEC 0.5	S

				health problems including abdominal pain, head and spinal cord injuries, and environmental hazards.	Nurse or currently enrolled in a nursing program or permission of Instructor.	for a total of five (5) credit hours.		0.5 0.5	
NCE216ND	2002 Spring	School Nurse Skills Update		Enhancement and reinforcement of specific skills encountered in the school health setting. Special needs of physically and emotional disabled children. Review of special procedures and medications used with special children populations.	Prerequisites: Current school nurse or school health aide.	NCE216ND may be repeated for a total of ten (10) credits.	Occ	LEC 0.5 0.5 0.5	S
NCE218	2015 Fall	Ventilator Management for Critical Care and Emergency Room Nurses		Patient care including indications, management and complications in mechanically ventilated patients. Types of mechanical ventilation, pharmacological management, care of the mechanically ventilated patient, intubation and extubation, and tracheostomy management.	Prerequisites: Health care professional, or permission of Department or Division.		Occ	LEC 0.5 0.5 0.5	S
NCE219	2005 Fall	Advanced First Aid for School Health Staff		Advanced first aid principles and interventions for staff working in a school health setting. Topics include assessment and management of medical emergencies such as asthma, anaphylaxis, environmental emergencies, seizures and playground trauma	(Basic first aid training or experience) or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
NCE220	1995 Spring	Advanced IV Therapy Skills for RNs		Intravenous (IV) therapy skills utilized by the Registered Nurse in home health, long term care, and the acute care setting. Includes principles of care for specific central venous catheters, and infusion pumps. Also, legal implications of advanced IV practice	Current license as registered nurse or enrolled in an accredited RN program or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
NCE221	2019 Summer	Patient Care Technician Skills		Patient care technician skills and techniques which include: drawing blood, performing a variety of specimen collections, observing and reporting patient status, assisting in patient preparation and electrode placement for electrocardiograms, suctioning patients, performing urinary catheterizations, documentation and reporting of skill	Prerequisites: Certified Nurse Assistant (CNA), Nurse Assistant course or equivalent within the past year, and permission of Continuing Education Program Director and/or Instructor.		Occ	LEC 3.0 2.5 2.5 LAB 0.0 24.0 1.5	R

				completion, maintaining patient confidentiality, and recognizing legal and ethical commitments related to patient care technician skills.					
NCE223	2019 Summer	LPN-IV Therapy and Medication Skills		Terminology and anatomy related to intravenous therapy. Drug response factors, dosage, calculations, intravenous site dressing change, intravenous administration equipment, and initiating intravenous therapy. Documentation and procedures for laboratory check lists. Meets state nursing board requirements for initiating intravenous therapy and administering intravenous medications.	Prerequisites: Current license as Practical Nurse or permission of Instructor.		Occ	LEC 2.5 2.0 2.0 LAB 0.0 24.0 1.5	R
NCE224	1996 Summer I	Nursing Case Management		Case management and managed care responsibilities, insurance strategies, utilization management, legal and ethical issues, quality improvement and discharge planning.	Prerequisites: Registered Nurse (RN) Licensed Practical Nurse (LPN) social worker or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
NCE225	2012 Fall	Introduction to School Nursing		Registered nursing skills necessary to prepare for employment in a School Health Setting. Triage, school health office management skills, and legal issues and scope of practice of the school nurse. Health screening basics and immunization protocols, emergency response skills, and health teaching.	Current Arizona Registered Nurse (RN) license, or Licensed Practical Nurse (LPN) license, or recent graduate of an accredited nursing program, or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
NCE226	2019 Summer	Pediatric Nursing Clinical Skills		Clinical application of nursing theory to the pediatric patient. Focuses on effective physical assessment techniques, and changes in nursing skills for the pediatric patient.	Prerequisites: Registered Nurse (RN), or Licensed Practical Nurse (LPN), or permission of Instructor. Corequisites: NCE227.	NCE226 is designed for the experienced nurse who is considering transferring to a pediatric unit of an	Occ	LAB 1.0 45.0 3.0	R

						acute care hospital. NCE226 may be repeated for a total of five (5.0) credits.			
NCE227	2011 Summer I	Science of Pediatric Nursing		Preparation for relocation to the pediatric unit the hospital nurse. Application of pediatric nursing theory based upon the nursing process.	Prerequisites: Registered Nurse (RN), or Licensed Practical Nurse (LPN), or permission of Instructor. Corequisites: NCE226.	NCE227 may be repeated for a total of five (5.0) credits	Occ	LEC 1.0 1.0 1.0	S
NCE228	2023 Fall	Holistic Nursing Fundamentals-Certification Exam Preparation		Preparation for the holistic nursing certification examination. Includes holistic nursing philosophy, foundations, core values, standards, and principles. Covers self-care and self-reflection, theories, Integrative Health and Wellness Assessments (IHWA), in addition to development of, goals, and strategies for implementation of individualized care plans. Also includes complementary modalities as well as theories and research in the field of holistic nursing.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
NCE230	2019 Summer	PICC Line Insertion		Overview of the care, maintenance and insertion of Peripherally Inserted Central Catheter (PICC) lines. Advantages of PICC lines, legal implications, types, as well as anatomy and physiology for proper insertion.	Prerequisites: Current license as a Registered Nurse.		Occ	L+L 0.5 24.0 1.5	R
NCE231	2003 Fall	Pharmacology for Critical Care and Emergency Room Nurses		Pharmacology update for emergency department and critical care personnel on new drug therapies and related patient care protocols. Pharmacological management of cardiac and respiratory system disorders, complications, and emergency interventions. Patient	Prerequisites: Registered Nurse or permission of Instructor.		Occ	LEC 1.0 1.0 1.0	S

				management protocols for conscious sedation. New pharmacological agents for the treatment and management of diabetes and other endocrine disorders.					
NCE232	2004 Spring	Health Assessment of the School Age Child		Comprehensive health assessment foundation. Development of interviewing skills, obtaining health histories, and conducting physical examinations on the school age child. Identification and management of minor illnesses and health problems common to school age children	School nurse or current Registered Nurse (RN) licensure.		Occ	LEC 3.0 3.0 3.0	S
NCE233	2004 Summer I	Nursing Care of the Special Needs Child		Overview of congenital and acquired pediatric conditions, chronic illnesses and physical challenges that may lead to developmental delay or educational dysfunction. Application of the nursing process to provide care for the special needs child. Developmental assessment tools, skilled nursing interventions and environmental factors. Resources for disabled and chronically ill children through family, educational system and the community	School nurse or current registered nurse (RN) licensure.		Occ	LEC 3.0 3.0 3.0	S
NCE234	2004 Summer I	Fundamentals of School Nursing Practice		Assessment, development, implementation and evaluation of school health programming. Focus on nursing theory as it relates to school health programming. Program management, professional development, dealing with change, health education, interdisciplinary interaction and the role of the professional nurse in the school setting	School nurse or current registered nurse (RN) licensure.		Occ	LEC 3.0 3.0 3.0	S
NCE235	2004 Summer I	Conscious Sedation		Conscious sedation criteria and protocols. Nursing responsibilities and interventions pre-, intra- and post-procedure. Medications commonly used for conscious sedation, monitoring equipment, potential complications and required documentation.	Prerequisites: Registered nurse (RN) or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S

NCE237	2011 Summer I	Care and Management of Vascular Access Devices		Types of vascular catheters, types of clients who use them and clinical indications for each. Care for the different devices, differences in tip locations and the types of infusion therapies infused through each device.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or registered as student nurse or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
NCE242	2001 Spring	Twelve Lead Electrocardiogram (EKG) Interpretation		Normal and abnormal wave forms of the cardiac cycle. Normal and abnormal heart axis. Differences between ventricular and supraventricular tachycardia. Various types of blocks. Identification of heart chamber enlargement. Injury, ischemic and necrotic heart patterns. Effect of specific drugs and electrolyte disorders on electrocardiograms (EKG)	Basic electrocardiogram (EKG) experience or previous course work in dysrhythmia interpretation or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
NCE243	2019 Summer	Nursing Skill and Competency Review		Resume writing, interpersonal and therapeutic communication, teamwork concepts, IV Skills and pharmacological review. Central line catheter care, nutritional management, urinary catheterization, NG insertion and suctioning, respiratory management, basic wound care, and patient assessment skills.	Prerequisites: Permission of Instructor.		Occ	LEC 3.5 2.5 2.5 LAB 0.0 90.0 6.0	R
NCE245	2011 Summer I	Introduction to Holistic Nursing		Philosophy and theories of holism applied to nursing practice. Focus on the physical, emotional, psychological, social, and spiritual needs of the client. Emphasis on application of the nursing process from a holistic perspective. Healing relationship model, self-care concept, nurse-patient communication, health care ethics, therapeutic environment, and cultural sensitivity.	Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	NCE245 may be repeated for a total of five (5.0) credits	Occ	LEC 1.0 1.0 1.0	S
NCE246AA	2011 Spring	Basic Fetal Heart Monitoring		Application of basic concepts and knowledge of fetal monitoring to assist the antepartum and intrapartum	Prerequisites: Current Arizona Registered Nurse (RN) license or	NCE246A A is designed for the	Occ	LEC 1.0 1.0 1.0	S

				nurse in providing effective nursing care to ensure fetal well-being.	Licensed Practical Nurse (LPN) license or permission of Instructor.	experienced nurse who is considering transferring to a maternal/child health hospital unit. NCE246A A may be repeated for a total of five (5.0) credits.			
NCE249	2002 Spring	Basic Critical Care Nursing		Foundation in basic critical care for nurses who are new or interested in entering the critical care environment. Including anatomy, physiology, and pharmacology. Disease management for the following systems: cardiac, respiratory, neuroscience, gastrointestinal, renal, endocrine and hematology, hemodynamics and ventilator management	Current license as Registered Nurse or Practical Nurse or recent graduate of an accredited nursing program or permission of Instructor.		Occ	LEC 4.0 4.0 4.0	S
NCE249AA	2002 Spring	Critical Care: Cardiac		Foundation in basic critical care for nurses who are new or interested in entering the critical care environment. Including anatomy, physiology, and pharmacology. Disease management for the cardiac system	Current license as Registered Nurse or Practical Nurse or recent graduate of an accredited nursing program or permission of Instructor.		Occ	LEC 1.0 1.0 1.0	S
NCE249AB	2002 Spring	Critical Care: Respiratory		Foundation in basic critical care for nurses who are new or interested in entering the critical care environment. Including anatomy, physiology, and pharmacology. Disease management for the respiratory system	Current license as Registered Nurse or Practical Nurse or recent graduate of an accredited nursing program or permission of Instructor.		Occ	LEC 1.0 1.0 1.0	S
NCE249AC	2002 Spring	Critical Care: Neurologic		Foundation in basic critical care for nurses who are new or interested in	Current license as Registered Nurse or		Occ	LEC 1.0	S

				entering the critical care environment. Including anatomy, physiology, and pharmacology. Disease management for the neurologic system	Practical Nurse or recent graduate of an accredited nursing program or permission of Instructor.			1.0 1.0	
NCE249AD	2002 Spring	Critical Care: Endocrine and Renal		Foundation in basic critical care for nurses who are new or interested in entering the critical care environment. Including anatomy, physiology, and pharmacology. Disease management for the endocrine and renal systems	Current license as Registered Nurse or Practical Nurse or recent graduate of an accredited nursing program or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
NCE249AE	2002 Spring	Critical Care: Gastrointestinal		Foundation in basic critical care for nurses who are new or interested in entering the critical care environment. Including anatomy, physiology, and pharmacology. Disease management for the gastrointestinal system	Current license as Registered Nurse or Practical Nurse or recent graduate of an accredited nursing program or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
NCE251	2009 Spring	Telemetry Nursing		Cardiac anatomy and physiology and the conduction system. Elements of a cardiac assessment. Recognition of arrhythmia and cardiac abnormalities seen on electrocardiogram (EKG). Indications for temporary and permanent pacing. Drug groups and their interactions specific to the cardiac patient. Normal and abnormal lab values for the cardiac patient. Pre- and post-procedure care for cardiac procedures. Nursing interventions and emergency treatment.	Prerequisites: Registered Nurse (RN) and a grade of C or better in NCE214CA or equivalent.		Occ	LEC 3.0 3.0 3.0	S
NCE255	2001 Fall	Death, Grief, and Bereavement		Grief and bereavement care for the client and family. Ethical and cultural issues in terminal care, children and death, AIDS related death issues, suicide, homicide and survivor interventions	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
NCE257	2011 Spring	Science of Maternity Nursing		Preparation for relocation to the maternal/child health unit the hospital nurse. Application of maternal/child nursing theory based upon the nursing process.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical	NCE257 may be repeated for a total of five	Occ	LEC 1.0 1.0 1.0	S

					Nurse (LPN) license or permission of Instructor.	(5.0) credits.			
NCE258	2018 Fall	Maternity Nursing Clinical Skills		Clinical application of nursing theory to the maternal/child patient. Focuses on effective physical assessment techniques, determining neonatal status, and maternal physiological and psychological well-being.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	NCE258 is designed for the nurse who would like to transfer to the maternal/child health unit of an acute care hospital. NCE258 may be repeated for a total of five (5.0) credits.	Occ	LAB 1.0 1.0 1.0	T
NCE259	1998 Fall	Advanced Critical Care Nursing		Provides the experienced Critical Care Nurse with an opportunity to build on basic critical care knowledge. Advanced concepts in assessment, hemodynamic monitoring, pathophysiology of disease processes, and use of the Nursing Process for critically ill patients with complex, multisystem disorders. Designed to help prepare experienced Critical Care Nurses for the certification examination for Critical Care Nursing offered by the American Association of Critical Care Nurses.	Prerequisites: A grade of C or better in NCE249 or Registered Nurse working in Critical Care or permission of Instructor.		Occ	LEC 4.0 4.0 4.0	S
NCE260	2001 Summer I	Intra-Aortic Balloon Pump		Mechanics of the cardiac cycle. Physiologic effects of the intra-aortic balloon pump. Indications and contraindications. Components, operation, care and maintenance of the intra-aortic balloon pump. Complications and nursing	Prerequisites: Registered Nurse (RN) or cardiovascular technician who has completed a Basic EKG course and has Critical Care Training.		Occ	LEC 0.5 0.5 0.5	S

				implications with the use of the intra-aortic balloon pump.					
NCE261	2019 Summer	Ultrasound-Guided Peripheral Intravenous Access		Technique of ultrasound-guided peripheral venous access. Client selection for procedure, selection of vasculature, and troubleshooting using ultrasound guidance equipment. Use of equipment and hands-on, simulated practice of catheter placement.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or registered as student nurse or permission of Instructor.		Occ	L+L 0.5 24.0 1.5	R
NCE262	2001 Summer I	Legal Medical Consulting		Role of the legal medical consultant in specific litigation. Importance of the law library. Definition of ethics, professionalism, standards of practice, discovery and disclosure. Steps and procedures involved with legal research. Role of the legal medical expert as a witness. Alternative conflict resolution. Role of independent medical examination. Role of the insurance industry and risk management in legal medical issues	Licensed medical personnel or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
NCE264	2002 Spring	Advanced Legal Medical Consulting/Civil Procedure		Reinforcement and broadening of knowledge and skills required for a career in legal medical consulting. Civil litigation process from initial client contact, discovery, and trial to post trial period. Intensive case analysis and thorough exploration of legal theory, procedure, and strategy. Discussion of the Federal and Arizona Rules of Civil Procedure and hands on experience in the preparation of legal documents and the trial notebook	Prerequisites: A grade of C or better in NCE262 or equivalent.		Occ	LEC 3.0 3.0 3.0	S
NCE265	2014 Summer	Triage Skills for Urgent Care Staff		Identification of high risk aspects of frequent medical complaints. Instruction in avoiding errors when triaging patients in the urgent care setting.	Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S

NCE266	2015 Spring	Recognition and Management of the Patient with Allergies		Allergy process, types of allergies and their presentations, levels and types of reactions, as well as treatment, diagnostic testing and prevention strategies.	Prerequisites: Health care professional or permission of Department or Division.		Occ	LEC 0.5 0.5 0.5	S
NCE267	2018 Fall	IV Medication Administration and Advanced Metrology		Knowledge and skills to safely prepare and administer intravenous medications and solutions. Includes advanced metrology to accurately calculate IV drug dosages and infusion rates.	Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.	NCE267 may be repeated for a total of five (5.0) credits	Occ	L+L 1.0 2.0 2.0	T
NCE268	2015 Summer	Non Rash Infectious Diseases in the Pediatric Patient		Epidemiology and symptomology of non rash producing infectious diseases often seen in children and identify ways to prevent, reduce, and control their spread. Meningococcal disease, Tuberculosis, influenza, Methicillin Resistant Staph Aureus (MRSA), pertussis, conjunctivitis, mononucleosis, streptococcal infections, hepatitis, and enterovirus D68.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
NCE271	2015 Summer	Pediatric Diabetes		Provides an overview of diabetes in the pediatric population. Epidemiology and etiology, types of diabetes in children and symptom recognition, medication and diet management, complications, new technological devices, and family interventions.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
NCE272	2020 Fall	Certified Medication Assistant		Completion of this course will qualify the student to sit for the certification examination to administer prescribed medications within defined state laws (Legislation A.R.S.32-1650.01).	Prerequisites: Students will need to have been a Certified Nursing Assistant (CNA) or a Licensed Nursing Assistant (LNA) for a minimum of six months, or completed the CNA or LNA course within the past year, or completed semester I of the Practical Nurse (PN) program, or completed the first		Occ	L+L 4.0 6.0 8.0	R

					block of the Registered Nurse (RN) program, or permission of the Director or Program Director as students who have completed components of nursing programs may qualify for a CMA waiver.				
NCE273	2020 Summer	Rehabilitation Technician		The rehabilitation technician (RT) performs patient related care tasks, assists patients with activities of daily living and provides direct patient care under supervision of the licensed nurse and or licensed therapist. Obtains and records patient vital signs. Monitors and records daily intake and output. Obtains specimens, including non-invasive body fluids and blood specimens. Performs electrocardiogram (ECG) electrode placement, running ECG strips, and blood glucose monitoring. Assists physician, licensed nurse, or licensed therapist with diagnostic tests, clinical procedures, and other tasks as requested. Communicates patient needs and observed/reported changes in patient condition to supervising licensed nurse, physician or licensed therapist. Documents all interactions as directed by licensed nurse, physician, or licensed therapist. Assists licensed therapist in performing therapeutic procedures. Carries out assigned rehab tech duties such as cleaning treatment areas, completing equipment maintenance and transporting patients.	Prerequisites: Valid certification or license as a nurse assistant (CNA or LNA) OR completion of a nurse assistant program within the past twelve (12) months OR permission of the Nursing Director.		Occ	L+L 2.0 2.5 3.0	R
NCE274	2020 Summer	Industry Telemetry Nursing		Overview of cardiac anatomy, physiology, and the conduction system. Demonstration of a cardiac assessment, review of normal and	Prerequisites: Current Arizona Registered Nurse (RN) license or		Occ	L+L 4.0 4.5 5.0	R

				abnormal lab values, arrhythmias, and cardiac abnormalities seen on an electrocardiogram (ECG). Introduction to medications specific to the cardiac patient. Overview of cardiac procedures, nursing interventions, and emergency treatment.	Licensed Practical Nurse (LPN) license or permission of Instructor.				
NCE275	2018 Fall	Registered Nurse Update		Update of current general principles of nursing care, procedures and medication.	Prerequisites: Current Registered Nurse License.		Occ	LEC 10.0 6.0 6.0 LAB 0.0 12.0 12.0	T
NCE276	2015 Fall	Clinical Teaching in Nursing: An Overview		Applies Nurse of the Future Competencies and educational Constructivism learning theory to develop a foundation for nursing faculty. Designed to assist instructor to consistently plan, guide, and evaluate learning activities for nursing students in clinical environments.	Prerequisites: Current Registered Nurse License.	NCE276 may be repeated for a total of four (4) credit hours.	Occ	LEC 1.0 1.0 1.0	S
NCE277	2019 Summer	Clinical Teaching in Nursing: A Practicum Experience		Overview of the process, concepts and skills related to supervising nursing students in the clinical area with application of concepts learned. A mentored clinical experience to guide and facilitate the student in the development of skills of clinical instruction.	Prerequisites: Current Arizona Registered Nurse License, BSN required, but MSN preferred as per our accrediting and approval bodies. All health and safety requirements per the current Maricopa Nursing Clinical Instructor Handbook must be met prior to admission into this course.	NCE277 may be repeated for a total of seven and a half (7.5) credits.	Occ	LEC 1.5 0.5 0.5 LAB 0.0 45.0 3.0	R
NCE278	2020 Summer	Critical Care Nursing		Foundations in critical care for nurses who are interested in entering the critical care environment or nurses who seek to increase their expertise in critical care. Includes basic anatomy, physiology, and pharmacology. Disease management	Prerequisites: Current license as a Registered Nurse or recent graduate of an accredited nursing program or permission of		Occ	L+L 4.0 4.5 5.0	R

				for the following systems: cardiac, respiratory, neuroscience, gastrointestinal, renal, endocrine and hematology, hemodynamics and ventilator management. The lab includes case studies, simulation, and lab practice.	Instructor and/or employer. Licensed Practical Nurses will be allowed to take the course by request of their employer and/or with permission of the Instructor.				
NCE282AA	1993 Fall	Volunteerism for Nursing: A Service Learning Experience		Service-learning field experience within human service organization/agency.	Prerequisites: Permission of Instructor.	NCE282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 1.0 1.0 0.0	L
NCE290	2011 Summer I	Concepts of Aging		Examine several concepts of aging: physiological, cognitive, spirituality, health promotion, and pharmacology of the older adult. Focus will be placed on caring for the aging patient and their family.	Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or registered as student nurse or permission of Instructor.	NCE290 may be repeated for a total of five (5.0) credits	Occ	LEC 1.0 1.0 1.0	S
NCE291	2019 Summer	Nursing Skills and Patient Care in Simulation		Review of basic skills. Remediation, guided learning, and simulation performance.	Prerequisites: Current Arizona Registered Nurse (RN) license or Licensed Practical Nurse (LPN) license or registered as student nurse or permission of Instructor.	NCE291 may be repeated for a total of five (5.0) credits.	Occ	LAB 1.0 45.0 3.0	R
NCE292	2019 Summer	Simulation for Patient Care Experiences		Review and practice of nursing skills. Remediation, guided learning, and simulation performance.	Prerequisites: Current Arizona Registered Nurse	NCE292 may be repeated	Occ	LAB 2.0	R

					(RN) license or Licensed Practical Nurse (LPN) license or registered as student nurse or permission of Instructor.	for a total of ten (10) credits.		90.0 6.0	
NCE292AA	2024 Fall	Simulated Patient Care		Review of practical nursing skills. Includes simulated patient experience in various focus areas.	Prerequisites or Corequisites: Permission of Program Director.		Occ	LAB 2.0 90.0 6.0	R
NCE292AB	2024 Fall	Patient Care Experiences		Practical nursing skills. Includes patient care experiences.	Prerequisites: A grade of C or better in NCE292AA. Prerequisites or Corequisites: Current Nursing Health and Safety Clearance.		Occ	LAB 2.0 90.0 6.0	R
NCE293	2019 Summer	Team Management of Deteriorating Patients in Simulation		Development of skills needed to effectively identify, assess, monitor, and respond to patients who are either deteriorating or at risk of deteriorating related to injury or disease process.	Prerequisites: Current licensure as a health professional or registered as a student in a health professional program of study, or permission of Instructor.	NCE293 may be repeated for a total of ten (10) credit hours.	Occ	LAB 2.0 90.0 6.0	R
NCE298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
NCE298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
NCE298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
NET127	2000 Fall	How Computers Work		Functional description of hardware component operation of the IBM and compatible microcomputers. Electronic and electromechanical components operation during bootup process and operating system utilization, RAM, RAM caching and the microprocessor, and data storage. Data storage description includes floppy disks, hard disk, CD-ROM, other disk type drives, and tape backup	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
NET181	2018 Fall	Visual BASIC for Technology		Introductory coverage of programming techniques in Visual BASIC. Flowcharting, pseudocoding, coding, testing, and documenting programs in accordance with specifications	Prerequisites: None.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
NET183AA	2019 Spring	Operating Systems		Designed to develop an understanding of operating systems and their interaction with hardware, software, networking, security, troubleshooting, IP addressing, user interfaces and operating system installation. The course is intended to help prepare students for entry-level industry certifications.	Prerequisites: None. BPC101AA recommended for those students unfamiliar with basic computer operations.		Occ	L+L 2.0 3.0 3.0	T

NET220	2021 Spring	Health Information Networking		Designed to equip students with knowledge and skills applicable to entry-level careers in healthcare networking. Using Cisco hardware and software, aims to develop an in-depth understanding of the critical principles and practices required in this specialized field.	Prerequisites: A grade of C or better in CNT160AB, or Cisco Certified Network Associate (CCNA) certification, or permission of Instructor.		Occ	L+L 2.0 4.0 4.0	T
NLT100	2020 Fall 1	Nail Technology I		Introduction to basic nail services, general sciences, safety, and infection control practices in the nail care industry.	Prerequisites: None.		CLK	200	
NLT105	2020 Fall 1	Nail Technology II		Apply advanced techniques and continue to build on previous concepts learned in nail services, general sciences, safety, and infection control in the nail industry.	Prerequisites: None.		CLK	200	
NLT110	2020 Fall 1	Nail Technology III		This course is designed to prepare Nail Technology students for the written and practical examinations for Arizona State Board of Cosmetology licensure. Students will master and apply previous concepts learned in nail services, general sciences, and business skills in the nail care industry.	Prerequisites: None.		CLK	200	
NMS120	2016 Fall	Media in Cyberspace		Using on-line material, investigates how the new information technologies affect the more traditional media. The effect on consumers and society.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
NMS160	2015 Summer	Sports Media Careers		Introduction to the professions, organizations, and media occupations within sports management. Examines professional and not-for-profit organizations, career opportunities in collegiate and community sports organizations, and career opportunities in the traditional and non-traditional media arenas. Includes resume writing, cover letters, career choices, interviews, and job searching strategies for sports management organizations.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
NMS215	2022 Fall	Electronic Newsroom		Creating, writing, designing, managing, promoting, and publishing the online student publication through	Prerequisites: A grade of C or better in JRN210 or		Occ	L+L 3.0	T

				team effort. Emphasis on style, consistency, and news/information judgment combined with community involvement.	NMS120 or JRN213 or permission of Instructor.			5.0 5.0	
NUC100	2021 Spring	Introduction to Nuclear Medicine Technology		Role of the nuclear medicine technologist job duties, responsibilities, working conditions and work environments. Certification and licensing requirements for the nuclear medicine technologist, shadowing experience specific to the nuclear medicine department.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
NUC101	2021 Spring	Essentials of Nuclear Medicine Technology		Introduction to the essential information for the Nuclear Medicine Technology program.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 1.0 1.0 1.0	S
NUC103	2021 Spring	Nuclear Medicine Image Evaluation I		Faculty-led case presentation with reinforcement of processing parameters.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	L+L 1.0 3.0 3.0	T
NUC110	2018 Summer	Introduction to Radiation Physics and Biology for Nuclear Medicine		Atomic structure, types of radiation, radiation biology, and radiation protection.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 3.0 3.0 3.0	S
NUC112	2021 Spring	Nuclear Medicine Quality Control Laboratory		Introduction to the nuclear medicine laboratory rules, equipment operation, and quality control (QC).	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 1.0 3.0 3.0	T
NUC113	2021 Spring	Nuclear Medicine Clinical Applications Laboratory		Establishing competencies by demonstration of nuclear medicine imaging and non-imaging procedures.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 1.0 3.0 3.0	T
NUC114	2018 Summer	Nuclear Medicine Instrumentation		Principles of safe operation for nuclear medicine imaging and non-imaging equipment, including quality control.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 3.0 3.0 3.0	S
NUC116	2021 Spring	Nuclear Medicine Procedures I		Skeletal, respiratory, gastrointestinal (GI) anatomy, physiology, pathology, and related clinical procedures and techniques.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 3.0 3.0 3.0	S
NUC120	2018 Fall	Radiopharmaceutical/Pharmaceutical Administration for the Nuclear Medicine Technologist		Techniques for the administration of radiopharmaceuticals and pharmaceuticals used by the nuclear medicine technologist.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	L+L 1.5 1.5 1.5	T

NUC122	2018 Fall	Nuclear Medicine Imaging I Lab		Protocols for opening/operating in a nuclear medicine department. Quality control, radiation safety, performance of bone scans, lung scans, and genitourinary procedures.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 1.0 3.0 3.0	T
NUC124AA	2009 Fall	Nuclear Medicine Theory I: Part A		Non-imaging instrumentation to include gas-filled detector systems, scintillation detection systems, statistics, nuclear counting statistics, and laboratory equipment. Imaging instrumentation to include planar scintillation cameras, multicrystal scintillation cameras, solid-state detector systems, single photon emission computed tomography (SPECT).	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 1.5 1.5 1.5	S
NUC124AB	2009 Fall	Nuclear Medicine Theory I: Part B		Imaging instrumentation to include quality control of imaging systems and maintenance of image archiving systems. Computers in instrumentation, types of computers, number systems, general structure of computer hardware, software, communications, data management, internet, nuclear medicine computer systems and quality control of these systems.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 1.5 1.5 1.5	S
NUC126	2021 Spring	Nuclear Medicine Procedures II		Endocrine and genitourinary anatomy, physiology, pathology, and clinical procedures and techniques.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 3.0 3.0 3.0	S
NUC130	2021 Spring	Professionalism and Patient Care		Communication and interaction skills, patient assessment, procedures involving transport, medical records, infection control, emergency, safety and venous access.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 1.0 3.0 3.0	T
NUC170AA	2009 Fall	Nuclear Medicine Cardiac Imaging I		Cardiovascular anatomy, physiology and pathology as it relates to cardiac system imaging. Cardiac stress and rest testing, myocardial perfusion and viability, equilibrium radionuclide angiograph (ERNA or MUGA or RVG). First pass angiography, infarct imaging, major vessels flow studies and detection of deep vein thrombosis.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 1.5 1.5 1.5	S

NUC170AB	2009 Fall	Nuclear Medicine Cardiac Imaging II		Cardiovascular imaging instrumentation, procedures, and processing. Radiopharmaceuticals and interventional drugs used in cardiovascular imaging. Non-pharmacologic stress testing. Patient care for the cardiac patient including procedures and pharmaceuticals.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 1.5 1.5 1.5	S
NUC180	2023 Fall	Nuclear Medicine Physics and Instrumentation		Principles of safe operation for nuclear medicine imaging and non-imaging equipment, including positron emission tomography (PET) systems and quality control.	Prerequisites: Admission to Nuclear Medicine Technology program or certified by the American Registry of Radiologic Technologists (ARRT) [R.T. (N)] or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine.		Occ	LEC 4.0 4.0 4.0	S
NUC202	2023 Fall	Nuclear Medicine Clinical Practicum I		Supervised clinical application of current nuclear medicine practice reinforcing didactic and laboratory concepts. Focus on developing competency in introductory nuclear medicine procedures.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 3.0 15.0 0.0	C
NUC203	2023 Fall	Nuclear Medicine Image Evaluation II		Student led/instructor coached evaluation of images related to clinical situations and procedures. Demonstration of technical skills.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	L+L 1.0 3.0 3.0	T
NUC212	2018 Summer	Clinical Practicum I		Orientation to facility policies and departmental organization. Under direct supervision, clinical application of current nuclear medicine practice of patient care and clinical experiences with an emphasis on quality control (QC) procedures.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 1.5 9.0 0.0	C
NUC214	2013 Fall	Fundamentals of Nuclear Medicine II		Principles and applications of statistics as they relate to Nuclear Medicine. Configuration, function, and application of computers and networks in nuclear medicine.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 1.5 1.5 1.5	S

NUC216	2023 Fall	Nuclear Medicine Procedures II		Endocrine and genitourinary anatomy, physiology, pathology, and clinical procedures and techniques.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 3.0 3.0 3.0	S
NUC220	2018 Summer	Sectional Anatomy for Nuclear Medicine		Sectional human anatomy in the transverse, sagittal and coronal planes. Emphasis on the brain, neck, thorax, abdomen/pelvic cavity and extremities.	Prerequisites: Admission to the Nuclear Medicine Technology Program or permission of Program Director.	NUC220 may be repeated up to five (5) times for a total of fifteen (15) credits. Repeats 5.0 15.0	Occ	LEC 3.0 3.0 3.0	S
NUC222	2018 Summer	Clinical Practicum II		Supervised clinical application of current nuclear medicine practice reinforcing didactic and laboratory concepts. Demonstrate developing competency in introductory nuclear medicine procedures.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 3.0 15.0 0.0	C
NUC223	2021 Spring	Nuclear Medicine Image Evaluation II		Student led/instructor coached evaluation of images related to clinical situations and procedures. Demonstration of technical skills.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	L+L 1.0 3.0 3.0	T
NUC224	2013 Fall	Fundamentals of Nuclear Medicine III		Policy and regulations of delivery systems health policy and ethics regarding the access of health care. Medical informatics implementation of clinical system data entry, patient data, administration, and medical quality assurance mandatory patient centered documentation for federal, state, regulatory, and credentialing agencies professional medical ethics, legal issues and patient rights.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 1.5 1.5 1.5	S
NUC232	2018 Summer	Clinical Practicum III		Under the supervision of licensed technologists, enhance skills and knowledge of current nuclear medicine practice with a focus on broadening procedure competencies.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 3.0 15.0 0.0	C
NUC233	2021 Spring	Nuclear Medicine Image Evaluation III		Advanced student-led serial evaluation of images related to clinical situations and procedures. Demonstration of technical skills.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	L+L 1.0 3.0 3.0	T

NUC234	2021 Spring	Nuclear Medicine Department Administration		Practical methods of leadership, ethics, advocacy, department management, continuous quality improvement, coding and reimbursement, and accreditation.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 3.0 3.0 3.0	S
NUC236	2021 Spring	Nuclear Medicine Procedures III		Central nervous system (CNS), tumor, hematopoietic and infection clinical procedures and techniques to demonstrate anatomy, physiology, and pathology.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 3.0 3.0 3.0	S
NUC240	2016 Fall	Clinical Pathology for Diagnostic Imaging		Causes of disease etiology and impact on the human body. Common physiologic effects of disease on body systems. Correlations of disease, physical findings, clinical laboratory values and diagnostic imaging. Role of Diagnostic Medical Imaging (DMI) modalities in the diagnosis and treatment of selected disease processes as part of the health care team. Cultural implications in the prevention and treatment of disease.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 3.0 3.0 3.0	S
NUC242	2018 Summer	Clinical Practicum IV		Independently function under limited supervision of licensed technologists. Advancement of skills to include all required competencies. Practice diverse and appropriate methods of performing procedures.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 3.0 15.0 0.0	C
NUC243	2018 Fall	Nuclear Medicine Image Evaluation IV		Evaluation of images related to clinical situations and procedures. Demonstration of technical skills. Peer-reviewed literature.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	L+L 1.0 3.0 3.0	T
NUC244	2021 Spring	Nuclear Medicine Radiopharmacy		Radiopharmacy and adjunctive pharmaceutical preparation, calculation, administration, and quality control.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	L+L 3.0 4.0 4.0	T
NUC246	2021 Spring	Nuclear Medicine Procedures IV		Radiopharmaceutical therapy and theranostics clinical procedures and techniques.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
NUC250	2021 Spring	Fundamentals of Computed Tomography and Elements of		Introduction to principles and operation of computed tomography (CT) scanner and magnetic resonance imaging (MRI).	Prerequisites: Admission to Nuclear Medicine Technology program or		Occ	LEC 3.0 3.0 3.0	S

		Magnetic Resonance Imaging			permission of the Program Director.				
NUC251	2021 Spring	Computed Tomography and Hybrid Imaging Case Analysis		Anatomy, physiology, pathology, and techniques related to the performance of clinical computed tomography (CT) and hybrid imaging.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
NUC252	2009 Fall	Clinical Practicum V		Orientation to facility policies and procedures and departmental organization. Reinforcement and broadening of knowledge base related to patient care and the roles and responsibilities of the nuclear medicine technologist at the advanced level. Focus on progression to independent level of function in the areas of patient care, radiation protection, instrumentation imaging, non-imaging and computers, radiopharmacy, diagnostic and therapeutic procedures. Ethical and professional behaviors, Health Insurance Portability and Accountability Act (HIPAA) requirements.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 3.0 15.0 0.0	C
NUC253	2018 Fall	Nuclear Medicine Image Evaluation V		Emphasis on positron emission tomography (PET) therapy imaging and other studies new to the nuclear medicine imaging field. Evaluation of images related to clinical situations and procedures including patient history, patient preparation, name and energy of radiopharmaceutical, method of localization, dosimetry, and method of clearance. Normal and abnormal distribution. Need for additional views and/or procedures. Technical limitations, protocol and equipment parameters and procedure results. Examination of professional journal articles.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 1.0 3.0 3.0	T
NUC259	2021 Spring	Fundamentals of Research in Nuclear Medicine		Fundamental components to nuclear medicine research.	Prerequisites: Admission to Nuclear		Occ	LEC 3.0	S

					Medicine Technology program.			3.0 3.0	
NUC260	2021 Spring	Research Methods and Design		Exploration of knowledge and effective analysis of resources to promote best practice in imaging professions. Introduction to research design, statistical reasoning, and interpretation of the medical literature. Provide a basis for understanding and interpreting the literature for use in evidence-based practice.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 3.0 3.0 3.0	S
NUC261	2013 Fall	Emerging Technologies		Exploration of new and emerging technologies that will become tomorrow's standard of practice. Introduction to these new ideologies. Development and presentation of research findings.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 2.0 2.0 2.0	S
NUC262	2018 Summer	Capstone Practicum		Culminating course to integrate the educational process to facilitate role transition from student to graduate nuclear medicine technologist.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of the Program Director.		Occ	LAB 1.5 9.0 0.0	C
NUC263	2021 Spring	Nuclear Medicine Research Presentation and Publication		Presentation of research project at local, regional, or national meeting or submission of research project to scientific journal for publication. Critical evaluation of research projects.	Prerequisites: A grade of C or better in NUC259 and NUC260.		Occ	LEC 3.0 3.0 3.0	S
NUC270	2009 Fall	Nuclear Medicine Scientific Method		Scientific research in the field of nuclear medicine. Abstract writing to include research study results, objectives, methods, observational and analytical techniques, and conclusion.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 1.0 1.0 1.0	S
NUC272	2018 Summer	Cardiac Practicum		Comprehensive, advanced-level practical experience at a designated cardiac clinical site.	Prerequisites: Admission to Nuclear Medicine Technology program or certified by the American Registry of Radiologic Technologists (ARRT) in Nuclear Medicine [R.T. (N)] or the Nuclear Medicine	NUC272 may be repeated five (5) times for a total of seven and a half (7.5) credits.	Occ	LAB 1.5 9.0 0.0	C

					Technology Certification Board (NMTCB) in Nuclear Medicine.				
NUC276	2021 Spring	Nuclear Cardiology		Cardiovascular anatomy, physiology, and pathophysiology as it relates to cardiac imaging including cardiac blood flow, electrophysiology, and function. Pharmacologic and exertional stress testing methods used in conjunction with imaging. Cardiac imaging instrumentation, acquisition and processing procedures, artifacts, and quality control.	Prerequisites: Admission to Nuclear Medicine Technology program or certified by ARRT [R.T. (N)] or the Nuclear Medicine Technology Certification Board (NMTCB) in nuclear medicine.		Occ	L+L 3.0 4.0 4.0	T
NUC280	2021 Spring	Nuclear Medicine PET Physics and Instrumentation		Principles of safe operation for positron emission tomography (PET) systems and required quality control.	Prerequisites: Admission to Nuclear Medicine Technology program or certified by the American Registry of Radiologic Technologists (ARRT) [R.T. (N)] or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine.		Occ	LEC 3.0 3.0 3.0	S
NUC283	2018 Summer	PET/CT Practicum		Comprehensive, advanced-level practical experience at a Positron Emission Tomography/Computed Tomography (PET/CT) clinical site.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of the Program Director.	NUC283 may be repeated five (5) times for a total of seven and a half (7.5) credits.	Occ	LAB 1.5 9.0 0.0	C
NUC290	2018 Summer	Nuclear Medicine Seminar		Review of content areas addressed on the American Registry of Radiologic Technologists (ARRT), Nuclear Medicine Technology Certification Board (NMTCB), and Arizona state licensure examinations. Study and test-taking strategies.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 3.0 3.0 3.0	S

NUC291	2023 Fall	Computed Tomography Registry and Board Exam Preparation	ICE291	Discussion of concepts outlined in the American Registry of Radiologic Technologists (ARRT) published content specifications for their post-primary certification exam in computed tomography (CT).	Prerequisites: Permission of the Program Director or Instructor.		Occ	LEC 1.0 1.0 1.0	S
NUC292	2013 Spring	Radiopharmacy Practicum		Comprehensive, high level practical experience at a Radiopharmacy clinical site. Cooperative work with direct and indirect supervisory personnel in a Radiopharmacy setting. Emphasis on technical components of Radiopharmacy procedures and radiation safety.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 1.0 3.0 0.0	C
NUC303	2023 Fall	Nuclear Medicine Image Evaluation III		Advanced student-led serial evaluation of images related to clinical situations and procedures. Demonstration of technical skills.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	L+L 1.0 3.0 3.0	T
NUC316	2023 Fall	Nuclear Medicine Procedures III		Central nervous system (CNS), tumor, hematopoietic and infection clinical procedures and techniques to demonstrate anatomy, physiology, and pathology.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 3.0 3.0 3.0	S
NUC322	2023 Fall	Nuclear Medicine Clinical Practicum II		Under the supervision of licensed technologists, enhance skills and knowledge of current nuclear medicine practice with a focus on broadening procedure competencies.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 3.0 15.0 0.0	C
NUC350	2023 Fall	Fundamentals of Computed Tomography and Elements of Magnetic Resonance Imaging		Introduction to principles and operation of computed tomography (CT) scanner and magnetic resonance imaging (MRI).	Prerequisites: Admission to Nuclear Medicine Technology program or permission of the Program Director.		Occ	LEC 3.0 3.0 3.0	S
NUC359	2023 Fall	Research Methods and Design		Exploration of knowledge and effective analysis of resources to promote best practice in imaging professions. Introduction to research design, statistical reasoning, and interpretation of the medical literature. Provide a basis for understanding and interpreting the literature for use in evidence-based practice.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 3.0 3.0 3.0	S

NUC372	2023 Fall	Cardiac Practicum		Comprehensive, advanced-level practical experience at a designated cardiac clinical site.	Prerequisites: Admission to Nuclear Medicine Technology program or certified by the American Registry of Radiologic Technologists (ARRT) in Nuclear Medicine [R.T. (N)] or the Nuclear Medicine Technology Certification Board (NMTCB) in Nuclear Medicine.	NUC372 may be repeated five (5) times for a total of seven and a half (7.5) credits.	Occ	LAB 1.5 9.0 0.0	C
NUC382	2023 Fall	PET/CT Practicum		Comprehensive, advanced-level practical experience at a positron emission tomography/computed tomography (PET/CT) clinical site.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of the Program Director.	NUC382 may be repeated five (5) times for a total of seven and a half (7.5) credits.	Occ	LAB 1.5 9.0 0.0	C
NUC392	2023 Fall	Computed Tomography Clinical Practicum I		Use of correct computed tomography instrumentation, protocol implementation and positioning techniques. Application of patient safety measures and follow As Low As Reasonably Achievable (ALARA) practices to reduce radiation dose as established by the institution. Practice within established ethical and legal guidelines. Use of effective communication skills.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 3.0 15.0 0.0	C
NUC402	2023 Fall	Computed Tomography Clinical Practicum II		Reinforcement of clinical skills in a practical setting within established ethical and legal guidelines. Focus on use of correct tomography instrumentation, protocol implementation, and positioning techniques and application of patient safety measures and As Low As Reasonably Achievable (ALARA) practices to reduce radiation dose as	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 3.0 15.0 0.0	C

				established by the institution. Also includes use of effective communication skills.					
NUC403	2023 Fall	Nuclear Medicine Image Evaluation IV		Evaluation of images related to clinical situations and procedures. Demonstration of technical skills. Peer-reviewed literature.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	L+L 1.0 3.0 3.0	T
NUC416	2023 Fall	Nuclear Medicine Procedures IV		Radiopharmaceutical therapy and theranostics clinical procedures and techniques.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
NUC422	2023 Fall	Nuclear Medicine Clinical Practicum III		Independently function under limited supervision of licensed technologists. Advancement of skills to include all required competencies. Practice diverse and appropriate methods of performing procedures.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LAB 3.0 15.0 0.0	C
NUC432	2023 Fall	Capstone Practicum		Culminating course to integrate the educational process to facilitate role transition from student to graduate nuclear medicine technologist.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of the Program Director.		Occ	LAB 3.0 9.0 0.0	C
NUC434	2023 Fall	Nuclear Medicine Department Administration		Practical methods of leadership, ethics, advocacy, department management, continuous quality improvement, coding and reimbursement, and accreditation.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 3.0 3.0 3.0	S
NUC444	2023 Fall	Nuclear Medicine Radiopharmacy		Radiopharmacy and adjunctive pharmaceutical preparation, calculation, administration, and quality control.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	L+L 3.0 4.0 4.0	T
NUC450	2023 Fall	Computed Tomography and Hybrid Imaging Case Analysis		Anatomy, physiology, pathology, and techniques related to the performance of clinical computed tomography (CT) and hybrid imaging.	Prerequisites: Admission to Nuclear Medicine Technology program or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
NUC459	2023 Fall	Nuclear Medicine Research Presentation and Publication		Presentation of research project at local, regional, or national meeting or submission of research project to scientific journal for publication. Critical evaluation of research projects.	Prerequisites: A grade of C or better in NUC259 and NUC260.		Occ	LEC 3.0 3.0 3.0	S

NUC490	2023 Fall	Nuclear Medicine Seminar		Review of content areas addressed on the American Registry of Radiologic Technologists (ARRT), Nuclear Medicine Technology Certification Board (NMTCB), and Arizona state licensure examinations. Study and test-taking strategies.	Prerequisites: Admission to Nuclear Medicine Technology program.		Occ	LEC 3.0 3.0 3.0	S
NUR101	2014 Spring	Student Success in Nursing		Individual self-awareness and self management strategies for success with nursing study, clinical reasoning and testing success. Emphasis on the development of prioritizing and delegation skills for the nursing student.	Prerequisites: Permission of Instructor.	NUR101 may be repeated for a total of four (4) credit hours. Repeats 4.0 4.0	Occ	LEC 1.0 1.0 1.0	S
NUR102	2011 Fall	Nursing Process Transition		Transitions paramedics to scope and practice of nursing. Focuses on nursing concepts and theories to meet basic human needs across the lifespan throughout the wellness/illness continuum. Theoretical concepts focus on clients of all ages with selected physiological and psychological alterations. Emphasis on expanding the paramedic's skills and experience to transition to the role of the nurse utilizing nursing process and critical thinking in acute care and community settings.	Prerequisites: Arizona or National Paramedic Registry Certificate, and application and admission to Maricopa Nursing advanced placement. One year current healthcare work experience required or permission of Nursing Department Chairperson. Corequisites: NUR103.		Occ	LEC 4.0 4.0 4.0	S
NUR103	2018 Fall	Nursing Science Transition		Application of nursing concepts and theories of health promotion to nursing care to meet basic human needs. Provides opportunity for the paramedic to develop clinical competency in selected nursing skills and care of clients across the lifespan experiencing altered physiologic functioning. Includes clinical experience with individuals, families, and small groups of clients in acute, long-term, and community settings to develop care plans, teaching plans, and discharge plans.	Prerequisites: Arizona or National Paramedic Registry Certificate, and application and admission to Maricopa Nursing with advanced placement. Minimum of one year current healthcare work experience required or permission of Nursing Department		Occ	LAB 4.0 12.0 12.0	T

					Chairperson. Corequisites: NUR102.				
NUR104AA	2018 Fall	Structured Nursing Review		Structured nursing tutorial assistance and nursing study skills to help students achieve success in their respective block of nursing courses. Nursing process and critical thinking application skills emphasized.	Prerequisites: None. Corequisites: Enrollment in the Nursing program or permission of Department Chair.	NUR104A A may be repeated for a total of six (6) credit hours. Course offered as Credit (P) No credit (Z) basis.	Occ	LEC 0.5 0.5 0.5	S
NUR104AB	2018 Fall	Structured Nursing Review		Structured nursing tutorial assistance and nursing study skills to help students achieve success in their respective block of nursing courses. Nursing process and critical thinking application skills emphasized.	Prerequisites: None. Corequisites: Concurrent enrollment in the Nursing program or permission of Department Chair.	NUR104A B may be repeated for a total of eight (8) credits. Course offered as Credit (P) No credit (Z) basis.	Occ	LEC 1.0 1.0 1.0	S
NUR106	2019 Summer	Nursing Theory and Science Transition (Paramedic Bridge)		Introduction and utilization of Nurse of the Future competencies to develop knowledge, skills, and attitudes to provide safe, quality patient care across the wellness-illness continuum in selected medical-surgical and mental health patients. Basic care concepts and nursing process are utilized to meet the needs of adult and older adult patients.	Prerequisites: (Arizona or National Paramedic Registry Certificate), acceptance into the Maricopa Nursing advanced placement, NUR187, and (one year current work experience utilizing Paramedic scope of practice or permission of Nursing Department Chairperson.).	NUR106 is intended for experienced paramedics seeking advanced placement to Maricopa Nursing.	Occ	LEC 9.0 5.5 5.5 LAB 0.0 157.5 10.5	R
NUR150	2019 Summer	Practical Nurse Bridge Course		Designed to bridge previously gained healthcare knowledge, skills, and abilities of the military Veteran student and/or Licensed Practical Nurse (LPN) seeking to refresh knowledge	Prerequisites: A military Veteran with a health care designation (medic/corpsman) or		Occ	LEC 12.0 9.0 9.0 LAB	R

				<p>in the role of the practical nurse. Course includes didactic, laboratory, and clinical experiences for practical nursing including concepts and theories related to care of geriatric, adult, pediatric, and childbearing clients. Areas of didactic and clinical focus include: role of the practical nurse collaborating with other members of the healthcare team; concepts of health promotion and disease/illness prevention; therapeutic communication techniques; nutritional concepts; medication administration to include pharmacokinetics and pharmacodynamics of medications, nursing considerations in medication administration, and dosage calculation; documentation and concepts related to information technology. Emphasis in clinical practicum is on nursing care of pediatric and child-bearing families, and older adult residents of long term care facilities with selected alterations in health; concepts of delegation, prioritization and management of care for the practical nurse is integrated.</p>	<p>a licensed practical nurse (LPN) who requires a refresher program. Approval of the Nursing Chair or designee and application packet completion is required.</p>			<p>0.0 180.0 12.0</p>	
NUR151	2018 Fall	Nursing Theory and Science I		<p>Introduction to fundamentals of nursing theory and practice utilizing critical thinking based on the nursing process and principles of evidence based practice. Focus on meeting basic human needs within the wellness/illness continuum. Theoretical concepts related to holistic care of well, geriatric, and adult clients. Provides safe nursing care to clients with selected alterations in health. Introduction to professional nursing practice. Applies concepts of health promotion, disease/illness prevention. Provides care based upon integration of pathophysiology, nutrition,</p>	<p>Prerequisites: Admission into the Nursing Program.</p>		Occ	<p>LEC 10.0 5.0 5.0 LAB 0.0 15.0 15.0</p>	T

				communication and physical, biological, and psycho-social sciences. Uses information technology in performing and evaluating client care					
NUR152	2023 Fall	Nursing Theory and Science I		Introduction of Nurse of the Future competencies as a foundational framework for development of the professional nurse. Basic care concepts, the nursing process, and clinical reasoning are utilized to meet the needs of adult and older adult patients.	Prerequisites: Admission into the Nursing program.		Occ	LEC 9.0 4.0 4.0 LAB 0.0 16.88 15.0	R
NUR158	2021 Spring	Nurse Assisting		Introduction to the role of the nursing assistant for clients across the wellness/illness continuum within the nurse assisting scope of practice. Includes basic problem solving processes specific to meeting the basic and holistic needs of clients, therapeutic communication skills, interventions to ensure the needs and safety of the client, specific types of diseases, conditions and alterations in behavior of the client. Focus is on the special needs of the older adult client in the acute and long-term care settings, and basic care skills and procedures. Provides opportunity for the development of clinical competency in the performance of selected nurse assisting skills and procedures through participation in the care of clients.	Prerequisites: Reading and math assessment as well as completion of all required Health and Safety documents.	NUR158 final admission requirements are determined by the Program Director and/or Division Chair and may be based on employer (partner) requirements if the student is employed by the requesting agency. NUR158 meets the application and admission requirements for Maricopa Nursing programs.	Occ	LEC 4.5 2.5 2.5 LAB 0.0 6.0 6.0	R

NUR160PN	2019 Summer	Practical Nursing Theory and Science I		Core values of the practical nursing program, nursing history, standards, and scope of practice of the practical nurse. Safe nursing care of clients with selected alterations in health; fundamental concepts of health promotion, disease/illness prevention. Nursing care based upon integration of pathophysiology, nutrition, communication and physical, biological, and psycho-social sciences. Uses information technology in performing and documenting client care.	Prerequisites: Admission into the Fast Track Practical Nursing Program.		Occ	LEC 11.0 6.0 6.0 LAB 0.0 225.0 15.0	R
NUR171	2018 Fall	Nursing Theory and Science II		Application of nursing theory and practice utilizing critical thinking based on the nursing process and evidence based practice. Holistic nursing concepts of health promotion, disease/illness prevention, and health restoration for adult and geriatric clients. Role development as the professional nurse member of the health care team. Participation in client teaching and discharge planning. Application of previous knowledge of physical, biologic, psycho-social sciences, and the cultural and spiritual aspects of nursing care. Application of nursing concepts in the development of plan of care to include pathophysiology, nutrition, pharmacology, and skills in communication. Uses information technology in planning, documenting, and evaluating client care	Prerequisites: A grade of C or better in NUR151 or permission of Nursing Department Chairperson.		Occ	LEC 8.0 4.0 4.0 LAB 0.0 12.0 12.0	T
NUR172	2023 Fall	Nursing Theory and Science II		Utilization of Nurse of the Future competencies and clinical judgment measures to develop knowledge, skills, and attitudes to provide safe, quality patient care across the wellness-illness continuum in selected medical-surgical and mental health patients.	Prerequisites: A grade of C or better in (BIO202 and NUR152) or permission of Nursing Department Chair.		Occ	LEC 9.0 5.5 5.5 LAB 0.0 11.81 10.5	R

NUR180PN	2019 Summer	Practical Nursing Theory and Science II		Holistic practical nursing concepts and theories related to care of childbearing, pediatric, adult, and geriatric clients. Role of the practical nurse collaborating with other members of the healthcare team. Concepts of health promotion and disease/illness prevention. Nursing care based upon integration of pathophysiology, nutrition, communication and physical, biological and psycho-social sciences. Information technology in performing and documenting client care. Emphasis on nursing care related to pediatric, child-bearing families, and adult clients with selected alterations in health; concepts of delegation, prioritization and management of care for the practical nurse based on the core values of the nursing program.	Prerequisites: A grade of C or better in NUR160PN.		Occ	LEC 11.0 6.0 6.0 LAB 0.0 225.0 15.0	R
NUR187	2020 Spring	Pharmacology and Medication Administration		Overview of selected drug classifications and categories. Emphasis on principles of drug metabolism and effects, interactions and adverse reactions, medication administration, and nursing implications for safe practice with a focus on adult and older adult patients. Requires application of previous knowledge of physical, biological, and social sciences.	Prerequisites: Permission of Nursing Department/Division Chair.		Occ	LEC 1.5 1.5 1.5	S
NUR191	2023 Summer	Practical Nursing Transition		Overview of the role of the practical nurse in the care of patients. Includes nursing standards and scope of practice of the practical nurse. Emphasis on nursing care related to pediatric and care of the well childbearing patient and childbearing family. Focus on the role of practical nurse in providing care through interventions consistent with established nursing care plans.	Prerequisites: A grade of C or better in NUR171, or NUR172, or permission of Nursing Department Chair.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
NUR251	2018 Fall	Nursing Theory and Science III		Application of critical thinking strategies related to holistic care of the newborn, pediatric, and	Prerequisites: A grade of C or better in (BIO202, BIO205		Occ	LEC 8.0 4.0	T

				childbearing clients. Integration of concepts related to holistic care of adults and geriatric clients with selected acute and chronic alterations in health. Integration of professional nursing standards in role development. Utilization of previous knowledge of physical, biologic, psycho-social sciences, and the cultural, spiritual aspects of nursing care. Integration of concepts of nutrition, pharmacology, communication, health promotion, and pathophysiology into nursing care.	and NUR171) or permission of Nursing Department Chairperson.			4.0 LAB 0.0 12.0 12.0	
NUR252	2023 Fall	Nursing Theory and Science III		Application of critical thinking strategies and clinical judgment measures related to holistic care of the newborn and childbearing patients. Integration of concepts related to holistic care of adults and older adult patients with selected acute and chronic alterations in health. Integration of professional nursing standards in role development. Utilization of previous knowledge of physical, biologic, psycho-social sciences, and the cultural, spiritual aspects of nursing care. Integration of concepts of nutrition, pharmacology, communication, health promotion, and pathophysiology into nursing care.	Prerequisites: A grade of C or better in [(CRE101 or appropriate district placement) and NUR172 and PSY101] or permission of Nursing Department Chair.		Occ	LEC 9.0 5.5 5.5 LAB 0.0 11.81 10.5	R
NUR271	2018 Fall	Nursing Theory and Science IV		Integration of critical thinking strategies for complex holistic needs of high-risk clients with multi- system health alterations. Application of strategies related to holistic care of the client with psychiatric/ mental health disorders. Introduction to community based care. Assimilation of professional role into practice. Evaluation of care based on the knowledge of physical, biologic, psycho-social sciences, and the	Prerequisites: A grade of C or better in NUR251 or permission of Nursing Department Chairperson.		Occ	LEC 7.0 4.0 4.0 LAB 0.0 9.0 9.0	T

				cultural and spiritual beliefs of clients. Development of nurse leadership and management roles. Integration of concepts of nutrition, pharmacology, communication, health promotion, and pathophysiology into nursing care					
NUR283	2023 Fall	Nursing Theory and Science IV		Applies Nurse of the Future competencies and clinical judgment measures to practice and manage care for the child/family unit and adults requiring complex care throughout the wellness/illness continuum, and prepare for transition from student to professional nurse.	Prerequisites: A grade of C or better in (BIO205 and NUR252) or permission of Nursing Department Chair.		Occ	LEC 9.0 5.5 5.5 LAB 0.0 11.81 10.5	R
NUR291	2018 Fall	Nursing Clinical Capstone		Synthesis of the nursing process to facilitate role transition from student to graduate nurse within a preceptorship experience. Development of nurse leadership and management roles.	Prerequisites: A grade of C or better in NUR271 or permission of Nursing Department Chairperson.		Occ	LAB 2.0 6.0 6.0	T
NUR292	2014 Fall	Overview of Current Nursing Principles and Practice across the Lifespan		Update of current principles and practice guidelines for returning nurses in pediatric, obstetrical and geriatric clients. Overview of nursing concepts, therapeutic interventions, and evidence-based practice for clients across the lifespan.	Prerequisites: Permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
NUR295	2019 Summer	Registered Nurse Refresher		Update of current principles of nursing theory and practice for registered nurses. Didactic instruction meets all Arizona State Board of Nursing requirements: nursing process and patient centered care; pharmacology, medication calculation, and medication administration; communication; critical thinking, clinical decision making and evidence-based practice; delegation, management, and leadership; working with interdisciplinary teams; meeting psychological and physiological needs of adult clients with medical-surgical conditions; ethics; documentation including electronic health records; informatics; and quality improvement.	Prerequisites: Permission of Instructor.		Occ	LEC 10.0 6.0 6.0 LAB 0.0 180.0 12.0	R

				Concentrated preceptorship experience under the supervision of a registered nurse with faculty guidance. Individualized teaching and learning opportunities to build confidence, competence and an increased level of independent functioning.					
NUR296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
NUR296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to		Occ	LAB 2.0 10.0 0.0	Z

					students major or career interest or with permission of Instructor.				
NUR296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
NUR296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z

NUR298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
NUR298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
NUR298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
NUR301	2024 Fall	Role of the Professional Nurse		Introduction to the transition from Registered Nurse to the role and scope of the professional baccalaureate nurse. Review of nursing philosophies, theories, and conceptual models. Focus on concepts and attributes of the baccalaureate nurse.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.		Occ	LEC 3.0 3.0 3.0	S

NUR302	2024 Fall	Health Assessment and Promotion		Overview of the health assessment process, including methods of taking health history, physical examination skills, documentation, and health promotion strategies. Emphasis on health promotion across the lifespan among diverse populations, health equity, and community resources.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.		Occ	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	R
NUR303	2024 Fall	Nursing Research and Evidence- Based Practice		Use of evidence-based research findings for improving clinical practice and person-centered care outcomes. Exploration of quantitative and qualitative research methodologies. Emphasis on the critical review of research studies and their applications to clinical practice.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.		Occ	LEC 3.0 3.0 3.0	S
NUR304	2024 Fall	Public and Community Health Nursing		Exploration of population health as a system of diverse cultures, values, and subgroups with varying socioeconomic circumstances and levels of vulnerability. Emphasis on factors affecting community settings using epidemiological data and functional health pattern assessments to plan, organize, and deliver services in community settings, including health education and promotion, illness prevention, and disaster preparedness. Includes project and simulation-based field experiences.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.		Occ	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	R
NUR305	2024 Fall	Legal and Ethical Topics in Nursing		Overview of health policy, legislative and regulatory guidelines, the Nurse Practice Act, and legal and ethical concepts that influence the practice of professional nursing. Focus on ethical decision-making models.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.		Occ	LEC 3.0 3.0 3.0	S
NUR401	2024 Fall	Systems-Based Thinking in Nursing		Overview of systems-based thinking in nursing and its role in improving the quality and safety of patient care. Focus on coordination of healthcare systems components to address complex issues and deliver optimal care.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.		Occ	LEC 3.0 3.0 3.0	S
NUR402	2024 Fall	Healthcare Technology and Informatics		Exploration of various modalities and integration of healthcare technology and informatics to manage and	Prerequisites: Admission into the RN to BSN program;		Occ	LEC 3.0	S

				communicate data, advance health information literacy, and improve patient outcomes. Focus on components, applications, problem solving, and data management strategies.	current, unencumbered RN license.			3.0 3.0	
NUR403	2024 Fall	Nursing Leadership and Management		Overview of leadership qualities, abilities, and personal style including strengths and challenges. Focus on understanding the differences between management and leadership. Emphasis on communication and transparency in management and leadership.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.		Occ	LEC 3.0 3.0 3.0	S
NUR404	2024 Fall	Advanced Nursing Capstone		Capstone project that provides the baccalaureate nursing student with the opportunity to assess, identify, propose, and present an evidence-based project that addresses an issue significant to nursing practice. The project will synthesize knowledge from coursework and experience. The capstone project will be under the guidance and in collaboration with program faculty and a preceptor from the facility or entity.	Prerequisites: Admission into the RN to BSN program; current, unencumbered RN license.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 6.0 6.0	T
NVH245	2008 Spring	Navajo Culture and Heritage		Survey of the Navajo people, including their history, culture/aesthetics, education, spirituality, and language	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
OAS101	2018 Fall	Computer Typing I: Keyboarding and Formatting		Keyboard mastery; letters, tables, and reports; office production; and manuscripts	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
OAS101AA	2018 Fall	Computer Typing I: Keyboard Mastery		Incorporates correct touch typing principles	Prerequisites: None.		Occ	L+L 1.0 1.7 1.7	T
OAS101AB	2018 Fall	Computer Typing I: Letters, Tables and Reports		Letter, table, and report formatting	Prerequisites: A grade of C or better in OAS101AA or permission of Department or Division.		Occ	L+L 1.0 1.7 1.7	T

OAS101AC	2018 Fall	Computer Typing I: Production and Manuscript		Simple office projects and manuscripts	Prerequisites: A grade of C or better in OAS101AB or permission of Department or Division.		Occ	L+L 1.0 1.7 1.7	T
OAS102	2018 Fall	Computer Typing II: Document Production		Arrangement of letters, memos, manuscripts, and tabulation; speed/accuracy improvement	Prerequisites: A grade of C or better in OAS101 or permission of Department or Division.		Occ	L+L 3.0 5.0 5.0	T
OAS103AA	2018 Fall	Computer Typing: Skill Building I		Individual progression on speed/accuracy drills.	Prerequisites: Ability to touch type at 25 words per minute or permission of Department or Division.		Occ	L+L 1.0 1.7 1.7	T
OAS107	1994 Fall	Professional Telephone Techniques		Proper telephone techniques and professional business manners	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
OAS108	1998 Summer I	Business English		Comprehensive coverage of correct use of English grammar including spelling, punctuation, capitalization, and number style mechanics in a business context	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
OAS111AA	2018 Fall	Computer Keyboarding I	BPC111AA	Mastery of essential microcomputer keyboarding skills. Emphasis on touch typing of alphabetic and numeric keys and symbols	Prerequisites: None.		Occ	L+L 1.0 1.7 1.7	T
OAS118	2018 Fall	10-Key By Touch		Touch system of numeric keys on ten- key pads	Prerequisites: None.		Occ	L+L 1.0 1.7 1.7	T
OAS120	1998 Summer I	Financial Record Keeping		Computerized application of concepts and procedures of office record keeping; includes finance and personnel records, inventory systems, banking procedures and cash control; decision-making process for solving financial problems	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
OAS125	1995 Spring	Introduction to the Professional Office		Expectations of the professional in the electronic office of today. Realistic and practical coverage of roles, responsibilities, and environment	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

OAS181	1998 Summer I	Medical Office: Vocabulary		Basic medical vocabulary with emphasis on pronunciation, spelling, and definition	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
OAS298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
OPH101	2023 Fall	Introduction to Eye Care		This course will introduce the student to the meaning of ophthalmology and the different members of the ophthalmic eye care team. The student will learn different certification levels and the importance of professional development. Body structure, body function, anatomy and physiology of the eye will be discussed in detail. Proper moving, transferring and safety issues of patients; as well as knowledge about diverse populations, geriatric patients and patients with special needs will be demonstrated and discussed. An introduction to infection control, agency guidelines, and using proper aseptic technique will be discussed and demonstrated.	Prerequisites: Successful completion of RDG100 or higher or appropriate reading placement into CRE101.		CLK	54	
OPH102	2021 Fall 1	Introduction to Ophthalmology		This course will introduce the student to the meaning of ophthalmology and the different members of the ophthalmic eye care team. The student will learn different certification levels and the importance of professional development as well as learn medical terminology and how to perform cardiopulmonary resuscitation (CPR) on infants, children, and adults. Students will be	Prerequisites: Successful completion of RDG100 or higher or appropriate reading placement into CRE101.		CLK	50	

				introduced to infection control procedures, legal and ethical considerations, and regulatory requirements. Students will learn about the Health Insurance Portability and Accountability Act (HIPAA) and privacy laws, and the importance of confidentiality in written and communication form.					
OPH103	2021 Fall 1	Ophthalmic Scheduling and Billing Practices		A certified medical administrative assistant (also called a medical office secretary or medical office assistant) keeps an ophthalmic healthcare office running efficiently and effectively. The ophthalmic medical administrative assistant is often the first to greet and help patients, and can help set the stage for a patient's experience. Students will gain the knowledge and skills relevant for working in the ophthalmic medical office setting such as greeting and checking in patients, collecting personal, medical, and insurance information. Schedule, reschedule, and verify patient appointments. Schedule appointments with secondary care providers and coordinate physician schedules. Ophthalmic medical administrative assistants will coordinate and maintain patient flow within the medical office by communicating patient arrivals or delays. This course will prepare students for the Certified Medical Administrative Assistant Examination through the National Healthcareers Association (NHA).	Prerequisites: OPH102		CLK	100	
OPH104	2021 Fall 1	Ocular and Systemic Diseases of the Eye		This course will introduce students to the signs and symptoms of specific eye diseases, as well as how disease processes affect the visual system. Students will be introduced to how systemic diseases with ocular manifestations occur, impact visual acuity, and are treated. Students will	Prerequisites: OPH103 or Program Manager approval.		CLK	50	

				learn how to obtain and record vital signs, set up a vision lane to screen school aged children, prepare and provide guidance to school aged children to prepare them for examinations, utilize specialized eye screening equipment and provide referrals for further care. This course prepares students for the Arizona Department of Health Vision Screener Certification.					
OPH105	2021 Fall 1	Ocular and Refractive Clinical Assessment, Skills, and Procedures		The Ocular and Refractive Clinical Assessment, Skills, and Procedures course will prepare students to work in the exciting and ever evolving world of ophthalmic medical assisting. This course will help students develop basic skills such as triaging patient complaints and symptoms, taking a good patient history, and performing comprehensive examinations on patients with various medical eye conditions. Students will study anatomy and physiology of the eye, pharmacology, and infection control procedures. Additionally, this course will prepare students to use and care for various types of ophthalmic instruments, assist with procedures, and conduct a variety of tests. This course will explain the principles of optics and refractive states of the eye to aid in caring for patients needing contact lenses or reading eyeglasses, and measuring the patient for the proper optical prescription.	Prerequisites: 1. Must show proof of employment at an ophthalmic office. 2. Successful completion of RDG100 or higher or appropriate reading placement into CRE101.		CLK	240	
OPH110	2020 Fall 1	Medical Terminology/Abbreviations and Disease Processes for Ophthalmic Medical Assistant		This course will introduce the student to understanding the signs and symptoms of specific eye diseases, as well as how said disease affects the visual system. Systemic diseases with ocular manifestations will be discussed. The students will discuss and document by writing essays on the causes of specific diseases and the procedures used to diagnose and	Prerequisites: OPH101, or with Program Manager approval, and current health and safety requirements.		CLK	42	

				treat these diseases. The students will begin practicing medical terminology and acceptable abbreviations specific to the field of ophthalmology with an outcome of the ability to spell, define, and use ophthalmic terminology and abbreviations. The student will learn, demonstrate and record vital signs.					
OPH112	2023 Fall	Clinical Theory and Skills		This course will explain the principles of optics and refractive states of the eye. Reading eyeglasses and measuring the patient for the proper eyeglass prescription will be demonstrated. The importance of ophthalmic pharmacology will be discussed and students will learn how the medications are used in the ophthalmology practice. Students will learn how to properly write a prescription for eye medications. Demonstration of proper eye drop instillation will be given. The importance of current microorganisms and infection control will be discussed in detail. The students will begin performing comprehensive medical eye examination. Ocular motility and other adjunctive testing in ophthalmology will be demonstrated.	Prerequisites: OPH110 or with Program Manager approval, and current health and safety requirements.		CLK	177	
OPH114	2023 Fall	Basic Skills and Ocular Assessment		This course will develop and refine the knowledge and skills necessary to assist the ophthalmologist in completion of the findings, assessment, and plan needed in a comprehensive ophthalmic medical evaluation for each patient. Community eye health and the importance of low vision will be discussed. The student ophthalmic assistant will perform and demonstrate comprehensive examinations and be required to pass skill evaluation testing.	Prerequisites: OPH112 or with Program Manager approval, and current health and safety requirements.		CLK	183	
OPH150	2021 Fall 1	Certified Ophthalmic		This is a refresher course that will help prepare students for the Joint	Prerequisites: Ophthalmic Assistant		CLK	24	

		Assistant (COA) Certification Prep		Commission on Allied Health Personnel in Ophthalmology (JCAHPO) for Certified Ophthalmic Assistant (COA) Exam. Students will feel more comfortable and more efficient with this exam.	Certification from the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO).				
OPH190	2021 Fall 1	Ophthalmic Assisting Externship		This course will give students hands-on experience with patients, staff, and other ophthalmic professionals while using their skills and techniques they obtain from lecture and lab courses. Students are assigned to an approved partnership site for one hundred and twenty (120) hours of externship. This will prepare the student for employment as an ophthalmic medical assistant.	Prerequisites: 1. OPH114 or with Program Manager approval. 2. Background check requirements in compliance with the Maricopa County Community College District Supplemental Background Check Policy. 2. Students also must provide a copy of an Arizona Department of Public Safety Level One Fingerprint Clearance Card. Students must maintain current fingerprint clearance throughout the externship(s). 3. Complete and submit the Allied Health Student Health and Safety Documentation Checklist, with included documentation 4. Students are responsible to meet the requirements of the background check, fingerprint clearance card, and health and safety documentation.	Externship hours are site specific and may require attendance any day of the week, including during unscheduled days and times.	CLK	120	
OPT105	2023 Fall	Introduction to Precision Optics		A historical overview of precision optics and scientific development.	Prerequisites: None.		Occ	LEC 3.0	S

				Covers optics application and the manufacturing process including machinery, tools, and systems. Examines fundamental principles, characteristics and design of optical components including geometrical optics, wave optics, metrology, fiber optics, photonics, aberration theory, optical phenomena, and optical illusions. Professional career paths in the optics industry also explored.				3.0 3.0	
OPT107	2023 Fall	Precision Optics and Mathematical Concepts		Precision optics and mathematical concepts. Covers basic algebraic operations, problem solving involving metric measurement, gears, pulleys, simple mechanism problems. Areas and volume calculations of geometric figures. Essentials of trigonometry for solving right and oblique triangles. Addresses geometrical optics (reflection, diffraction, imaging, thin lens formula, lens maker's equation), wave optics (interference, diffraction, polarization), and the basic principles and practical applications of lasers. Covers optical handling and positioning, light sources, laser classifications and safety.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
OPT112	2023 Fall	Optical Elements and Ray Optics		Overview of terminology and techniques in the use of analytical and laboratory methods for planning, executing, and evaluating arrangements using components such as mirrors, prisms, thin and thick lenses, diffusers, stops, reticles, and various types of light sources. Reflection, refraction, dispersion, image formation, and aberrations studied, with emphasis on the ray concept of light.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
OPT115	2023 Fall	Optical Fabrication and Metrology		A study of optical materials, processes, and measurement techniques employed in the manufacture of modern optical components. Covers steps in planning, tooling, fabricating,	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T

				finishing, testing, coating, and assembly of precision optical elements.					
OPT215	2023 Fall	Advanced Optical Fabrication and Metrology		Study of advanced processes, tools, and Computerized Numerical Control (CNC) technology shaping the methodology in manufacturing precision optical components. Emphasis in CNC grinding and polishing, tolerancing, and metrology of precision optical lenses.	Prerequisites: A grade of C or better in OPT115.		Occ	L+L 3.0 4.0 4.0	T
OPT225	2023 Fall	Optical Systems		Application of optical fabrication techniques covering assembly of multiple optical elements into cemented and mechanically mounted lens systems, in addition to training in precision cleaning and inspection of optical surfaces. Also covers advanced metrology skills such as interferometry of transmitted beams and measurement of the optical transfer function.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
OSH101	2023 Fall	Introduction to Occupational Safety, Health, and Environmental Technology		Overview of occupational safety, health, and environmental regulations and technology. Overview of the regulatory framework related to safety and environmental program management. Career opportunities and their relationship to business management.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
OSH102	2020 Fall	Introduction to Industrial Hygiene		Overview of environmental hazardous materials technology. History of pollution leading to current legislation. Environmental effects of pollution. Overview of the regulatory framework. Career opportunities in handling and management of hazardous substances	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
OSH105	2000 Summer I	Construction Safety		Occupational Safety and Health Act. Common causes for accidents and fatalities in construction. Abatement techniques for construction specific hazards. Use of personal protection and lifesaving equipment. Specific types of health hazards related to the	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S

				construction industry. Proper methods for handling hazardous materials					
OSH105AA	2012 Fall	Construction Safety		Occupational Safety and Health Act. Common causes for accidents and fatalities in construction. Abatement techniques for construction specific hazards. Use of personal protection and lifesaving equipment. Specific types of health hazards related to the construction industry. Proper methods for handling hazardous materials.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
OSH106	2018 Fall	Industrial Safety	GTC106 MIT106	Safety, health management, and accident prevention in industrial work environment. Role of Occupational Safety and Health Administration (OSHA) act, materials handling, electrical safety, machine safety, first response to fire and medical emergencies, safety signs and color codes, recognition of safety and health hazards accident prevention, management responsibilities, and OSHA 10 certification.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
OSH106AC	2020 Fall	Industrial Safety		Safety, health management and accident prevention in industrial work environment. Role of Occupational Safety and Health Administration (OSHA) act, materials handling, electrical safety, machine safety, emergency preparedness, safety signs and color codes, recognition of safety and health hazards accident prevention, and management's responsibilities.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
OSH107	2020 Fall	Occupational Safety Principles and Practice		Application of safety and health regulations and best practices. Hazard identification and accident investigation techniques. Major construction hazards and controls. Application of fire protection standards.	Prerequisites: A grade of C or better in OSH106AC or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
OSH189	2016 Fall	Professional Leadership Development for Occupational Safety and Health		Personal and professional leadership development related to Occupational Health and Safety (OSH) through active participation in peer-to-peer and professional mentoring. Exposure	Prerequisites: A grade of C or better in HMT/OSH101 and GTC/MIT/OSH106 and a student	OSH189 may be repeated for a total of three	Occ	LEC 1.0 1.0 1.0	S

				to industry technical meetings, technical tours, seminars, college discipline specific campus club, scholarship awareness, career fairs, and other similar events. Supplemented by readings, and pre- and post-activity discussion and critique. Varied content due to variety of personal and professional development available.	member of the American Society of Safety Engineers.	(3) credit hours.			
OSH189AA	2020 Fall	Professional Leadership Development for Occupational Safety and Health I		Personal and professional leadership development related to Occupational Safety and Health (OSH) through active participation in professional mentoring. Exposure to industry technical meetings, technical tours, college discipline specific campus club, scholarship awareness, and other similar events. Supplemented by readings, and pre- and post-activity discussion and critique. Varied content due to variety of personal and professional development available.	Prerequisites: A grade of C or better in OSH106AC.		Occ	L+L 1.0 2.0 0.0	C
OSH203	2020 Fall	Health and Safety Program Management		Introduction to safety program theory and principles needed to develop, manage, implement and evaluate a safety and health program. Systems safety and applied psychology theories that enhance safety program management. Hazard identification methods and controls, and application of these principles to case studies.	Prerequisites: A grade of C or better in OSH106AC or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
OSH204	2017 Fall	Health and Safety Program Management II		Current and emerging topics in safety and health program management. Exploration of current topics through emerging regulatory and/or consensus standards organizations. Case study investigation and analysis with applications to safety and health management. Introduction to new and evolving online training courses, seminars, video and documents. Adult leaning and instructional theory.	Prerequisites: A grade of C or better in OSH107 and OSH203, or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
OSH206	2005 Spring	Risk Management and Loss Control		Statistical and cost analysis, report writing, and injury prevention related to loss control. Prevention programs	Prerequisites: None.		Occ	LEC 3.0	S

				designed to minimize or eliminate property and personnel loss or injury				3.0 3.0	
OSH211	2020 Fall	Industrial Safety Management Systems and Performance Indicators		Establishment of a safety management system meeting safety management system standards, concentrating on reactive and proactive approaches for safety department functions. Specific content includes development of safety duties, establishment of performance metrics, investigational accuracy and self-assessment.	Prerequisites: A grade of C or better in OSH203.		Occ	LEC 3.0 3.0 3.0	S
OSH218	2020 Fall	Ergonomics		Analysis and evaluation of ergonomics risk factors for occupational tasks. Application of theories, methods, and techniques used in work design and systems. Methodological problems in human information processing, human control functions, human-machine interface, work design and process evaluation.	Prerequisites: A grade of C or better in OSH107 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
OSH220	2020 Fall	Safety and Emergency Management		Assessment of emergency management systems for occupational safety program development. Planning and implementation of the four phases of emergency management: mitigation, preparedness, response, and recovery. Analysis of all hazards preparedness and response in emergency situations resulting from natural and technological hazards. Planning and budgeting for resources and staffing.	Prerequisites: A grade of C or better in OSH105AA or OSH106AC.		Occ	LEC 3.0 3.0 3.0	S
OSH240	2020 Fall	Fire Protection Systems	FAC240	Building occupant safety requirements including industry standards, regulations, building codes, fire codes and life safety codes. Fundamentals of fire protection system operation, inspection and maintenance. Principles of life safety systems including fire door and walls, smoke control systems, and exit components.	Prerequisites: A grade of C or better in OSH106AC.		Occ	LEC 3.0 3.0 3.0	S

OSH270AA	2020 Fall	Occupational Safety and Health Internship		Occupational Safety and Health (OSH) work experience in business, industry or government. Eighty (80) hours of designated work experience.	Prerequisites: A grade of C or better in HMT/OSH101 and OSH106AC or permission of Instructor.	OSH270A A may not be repeated for credit.	Occ	LAB 1.0 6.0 0.0	C
OSH270AB	2020 Fall	Occupational Safety and Health Internship		Occupational Safety and Health (OSH) work experience in business, industry or government. One hundred and sixty (160) hours of designated work experience.	Prerequisites: A grade of C or better in HMT/OSH101 and OSH106AC.	OSH270A B may not be repeated for credit.	Occ	LAB 2.0 12.0 0.0	C
OSH270AC	2020 Fall	Occupational Safety and Health Internship		Occupational Safety and Health (OSH) work experience in business, industry or government. Two hundred and forty (240) hours of designated work experience.	Prerequisites: A grade of C or better in HMT/OSH101 and OSH106AC.	OSH270A C may not be repeated for credit.	Occ	LAB 3.0 18.0 0.0	C
OSH290AC	2018 Fall	Case Study and Research Project		Completion of a selected safety project in policy and procedure development or training program curriculum design in actual or simulated work setting. Combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students	Prerequisites: Permission of Instructor.		Occ	LAB 3.0 3.0 3.0	T
OSH298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
OSH298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				combined to maximize student development.					
OSH298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
OTA100	2019 Fall	Introduction to Occupational Therapy Assistant Profession		History, theory and philosophy of occupational therapy and occupational therapy assistant (OTA) professions. Topics include practice contexts, ethics, and scope of practice. Emphasis on developing professional behavior skills expected of an entry-level occupational therapy assistant.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
OTA102	2019 Fall	Psychosocial Health and Occupation		Analysis of impact of psychosocial health on occupation throughout the lifespan. Focus on occupational therapy (OT) assessments and screening procedures for process skills, social interaction skills, and performance patterns. Theoretical models for group occupational therapy assistant (OTA) interventions and development of therapeutic client relationships.	Prerequisites: Admission to the Occupational Therapy Assistant program, and a grade of C or better in (OTA100 and PSY101). Corequisites: PSY266.		Occ	LEC 3.0 3.0 3.0	S
OTA105	2019 Fall	Fieldwork: Psychosocial		Introductory-level clinical fieldwork experience for the occupational therapy assistant (OTA). Emphasis on observational skills and basic interactional skill in a mental health clinical setting with a culturally diverse client population. Focus on developing professional behavior, professional communication, and clinical reasoning in psychosocial context. Opportunities to apply group theory and therapeutic use of self.	Prerequisites: Admission to Occupational Therapy Assistant program. Corequisites: OTA102.		Occ	LAB 0.5 3.0 0.0	C

OTA107	2019 Fall	Fundamentals of Occupational Therapy		Discussion of Occupational Therapy Practice Framework (OTPF), analysis of occupational performance and analysis of activities. Role of occupational therapy assistant (OTA) from referral to discharge. OTA interventions, documentation requirements, and terminology. Emphasis placed on therapeutic use of self and development of clinical reasoning skills.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in OTA100.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
OTA117	2019 Fall	Physical Health and Occupations		Impact of physical health on occupation throughout the lifespan. Focus on observing, identifying, measuring, and assessing motor and sensory client factors.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in BIO202.		Occ	LEC 3.0 1.0 1.0 LAB 0.0 6.0 6.0	T
OTA157	2019 Fall	Occupational Therapy Assistant in Physical Rehabilitation		Theories and practice models for occupational therapy for clients with physical disabilities. Topics include pathology and therapeutic interventions. Emphasis on clinical reasoning, locating resources, daily treatment planning, task and environmental modifications, activity grading, client education and documentation.	Prerequisites: Admission to the Occupational Therapy Assistant program.		Occ	LEC 3.0 1.0 1.0 LAB 0.0 6.0 6.0	T
OTA201	2019 Fall	Assistive Technology		Specialized assistive technology items: car modifications, power wheel chair options, adaptive toys and switches, seating systems, orthotics and prosthetics, and apps for therapeutic use. Emphasis on identifying need, referral process, and funding sources.	Prerequisites: A grade of C or better in OTA157.		Occ	LEC 2.0 2.0 2.0	S
OTA205	2019 Fall	Fieldwork: Geriatric		Introductory level clinical fieldwork experience with a geriatric population. Application of learning with focus on exhibiting professional behavior, professional communication, clinical observation skills, and implementation of selected geriatric treatment strategies and modifications.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in OTA157. Corequisites: OTA207.		Occ	LAB 0.5 2.5 0.0	C

OTA207	2019 Fall	Occupational Therapy Assistant in Geriatrics		Impact of aging on occupational performance. Physical, sensory, and cognitive changes associated with aging. Social, psychological, and cultural impact on aging. Common and emerging contexts of service provision. Focus on synthesizing learning and implementing treatment techniques with aging population.	Prerequisites: A grade of C or better in OTA157.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
OTA215	2019 Fall	Fieldwork: Pediatric I		Introductory-level fieldwork experience in a pediatric context. Emphasis on demonstrating professional behavior, professional communication, clinical observation skills, selecting age-appropriate therapeutic activities, and applying therapeutic use of self with a culturally diverse pediatric client population.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in OTA157. Corequisites: OTA217.		Occ	LAB 0.5 2.5 0.0	C
OTA216	2023 Fall	Occupational Therapy Assisting Pediatrics I		Distinguishes between typical and atypical pediatric development. Common pediatric health conditions of infants, children, and adolescents. Occupational therapy practice models, theories, and delivery contexts found in pediatrics.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in OTA102 and OTA117.		Occ	LEC 2.0 2.0 2.0	S
OTA217	2024 Fall	Occupational Therapy Assisting Pediatrics II		Distinguishes between typical and atypical pediatric development. Common pediatric health conditions of infants, children, and adolescents. Occupational therapy practice models, theories, and delivery contexts found in pediatrics. Focus on synthesizing prior learning and specific pediatric treatment activities to develop pediatric treatment plans.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in OTA102, OTA117, and OTA216.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
OTA234	2019 Fall	Occupational Therapy Assistant Professional Standards		Preparation for transition into level 2 fieldwork. Focus on supervisory structures, professional ethics, legislative issues, licensure requirements, evidence based practice, and reimbursement systems. Topics include program planning, marketing, quality assurance. Assessment of personal and	Prerequisites: A grade of C or better in OTA157.		Occ	LEC 2.0 2.0 2.0	S

				professional competencies during resume and portfolio development.					
OTA255	2019 Fall	Fieldwork: Adult		Clinical experience under the direct supervision of experienced occupational therapists (OTs) or occupational therapy assistants (OTAs) in a context primarily serving adult clients. Emphasis is placed on clinical preparation for entry-level practice as an OTA.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in (OTA207, OTA217, and OTA234). Corequisites: OTA284.	Students should have completed all other OTA coursework within the last 18 months.	Occ	LAB 4.0 21.0 0.0	C
OTA265	2019 Fall	Fieldwork: Pediatric II		Secondary clinical experience under the direct supervision of experienced occupational therapists (OTs) or occupational therapy assistants (OTAs) in a context primarily serving pediatric clients. Emphasis is placed on clinical preparation for entry-level practice as an OTA.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in (OTA207, OTA217, and OTA234).	Students should have completed all other OTA coursework within the last 18 months.	Occ	LAB 4.0 21.0 0.0	C
OTA284	2019 Fall	Occupational Therapy Assistant Professional Transition		Integration of clinical experiences during level 2 fieldwork with theoretical models and didactic learning. Preparation for licensure and National Board for Certification in Occupational Therapy (NBCOT) examination. Focus on self-assessment, study skills, comprehensive content review, and fieldwork review.	Prerequisites: Admission to the Occupational Therapy Assistant program and a grade of C or better in (OTA207, OTA217, and OTA234).	Students should have completed all other OTA coursework within the last 18 months.	Occ	LEC 2.0 2.0 2.0	S
PAD100	2013 Spring	21st Century Public Policy and Service		Introduction to topics pertaining to public policy and public service in the 21st century. Includes formation, implementation, and evaluation procedures for public policy, as well as roles and agendas of policy makers and public administrators. Also covers careers in public service/administration and an evaluation of essential skills necessary for a career in public service.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

PAD107	2019 Summer	Public Finance Administration		Basic overview of public finance system for state and local government. Includes budgeting processes, revenue and funding sources involving taxes and revenue forecasting. Also covers capital planning, debt management, performance measurement, financial statements, and auditing.	Prerequisites: A grade of C or better in CIS114DE.		Occ	LEC 3.0 3.0 3.0	S
PAD122	2019 Summer	Public Sector Human Resources Management		Overview of human resources management in the public sector. Covers planning, staffing, training, compensating, and appraising employees in labor management relationships.	Prerequisites: A grade of C or better in CIS114DE.		Occ	LEC 3.0 3.0 3.0	S
PAD170	1999 Spring	Public Sector Organizational Behavior		Basic principles of public-sector management from an organizational behavior perspective. Levels of organizational behavior: the individual, the group and the organization system emphasized	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
PAD200	2013 Spring	Public Affairs Economics		Introduction to the use of macroeconomic and microeconomic principles concerning public affairs and social issues. Includes the role of economics in societal development and public policies in addition to the effects of unemployment and inflation. Also covers measurement of, causes for and societal responses to poverty.	Prerequisites: A grade of C or better in PAD100 or permission of Instructor.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB]	Occ	LEC 3.0 3.0 3.0	S
PAD210	2018 Fall	Fundamentals of Real Property Appraisal		Procedures and techniques for estimating market value of vacant and improved properties. Includes appraisal theory, assessment procedures, and appraisal/assessment techniques in addition to land description and land valuation. Also covers definitions and structure of cost and various types of cost estimates as well as procedures for determining depreciation	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 3.0 3.0	T
PAD212	2019 Spring	Valuation Concepts and Cost Appraisal Methods		Functions of the assessor and appraiser. Covers the nature and principles of value, assessment, as well as appraisal processes.	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 3.0 3.0	T

				Emphasis on property owner rights and limitations including an overview of the Arizona Property Tax System. Also covers use of a construction cost system.					
PAD214	2019 Spring	Land Valuation		Analysis of land valuation procedures. Covers maps, land value factors, and ownership as well as systems of land identification. Includes site data units of comparison and market influences in addition to Arizona statutes and precedents related to special land valuation.	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 3.0 3.0	T
PAD216	2019 Spring	Basic Ad Valorem Appraisal Concepts		Basic assessment and valuation practices for mixed-use properties, partially complete structures, and salvage properties. Also covers the construction cost system, cost components, and market adjustments as well as methods for measuring depreciation. Also includes market value and ratio studies.	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 3.0 3.0	T
PAD218	2019 Spring	Personal Property Valuation		Overview of personal property valuation in the state of Arizona. Includes procedures and forms for the valuation process, as well as mobile home classification and affixture requirement. Also covers year/life tables and depreciation calculations.	Prerequisites: Permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
PAD220	2018 Fall	Income Approach to Valuation		Principles for the income approach to valuation. Includes an overview of real estate investment and finance as well as development of net operating income estimates. Also covers contemporary and historical capitalization methods and procedures for developing capitalization rates	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 3.0 3.0	T
PAD222	2019 Spring	Intermediate Ad Valorem Appraisal Concepts		Procedures for Ad Valorem Appraisal. Covers sales ratio studies, appraisal level, and uniformity as well as mixed-use assessment ratios. Also includes Centrally Valued Properties, Direct Sales Comparison, and Income Value calculations.	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 3.0 3.0	T

PAD224	2019 Spring	Hearing Procedures		Preparation for hearing procedures. Emphasis on presentation techniques, documentation, and organization of Assessor's records as well as property classification and confirmation. Also covers analysis of and response to appellant arguments and completion of the administrative appeal process.	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 3.0 3.0	T
PAR101	2020 Fall	Introduction to the Paralegal Profession		Comprehensive introduction into the legal profession with a focus on the paralegal's role. Introduction into legal terminology, basic legal principles, and the parties involved in the legal system.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
PAR102	2021 Fall	Paralegal Research, Analysis, and Writing I		Introduction into legal research, analysis and writing. Covers legal research binding, persuasive authority, and use of legal citation. Includes components and use of case law and briefs in addition to use of secondary sources and digests. Also covers electronic legal research and research plans.	Prerequisites: A grade of C or better in (ENG101 or ENG107) and (BPC110 or CIS105) and (CRE101 or equivalent as indicated by assessment).		Occ	LEC 3.0 3.0 3.0	S
PAR103	2020 Fall	Paralegal Research, Analysis, and Writing II		Advanced legal writing and research. Analysis and application of the writing process to produce well-written documents commonly used in the practice of law. Covers various types of legal writing, including memorandum of law, persuasive writing, and legal correspondence. The use of proper grammar, punctuation, and spelling in the construction of sentences and the development of paragraphs.	Prerequisites: A grade of C or better in PAR102.		Occ	LEC 3.0 3.0 3.0	S
PAR104	2022 Fall	Ethics for the Paralegal		Paralegal rules of professional responsibility and ethical requirements. Includes regulation of the profession as well as unauthorized practice of law and confidentiality. Also covers conflict of interest, competence, and negligence.	Prerequisites: A grade of C or better in (ENG101 or ENG107) and (BPC110 or CIS105) and (CRE101 or equivalent as indicated by assessment) and PAR102.		Occ	LEC 3.0 3.0 3.0	S

PAR106	2020 Fall	Legal Foundations for Paralegals		Legal principles of tort, contract, and criminal law. Includes roles and responsibilities of court systems, the legal community, and the paralegal. Also covers procedures for preparing cases for trial, adjudication, and post-trial.	Prerequisites: A grade of C or better in (ENG101 or ENG107) and (BPC110 or CIS105) and (CRE101 or equivalent as indicated by assessment) and PAR103.		Occ	LEC 3.0 3.0 3.0	S
PAR112	2020 Fall	Civil Litigation I		Responsibilities of the paralegal in the civil litigation process. Includes review of the American court system and techniques for case investigation. Also covers case management and evidence procedures as well as settlements and pleadings.	Prerequisites: A grade of C or better in (ENG101 or ENG107) and (BPC110 or CIS105) and (CRE101 or equivalent as indicated by assessment).		Occ	LEC 3.0 3.0 3.0	S
PAR114	2020 Fall	Civil Litigation II		Civil litigation responsibilities of the paralegal in the areas of discovery, depositions, pretrial, and post-trial procedures. Includes preparation of clients, witnesses, and exhibits for the courtroom. Also covers responsibilities of the paralegal in the evidentiary phase of trial, post-trial, and the appeals process in addition to collection and enforcement of judgments.	Prerequisites: A grade of C or better in PAR112.		Occ	LEC 3.0 3.0 3.0	S
PAR206	2024 Fall	Paralegal Business Law		Overview of business law for the paralegal. Includes a review of basic contract formation and enforcement, fundamental law concepts, ethics, and social responsibility. Also includes topics such as white collar and corporate crime, consumer protection, employment laws, international commerce, and intellectual property.	Prerequisites: A grade of C or better in PAR106 and PAR114.		Occ	LEC 3.0 3.0 3.0	S
PAR208	2024 Fall	Introduction to Tort Law		Introduction to tort law and the responsibilities of the paralegal. Includes elements of types of various types of torts, negligence, and defenses in addition to classification of and legal issues pertaining to	Prerequisites: A grade of C or better in PAR106 and PAR114.		Occ	LEC 3.0 3.0 3.0	S

				damages. Also covers insurance and its application to tort law as well as procedures for records evaluation and calculation of net settlements.					
PAR224	2019 Spring	Law Office Technology for the Paralegal		Technology resources and procedures for the law office. Includes types of hardware and software in addition to office security. Also covers paperless office and electronic research procedures as well as use of trial presentation software.	Prerequisites: A grade of C or better in PAR104 or Corequisites: PAR104.		Occ	LEC 3.0 3.0 3.0	S
PAR230	2009 Fall	Family Law for the Paralegal		Paralegal responsibilities in the area of family law. Includes procedures for the initial client interview as well as drafting of applicable documents in dissolution, post-decree, and custody proceedings. Also covers discovery tools and procedures in addition to methods for valuation and division of assets	Prerequisites: A grade of C or better in PAR114.		Occ	LEC 3.0 3.0 3.0	S
PAR232	2024 Fall	Bankruptcy Law for the Paralegal		Paralegal responsibilities in the area of bankruptcy law. Emphasis on chapters 7, 11, and 13 of the bankruptcy code of Title 11 of the United States Code. Also covers bankruptcy documentation, automatic stay, dischargeable and non-dischargeable debts, and bankruptcy case dismissals, conversions, and transfers.	Prerequisites: A grade of C or better in PAR114.		Occ	LEC 3.0 3.0 3.0	S
PAR233	2024 Fall	Real Estate Law for the Paralegal		Paralegal responsibilities in the area of real estate law. Covers real estate transactions and agreements of sale as well as title and deed procedures. Also includes procedures for completing title abstractions and legal documentation pertinent to arbitration and foreclosure. The role of the paralegal in completing real estate client interviews also covered.	Prerequisites: A grade of C or better in PAR114.		Occ	LEC 3.0 3.0 3.0	S
PAR234	2024 Fall	Administrative Law for the Paralegal		Paralegal responsibilities in the area of administrative law. Overview of types and sources of administrative law. Includes accountability, agency discretion and due process in addition to delegation and rule-making. Also	Prerequisites: A grade of C or better in PAR114.		Occ	LEC 3.0 3.0 3.0	S

				covers agency investigations and adjudication procedures.					
PAR236	2024 Fall	Estate and Elder Law for the Paralegal		Paralegal responsibilities in the area of estate law and elder law. Includes estate planning and administration. Covers procedures for preparing wills and trusts in addition to handling probate issues and elder long-term care.	Prerequisites: A grade of C or better in PAR114.		Occ	LEC 3.0 3.0 3.0	S
PAR237	2015 Fall	Paralegals and Environmental Law		Overview of role and key responsibilities of a paralegal supporting environmental law concerns. Covers the essentials of environmental law, including types of organizations and agencies. Also covered, process of environmental laws and rulemaking with an emphasis on major environmental acts.	Prerequisites: A grade of C or better in PAR106 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
PAR238	2024 Fall	Immigration Law for the Paralegal		Overview of role and key responsibilities of a paralegal working with immigration law cases. Includes immigration laws and essentials of federal regulations. Covers process and procedures for citizenship and naturalization including, establishing temporary and permanent legal citizenship and types of visas. Also includes process for application and appeals.	Prerequisites: A grade of C or better in PAR114.		Occ	LEC 3.0 3.0 3.0	S
PAR239	2024 Fall	Legal Investigation for the Paralegal		Overview of role and key responsibilities of a legal investigator. Covers the process for conducting an interview including discovery methods and research techniques. Also covers procedures for documenting and writing accurate statements and preparing legal evidence and exhibits for trial.	Prerequisites: A grade of C or better in PAR114.		Occ	LEC 3.0 3.0 3.0	S
PAR240	2024 Fall	Introduction to eDiscovery for the Paralegal		Overview of electronic discovery and the impact of electronic data on the legal field. Includes a review of the development of technology assisted review (TAR), preservation procedures, and collection methods for electronical stored information	Prerequisites: A grade of C or better in PAR114.		Occ	LEC 3.0 3.0 3.0	S

				(ESI). Also covers changes in civil rules of procedure and ethical duties for legal professionals.					
PAR260	2020 Fall	Legal Career Preparation		Overview of the essential skills necessary for the paralegal student in the internship environment. Covers essential skills, self-evaluation and resources available to the paralegal.	Prerequisites: A grade of C or better in PAR114.		Occ	LEC 1.0 1.0 1.0	S
PAR290AA	2018 Fall	Internship for the Paralegal		Paralegal work experience in industry. Eighty (80) hours of designated work per credit	Prerequisites: Permission of Department or Division.	PAR290A A may be repeated for a total of three (3) credit hours.	Occ	L+L 1.0 1.0 1.0	T
PAR290AB	2018 Fall	Internship for the Paralegal		Paralegal work experience in industry. Eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division. Corequisites: PAR260.	PAR290A B may be repeated for a total of four (4) credit hours.	Occ	L+L 2.0 2.0 2.0	T
PED101	2018 Fall	Physical Activities: Basic		Individual, dual, or team sports activities at the basic level.	Prerequisites: None.	PED101 may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101AD	2018 Fall	Aerobic Dance		A cardiovascular workout through dance.	Prerequisites: None.	PED101A D may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101AK	2018 Fall	Aikido		Covers the fundamentals of Aikido including rules, moves, and traditional discipline of the sport.	Prerequisites: None.	PED101A K may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101AP	2018 Fall	Adapted PE		Fitness for persons with disabilities.	Prerequisites: None.	PED101A P may be repeated for credit. May need medical clearance. May need medical clearance.	Occ	L+L 1.0 2.0 2.0	T
PED101AQ	2019 Fall	Aquatic Fitness		This aquatic fitness class offers knowledge and skills to keep fit for	Prerequisites: None.	PED101A Q may be	Occ	L+L 1.0	T

				life. It teaches safe performance of movement and exercise in a progressive approach and offers an opportunity to improve and/or maintain a high level of fitness through application of aerobic training principles in an aquatic environment. Swimming skills are not required. This class is designed for all fitness levels. Students are encouraged to understand their own limitations and work within their bounds.		repeated for credit.		2.0 2.0	
PED101BA	2018 Fall	Baseball		Basic skills and game strategy of baseball. Class emphasis on competition and drills.	Prerequisites: None.	PED101B A may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101BB	2018 Fall	Basketball		Basic skills and game strategy of basketball. Class emphasis on competition and drills.	Prerequisites: None.	PED101B B may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101BC	2018 Fall	Boot Camp		Vigorous physical and mental conditioning incorporating cardiovascular, core fitness, strength training, and flexibility. Emphasis will be placed on proper body mechanics and safety.	Prerequisites: None.	PED101B C may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101BD	2018 Fall	Ballroom Dancing		Basic level instruction on ballroom dancing footwork, timing, techniques, and style. Partners rotate.	Prerequisites: None.	PED101B D may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101BE	2018 Fall	Belly Dance		Practice and demonstration of basic belly dance skills and movements. Basic posture and muscularity, primary upper and lower body isolations, footwork, simple combination movements. Rhythms broken down, and at least one prop demonstrated. Basic routine, improvisation, and current styles and trends in belly dance. Belly dance etiquette and attire.	Prerequisites: None.	PED101B E may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101BL	2018 Fall	Ballet		Basics of ballet incorporating steps, poses, and graceful movements including leaps and spins.	Prerequisites: None.	PED101B L may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T

PED101BP	2018 Fall	Backpacking		Covers basic skills and techniques of backpacking and the application of these to wilderness travel.	Prerequisites: None.	PED101B P may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101BS	2018 Fall	Body Sculpting		Stretch and strengthen. Emphasizes increasing fitness, muscle tone, and body flexibility. Great for reducing stress.	Prerequisites: None.	PED101B S may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101CD	2018 Fall	Country Dance		Popular country dances including Arizona Two Step, Progressive Two Step and other current popular dances. Partners rotate.	Prerequisites: None.	PED101C D may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101CP	2018 Fall	Camping		Learn the skills of camping in an outdoor setting. Length of overnight stay varies.	Prerequisites: None.	PED101C P may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101CY	2018 Fall	Cycling - Indoor		Basic skills for bike set up and proper body mechanics. Increase leg strength, lung capacity, and metabolism.	Prerequisites: None.	PED101C Y may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101DF	2018 Fall	Self Defense		Basic self-defense skills, ground-fighting skills, and stand-up fighting capabilities. Modified for all skill levels. Practice is based on real-life experiences and endurance enhanced drills. Develops self confidence.	Prerequisites: None.	PED101D F may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101FB	2018 Fall	Football		Basic skills and game strategy of football. Class emphasis on competition and drills.	Prerequisites: None.	PED101F B may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101FE	2018 Fall	Fencing		Introduction to the sport of fencing. Instruction and practice in proper body mechanics with the use of a foil, saber, and epee.	Prerequisites: None.	PED101F E may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101FL	2018 Fall	Fitness for Life		Learn the basics of designing and implementing a personalized fitness program to meet your needs in the areas of Cardiovascular Fitness, Weight Control, Muscular Strength and Flexibility.	Prerequisites: None.	PED101F L may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101FW	2018 Fall	Fitness Walking		Development of safe and effective walking skills through proper	Prerequisites: None.	PED101F W may be	Occ	L+L 1.0	T

				exercises and use of equipment to enhance a walking program.		repeated for credit.		2.0 2.0	
PED101GF	2018 Fall	Group Fitness/Aerobics		Group exercise incorporating a variety of equipment to increase respiration, heart rates, strength, and flexibility.	Prerequisites: None.	PED101G F may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101GO	2018 Fall	Golf		Instruction and practice for all skill levels, beginning through advanced. Assistance on shot making, club selection and etiquette on the course.	Prerequisites: None.	PED101G O may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101HH	2018 Fall	Hip Hop		Basic skills of hip hop with instruction, practice, and performance including proper body mechanics, choreography, and behavioral competencies.	Prerequisites: None.	PED101H H may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101HK	2018 Fall	Hiking		Develop safe and effective hiking skills. Essentials and requirements for safe hiking; proper hiking clothing and attire; impact of hiking on the environment.	Prerequisites: None.	PED101H K may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101JR	2018 Fall	Jogging/Running		Introduction to jogging/running. Learn proper technique to decrease injury and increase training distance. All skill levels welcome.	Prerequisites: None.	PED101J R may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101JS	2018 Fall	Japanese Swordmanship		Vigorous martial arts swordmanship training program utilizing historical principles that promotes the development of fitness, coordination, agility, balance, mindfulness/focus, and knowledge of strategy.	Prerequisites: None.	PED101J S may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T

PED101JU	2018 Fall	Judo		Japanese martial art in which opponents use balance and body weight to throw, pin and lock.	Prerequisites: None.	PED101J U may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101JZ	2018 Fall	Jazz		Learn various dance skills characterized by the use of improvisation and influenced by rhythms and techniques of Jazz music.	Prerequisites: None.	PED101J Z may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101KA	2018 Fall	Karate		Training emphasizes fundamentals, traditional form, and applied sparring that follows the theory of Karate.	Prerequisites: None.	PED101K A may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101KB	2018 Fall	Kickboxing		Techniques to increase muscular endurance and strength, enhance flexibility and increase body awareness and self-confidence. Jabs, kicks, and blocks will be used in this martial arts based workout.	Prerequisites: None.	PED101K B may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101KF	2018 Fall	Kung Fu		Techniques of one of the most comprehensive martial arts in China.	Prerequisites: None.	PED101K F may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101KY	2024 Fall	Kayaking		For leisure or competition, basic skills and techniques of kayaking.	Prerequisites: None.	PED101K Y may be repeated for credit. Repeats 99.0 99.0	Occ	L+L 1.0 2.0 2.0	T

PED101LD	2018 Fall	Latin Dancing		Spicy, energetic style of dance. Cha Cha, Merengue, Salsa, Rumba, and Bolero. Partners rotate.	Prerequisites: None.	PED101L D may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101LT	2023 Spring	Lifeguard Training		Designed to provide the knowledge and skills for preventing, recognizing, and responding to aquatic emergencies. Practical skills in water rescue, CPR, and first aid.	Prerequisites: None.	It is highly recommended that PED101LT students demonstrate the ability to tread water without the use of hands for one minute, swim 100 yards without stopping, and retrieve a weighted object at the bottom of the pool (minimum of 10 lbs). Students must be 16 years or older to enroll in PED101LT. PED101LT may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T

PED101MD	2018 Fall	Modern Dance		Learn the skills and techniques to express yourself through dance. Practice and drills included.	Prerequisites: None.	PED101M D may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101PB	2022 Fall	Pickleball		Basic skills and game strategy of pickleball. Class emphasis on competition and drills.	Prerequisites: None.	PED101P B may be repeated for four (4) credits. Repeats 4.0 4.0	Occ	L+L 1.0 2.0 2.0	T
PED101PC	2018 Fall	Physical Conditioning		Exercise program with access to free weights, strength machines and cardio equipment.	Prerequisites: None.	PED101P C may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101PS	2021 Fall	Pilates		Mat-based exercise system focused on improving flexibility and strength for the total body. Teaches core control and stabilization while improving postural alignment.	Prerequisites: None.	PED101P S may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101QG	2018 Fall	Qi Gong		Ancient Chinese Qi Gong breathing exercises for healing and opening channels of energy. Includes Power of Positive thought along with relaxation and meditation techniques.	Prerequisites: None.	PED101Q G may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101RC	2018 Fall	Rock Climbing		Beginning climbing skills including equipment, knots, anchoring, belaying, and climbing techniques in an indoor climbing gym. No previous experience needed. Develop strength and confidence.	Prerequisites: None.	PED101R C may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T

PED101RQ	2018 Fall	Racquetball		Basic skills and game strategy of racquetball. Class emphasis on competition and drills.	Prerequisites: None.	PED101R Q may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101RT	2021 Fall	Resistance Training for Improved Sports Performance		Introduction to sport-specific resistance training programs to enhance athletic performance. Includes focus on advanced assessment and sport-related resistance training, including Olympic lifting with a qualified instructor.	Prerequisites: None.	PED101R T may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101SA	2018 Fall	Salsa		Basic moves for the popular, hot Latin dance Salsa. Partners rotate.	Prerequisites: None.	PED101S A may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101SB	2018 Fall	Softball		Basic skills and game strategy of softball. Class emphasis on competition and drills.	Prerequisites: None.	PED101S B may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101SD	2018 Fall	Social Dance		Introduction to various dances encountered in a social setting. Partners rotate.	Prerequisites: None.	PED101S D may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101SM	2021 Fall	Swimming		Designed to improve cardiovascular fitness, flexibility and muscular endurance in an aquatic environment. Includes instruction in, practice with and individualized coaching on the basic swim strokes, breathing	Prerequisites: None.	PED101S M may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T

				techniques and strategies to improve efficiency of movement in the water.					
PED101SO	2018 Fall	Soccer		Basic skills and game strategy of soccer. Class emphasis on competition and drills.	Prerequisites: None.	PED101S O may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101SR	2018 Fall	Stretch and Relaxation		A mat-based stretching class with guided meditation. Stretching increases flexibility and relieves stress, promoting an overall sense of well being.	Prerequisites: None.	PED101S R may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101ST	2018 Fall	Strength Training		Introduction to techniques of basic weight training, concentrating on incorporating an exercise regimen for increased strength.	Prerequisites: None.	PED101S T may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101SU	2018 Fall	SCUBA Diving		Introduction to the theory and practice of SCUBA diving. Course includes lectures, pool dives, open water dives, and SCUBA Certification.	Prerequisites: None.	PED101S U may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.5 2.5 2.5	T
PED101SW	2018 Fall	Swing Dancing		Popular Swing dance moves and rhythms, including basic Lindy. All students will rotate.	Prerequisites: None.	PED101S W may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101TA	2018 Fall	Tango		Beginning, basic footwork and body mechanics for Tango. Partners rotate.	Prerequisites: None.	PED101T A may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T

						COMMON COMPET ENCY COURSE			
PED101TC	2018 Fall	Tai Chi		Fundamentals of Tai Chi including moves, breathing and meditation.	Prerequisites: None.	PED101T C may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101TD	2018 Fall	Tap Dance		Introduction to Tap a step dance performed with the use of shoes with metal tips making rhythmic sounds.	Prerequisites: None.	PED101T D may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101TE	2018 Fall	Tennis		Basic skills and game strategy of tennis. Class emphasis on competition and drills.	Prerequisites: None.	PED101T E may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101TF	2018 Fall	Track and Field		Instruction and practice in track and field events, running, throwing and jumping.	Prerequisites: None.	PED101T F may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101TK	2018 Fall	Taekwondo		Fundamentals of Taekwondo including the moves, rules, and traditional discipline of the sport.	Prerequisites: None.	PED101T K may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T

PED101TT	2018 Fall	Triathlon Training		Train for triathlons. Beginners to elite. Learn training techniques for triathlon competition: Swim, Bike, Run.	Prerequisites: None.	PED101T T may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101TX	2018 Fall	Suspension Training		Suspension training using TRX or similar equipment. Designed to develop strength, balance, flexibility and core stability. Incorporates a variety of exercises using adjustable positions, stability levels and intensities. Suitable for all skill levels.	Prerequisites: None.	PED101T X may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101VB	2018 Fall	Volleyball		Basic skills and game strategy of volleyball. Class emphasis on competition and drills.	Prerequisites: None.	PED101V B may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101WS	2018 Fall	West Coast Swing		Basic patterns and rhythms of the classic dance style of West Coast Swing. Partners rotate.	Prerequisites: None.	PED101W S may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101WW	2021 Fall	Weight Training for Women		Designed to introduce students of all fitness levels to the fundamentals of resistance training in a safe and supportive environment. Includes hands-on demonstrations of and practice using equipment such as machine weights, free weights, and/or Olympic lifts. Individual workout programs developed under instructor supervision and strategies to integrate resistance training into lifestyle considered.	Prerequisites: None.	PED101W W may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101YG	2018 Fall	Gentle Yoga		Focuses on the use of such props as blankets, blocks, and chairs to modify traditional Yoga poses, enabling	Prerequisites: None.	PED101Y G may be	Occ	L+L 1.0	T

				participation with moderate effort and without strain; suitable for all levels but especially for students needing a slower pace.		repeated for credit.		2.0 2.0	
PED101YH	2018 Fall	Hatha Yoga		Combination of traditional and flow style yoga that utilizes breathing, yoga poses, relaxation and meditation to create balance and inner peace.	Prerequisites: None.	PED101Y H may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED101YI	2018 Fall	Iyengar Yoga		Form of Hatha Yoga using various props such as belts, blocks, and straps used to focus on precise body alignment.	Prerequisites: None.	PED101YI may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101YK	2018 Fall	Kundalini Yoga		Energetically guided Yoga focusing on psycho-spiritual growth with special consideration of the spine and endocrine system.	Prerequisites: None.	PED101Y K may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101YO	2018 Fall	Yoga		Promotion of overall health by strengthening muscles and stimulating glands and organs. Basic postures, breathing and relaxation techniques.	Prerequisites: None.	PED101Y O may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101YP	2018 Fall	Power Yoga		Yoga postures performed in a dynamic series designed to gain strength, add flexibility, release toxins, This is a vigorous, athletic form of yoga.	Prerequisites: None.	PED101Y P may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED101YR	2018 Fall	Restorative Yoga		Gentle form of Yoga poses utilizing props to create fully supported postures; focuses on relaxation and involves non-rigorous physical activity, providing rest and recovery	Prerequisites: None.	PED101Y R may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T

				and promoting the restoration of tranquility; suitable for all levels.					
PED101ZU	2021 Fall	Zumba Fitness		Uses easy to follow dance movements and high energy music to enhance cardiovascular fitness and to promote self-esteem and confidence in physical movement. Provides an accepting and encouraging atmosphere for students of all levels to participate in a group fitness class.	Prerequisites: None.	PED101Z U may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED102	2018 Fall	Physical Activities: Intermediate		Individual, dual, or team sports activities at the intermediate level.	Prerequisites: None. Prior experience recommended.	PED102 may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102BA	2018 Fall	Baseball - Intermediate		To improve upon basic skills and game strategy of baseball at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	PED102B A may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102BB	2018 Fall	Basketball - Intermediate		To improve upon basic skills and game strategy of basketball at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	PED102B B may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102BC	2018 Fall	Boot Camp - Intermediate		Vigorous training at an intermediate level incorporating cardiovascular, core fitness, strength training, and flexibility. Emphasis will be placed on proper body mechanics and safety.	Prerequisites: None. Prior experience recommended.	PED102B C may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102BD	2018 Fall	Ballroom Dancing - Intermediate		Intermediate level instruction on ballroom dancing footwork, timing, techniques, and style. Partners rotate.	Prerequisites: None. Prior experience recommended.	PED102B D may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T

						COMMON COMPET ENCY COURSE			
PED102BE	2018 Fall	Belly Dance - Intermediate		Practice and demonstration of basic belly dance skills and movements at the intermediate level. Posture and muscularity, primary upper and lower body isolations, footwork, intermediate level combination movements. Rhythms broken down, and at least two props demonstrated. Routine, improvisation, and current styles and trends in belly dance. Belly dance etiquette and attire.	Prerequisites: None. Prior experience recommended.	PED102B E may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102BL	2018 Fall	Ballet - Intermediate		Ballet steps, poses and graceful movements including leaps and spins at the intermediate level.	Prerequisites: None. Prior experience recommended.	PED102B L may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102CH	2018 Fall	Cheerleaders - Intermediate		Intermediate skills of cheerleading with instruction, practice, and performance including proper body mechanics, choreography, and behavioral competencies.	Prerequisites: None. Prior experience recommended.	PED102C H may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102DF	2018 Fall	Self Defense - Intermediate		Intermediate self-defense skills, ground-fighting skills, and stand-up fighting capabilities. Practice is based on real-life experiences and endurance enhanced drills. Develops self confidence. Not recommended for beginners.	Prerequisites: None. Prior experience recommended.	PED102D F may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102FB	2018 Fall	Football - Intermediate		Improve upon basic skills and game strategy of football at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	PED102F B may be repeated for credit. COMMON COMPET	Occ	L+L 1.0 2.0 2.0	T

						ENCY COURSE			
PED102FE	2018 Fall	Fencing - Intermediate		Build upon the basic skills in the sport of fencing. Intermediate level instruction in the use of a foil, saber, and epee. Emphasis on skill practice and competition.	Prerequisites: None. Prior experience recommended.	PED102FE may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102FL	2018 Fall	Fitness for Life - Intermediate		Intermediate level design and implementation of a personalized fitness program to increase your fitness level in the areas of Cardiovascular Fitness, Weight Control, Muscular Strength and Flexibility.	Prerequisites: None. Prior experience recommended.	PED102FL may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102GO	2018 Fall	Golf - Intermediate		Improving techniques of putting, chipping, the full swing, rules and scoring will be covered in this class.	Prerequisites: None. Prior experience recommended.	PED102GO may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102HH	2018 Fall	Hip Hop - Intermediate		Intermediate level dance instruction and practice in the skills of hip hop. Emphasis on performance including proper body mechanics, choreography, and behavioral competencies.	Prerequisites: None. Prior experience recommended.	PED102HH may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102HK	2018 Fall	Hiking - Intermediate		Improve your hiking skills on more challenging terrain. Includes Physical training.	Prerequisites: None. Prior experience recommended.	PED102HK may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102JR	2018 Fall	Jogging/Running - Intermediate		Intermediate training for jogging/running. Learn proper technique to decrease injury and	Prerequisites: None. Prior experience recommended.	PED102JR may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T

				increase training distance. Not recommended for beginners.		COMMON COMPETENCY COURSE			
PED102JS	2018 Fall	Japanese Swordmanship - Intermediate		Intermediate level of vigorous martial arts swordmanship training program utilizing historical principles that promotes the development of fitness, coordination, agility, balance, mindfulness/focus, and knowledge of strategy.	Prerequisites: None.	PED102JS may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED102JZ	2018 Fall	Jazz - Intermediate		Intermediate dance skills for dancing Jazz. Not recommended for beginners.	Prerequisites: None. Prior experience recommended.	PED102JZ may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102KA	2018 Fall	Karate - Intermediate		Applied technique and theory of Karate at the intermediate level.	Prerequisites: None. Prior experience recommended.	PED102KA may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102KB	2018 Fall	Kickboxing - Intermediate		Intermediate level kickboxing techniques to increase muscular endurance and strength, enhance flexibility and increase body awareness and self- confidence. Not recommended for the beginner.	Prerequisites: None. Prior experience recommended.	PED102KB may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102LD	2018 Fall	Latin Dancing - Intermediate		Incorporate intermediate dance moves while performing Latin Dance.	Prerequisites: None. Prior experience recommended.	PED102LD may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102PB	2024 Spring	Pickleball - Intermediate		Intermediate skills and game strategy of pickleball. Class emphasis on competition and drills.	Prerequisites: None. Prior experience	PED102PB may be repeated	Occ	L+L 1.0	T

					suggested but not required.	for four (4) credits. Repeats 4.0 4.0		2.0 2.0	
PED102PC	2018 Fall	Physical Conditioning - Intermediate		Intermediate level exercise program with access to free weights, strength machines and cardio equipment. Not recommended for the beginner.	Prerequisites: None. Prior experience recommended.	PED102P C may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102PS	2018 Fall	Pilates - Intermediate		Intermediate level Mat-based exercise system focused on improving flexibility and strength for the total body. Teaches core control and stabilization while improving postural alignment.	Prerequisites: None. Prior experience recommended.	PED102P S may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102RC	2018 Fall	Rock Climbing - Intermediate		Improve upon basic skills of climbing including, knots, anchoring, belaying, and climbing techniques in an indoor climbing gym. Develop strength and confidence.	Prerequisites: None. Prior experience recommended.	PED102R C may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102RT	2021 Fall	Resistance Training for Improved Sports Performance - Intermediate		Intermediate level of sport specific programs designed to enhance athletic performance. Includes a focus on advanced assessment and sport related resistance training including Olympic lifting and plyometrics with a qualified instructor.	Prerequisites: None. Prior experience recommended.	PED102R T may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED102SA	2018 Fall	Salsa - Intermediate		Learn the intermediate dance moves for Salsa. Not recommended for the beginning Salsa dancer.	Prerequisites: None. Prior experience recommended.	PED102S A may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102SB	2018 Fall	Softball - Intermediate		Improve upon basic skills and game strategy of softball at the intermediate	Prerequisites: None. Prior experience recommended.	PED102S B may be repeated	Occ	L+L 1.0	T

				level. Class emphasis on competition and drills.		for credit. COMMON COMPET ENCY COURSE		2.0 2.0	
PED102SO	2018 Fall	Soccer - Intermediate		To improve upon basic skills and game strategy of soccer at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	PED102S O may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102ST	2018 Fall	Strength Training - Intermediate		Intermediate techniques of strength training, concentrating on incorporating an exercise regimen for increased strength and endurance. Not recommended for the beginning weight lifter.	Prerequisites: None. Prior experience recommended.	PED102S T may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102SW	2018 Fall	Swing Dancing - Intermediate		Learn the intermediate dance moves for Swing Dancing.	Prerequisites: None. Prior experience recommended.	PED102S W may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102TC	2018 Fall	Tai Chi - Intermediate		Intermediate level techniques of Tai Chi including moves, breathing and meditation.	Prerequisites: None. Prior experience recommended.	PED102T C may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102TD	2018 Fall	Tap Dance- Intermediate		Tap dance steps at the intermediate level. Some experience welcomed	Prerequisites: None. Prior experience recommended.		Occ	L+L 1.0 2.0 2.0	T
PED102TE	2018 Fall	Tennis - Intermediate		Improve upon basic skills and game strategy of tennis at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	PED102T E may be repeated for credit. COMMON	Occ	L+L 1.0 2.0 2.0	T

						COMPETENCY COURSE			
PED102TF	2018 Fall	Track and Field - Intermediate		To improve upon basic track and field event skills at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	PED102TF may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102TK	2018 Fall	Taekwondo - Intermediate		Intermediate level training in Taekwondo.	Prerequisites: None. Prior experience recommended.	PED102TK may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102TT	2018 Fall	Triathlon Training - Intermediate		Intermediate level training for triathletes. Improve your training techniques for triathlon competition: Swim, Bike, Run.	Prerequisites: None. Prior experience recommended.	PED102TT may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102VB	2018 Fall	Volleyball - Intermediate		Improve upon basic skills and game strategy of volleyball at the intermediate level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience recommended.	PED102VB may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102WW	2021 Fall	Weight Training for Women - Intermediate		Designed to advance the resistance training routines of more experienced students in a progressive fashion. Includes principles of and practice with the safe use of free and machine weights and Olympic lifts as well as strategies for effective workouts. Customized training programs devised with instructor guidance. Consideration of resistance training as part of a comprehensive health,	Prerequisites: None. Prior experience recommended.	PED102WW may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T

				fitness and wellness program included.					
PED102YO	2018 Fall	Yoga - Intermediate		Yoga for the experienced practitioner.	Prerequisites: None. Prior experience recommended.	PED102Y O may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED102YP	2018 Fall	Power Yoga - Intermediate		Intermediate level Yoga postures performed in a dynamic series designed to gain strength, add flexibility, release toxins, This is a vigorous, athletic form of yoga.	Prerequisites: None. Prior experience recommended.	PED102Y P may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED103	2018 Fall	Physical Activities: Basic		Individual, dual, or team sports activities at the basic level.	Prerequisites: None.	PED103 may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103AQ	2019 Fall	Aquatic Fitness		This aquatic fitness class offers knowledge and skills to keep fit for life. It teaches safe performance of movement and exercise in a progressive approach and offers an opportunity to improve and/or maintain a high level of fitness through application of aerobic training principles in an aquatic environment. Swimming skills are not required. This class is designed for all fitness levels. Students are encouraged to understand their own limitations and work within their bounds.	Prerequisites: None.	PED103A Q may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
PED103BC	2018 Fall	Boot Camp		Vigorous physical and mental conditioning incorporating cardiovascular, core fitness, strength training, and flexibility. Emphasis will be placed on proper body mechanics and safety.	Prerequisites: None.	PED103B C may be repeated for credit. COMMON COMPET	Occ	L+L 0.5 1.0 1.0	T

						ENCY COURSE			
PED103BD	2018 Fall	Ballroom Dancing		Basic level instruction on ballroom dancing footwork, timing, techniques, and style. Partners rotate.	Prerequisites: None.	PED103B D may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103BE	2018 Fall	Belly Dance		Practice and demonstration of basic belly dance skills and movements. Basic posture and muscularity, primary upper and lower body isolations, footwork, simple combination movements. Rhythms broken down, and at least one prop demonstrated. Basic routine, improvisation, and current styles and trends in belly dance. Belly dance etiquette and attire.	Prerequisites: None.	PED103B E may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103BS	2018 Fall	Body Sculpting		Stretch and strengthen. Emphasizes increasing fitness, muscle tone, and body flexibility. Great for reducing stress.	Prerequisites: None.	PED103B S may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103DF	2018 Fall	Self Defense		Basic self-defense skills, ground-fighting skills, and stand-up fighting capabilities. Modified for all skill levels. Practice is based on real-life experiences and endurance enhanced drills. Develops self confidence.	Prerequisites: None.	PED103D F may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103GF	2018 Fall	Group Fitness/Aerobics		Group exercise incorporating a variety of equipment to increase respiration, heart rates, strength, and flexibility.	Prerequisites: None.	PED103G F may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 0.5 1.0 1.0	T

PED103HK	2018 Fall	Hiking		Develop safe and effective hiking skills. Essentials and requirements for safe hiking; proper hiking clothing and attire; impact of hiking on the environment.	Prerequisites: None.	PED103H K may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103KB	2018 Fall	Kickboxing		Techniques to increase muscular endurance and strength, enhance flexibility and increase body awareness and self-confidence. Jabs, kicks, and blocks will be used in this martial arts based workout.	Prerequisites: None.	PED103K B may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103KF	2018 Fall	Kung Fu		Techniques of one of the most comprehensive martial arts in China.	Prerequisites: None.	PED103K F may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103LD	2018 Fall	Latin Dancing		Spicy, energetic style of dance. Cha Cha, Merengue, Salsa, Rumba, and Bolero. Partners rotate.	Prerequisites: None.	PED103L D may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103PC	2018 Fall	Physical Conditioning		Exercise program with access to free weights, strength machines and cardio equipment.	Prerequisites: None.	PED103P C may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103PS	2018 Fall	Pilates		Mat-based exercise system focused on improving flexibility and strength for the total body. Teaches core control and stabilization while improving postural alignment.	Prerequisites: None.	PED103P S may be repeated for credit. COMMON COMPET	Occ	L+L 0.5 1.0 1.0	T

						ENCY COURSE			
PED103QG	2018 Fall	Qi Gong		Ancient Chinese Qi Gong breathing exercises for healing and opening channels of energy. Includes Power of Positive thought along with relaxation and meditation techniques.	Prerequisites: None.	PED103QG may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103SA	2018 Fall	Salsa		Basic moves for the popular, hot Latin dance Salsa. Partners rotate.	Prerequisites: None.	PED103SA may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103SM	2021 Fall	Swimming		Designed to improve cardiovascular fitness, flexibility and muscular endurance in an aquatic environment. Includes instruction and coaching in basic swim strokes and breathing techniques as well as tips for improving efficiency of movement in the water.	Prerequisites: None.	PED103SM may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
PED103SR	2018 Fall	Stretch and Relaxation		A mat-based stretching class with guided meditation. Stretching increases flexibility and relieves stress, promoting an overall sense of well being.	Prerequisites: None.	PED103SR may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103TC	2018 Fall	Tai Chi		Fundamentals of Tai Chi including moves, breathing and meditation.	Prerequisites: None.	PED103TC may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103TX	2018 Fall	Suspension Training		Suspension training using TRX or similar equipment. Designed to develop strength, balance, flexibility and core stability. Incorporates a	Prerequisites: None.	PED103TX may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T

				variety of exercises using adjustable positions, stability levels and intensities. Suitable for all skill levels.		Common Competency Course			
PED103VB	2018 Fall	Volleyball		Basic skills and game strategy of volleyball. Class emphasis on competition and drills.	Prerequisites: None.	PED103V B may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103YG	2018 Fall	Gentle Yoga		Focuses on the use of such props as blankets, blocks, and chairs to modify traditional Yoga poses, enabling participation with moderate effort and without strain; suitable for all levels but especially for students needing a slower pace.	Prerequisites: None.	PED101Y G may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
PED103YH	2018 Fall	Hatha Yoga		Combination of traditional and flow style yoga that utilizes breathing, yoga poses, relaxation and meditation to create balance and inner peace.	Prerequisites: None.	PED103Y H may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103YO	2018 Fall	Yoga		Promotion of overall health by strengthening muscles and stimulating glands and organs. Basic postures, breathing and relaxation techniques.	Prerequisites: None.	PED103Y O may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 0.5 1.0 1.0	T
PED103YR	2018 Fall	Restorative Yoga		Gentle form of Yoga poses utilizing props to create fully supported postures; focuses on relaxation and involves non-rigorous physical activity, providing rest and recovery and promoting the restoration of tranquility; suitable for all levels.	Prerequisites: None.	PED101Y R may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
PED103ZU	2018 Fall	Zumba Fitness		Zumba dynamic fitness program. Features high energy, easy to follow rhythmic moves set to energizing Latin and international beats.	Prerequisites: None.	PED103Z U may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T

				Provides an enjoyable way to increase fitness level.					
PED105	2016 Summer	Army Master Fitness		Introduces the student to the Army Master Fitness Program. Designed to enhance the student's level of individual fitness and wellness.	Prerequisites: None.	PED105 may be repeated for credit. PED105 is taught at the ASU Tempe Campus. Contact the Army ROTC Department.	Occ	L+L 1.0 3.0 0.0	Z
PED114	2018 Fall	Fitness		Fitness activity and wellness study to help develop a lifetime of regular exercise, stress management, and proper nutrition. Workout includes warm-up/stretch, aerobic exercise, selected strength exercises, and cool down/stretch.	Prerequisites: None.	PED114 may be repeated for credit.	Occ	L+L 1.5 3.0 3.0	T
PED115	2018 Fall	Lifetime Fitness		Increase personal fitness, strength, and vitality. Current principles of cardiovascular exercise, weight training, flexibility, and balance exercises applicable to lifetime fitness goals. Personalized fitness plans developed and implemented with support of highly trained fitness professionals. Techniques to make sessions more effective and enjoyable.	Prerequisites: None.	PED115 may be repeated for a total of eight (8) credit hours.	Occ	L+L 2.0 4.0 4.0	T
PED116	2018 Fall	Cardiovascular Fitness		Blends an effective warm-up, challenging cardiovascular and strength/endurance training strategies and a relaxing cool-down. Tailored by certified fitness professionals to personal goals.	Prerequisites: None.	PED116 may be repeated for a total of eight (8) credit hours.	Occ	L+L 2.0 4.0 4.0	T
PED117	2018 Fall	Weight Training for Wellness		Strength training and muscular fitness activity to help develop a lifetime of regular exercise and muscular strength maintenance. Development of full body strength and stability of	Prerequisites: None.	PED117 may be repeated for a maximum	Occ	L+L 2.0 4.0 4.0	T

				the body's core musculature, translating to increased power, balance, and functional movement ability including assessment of current strength and goal-specific program design to increase strength and muscular fitness.		of eight (8) credit hours.			
PED118	2018 Fall	Exercise is Medicine(r)		Group exercise that is individualized by highly trained fitness professionals to help meet personal health enhancement goals. Designed to follow the national initiative, "Exercise is Medicine(r)", coordinated by the American College of Sports Medicine (ACSM) and the American Medical Association (AMA) to help improve overall health and well-being. Designed for individuals over age 55.	Prerequisites: None.	PED118 may be repeated for a total of six (6) credit hours.	Occ	L+L 1.5 3.0 3.0	T
PED120AF	2018 Fall	Special Emphasis Activities: Weight Training		Intensive experience in weight training.	Prerequisites: None.	PED120A F may be repeated for a total of 8 credits. COMMON COMPETENCY COURSE	Occ	L+L 2.0 4.0 4.0	T
PED124	2018 Fall	Strength and Conditioning for Sport Performance: Basic		Introduction to the principles and training techniques of strength and conditioning for sport performance. Emphasis is placed on beginning instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity.	Prerequisites: None.	PED124 may be repeated for a total of eight (8) credit hours.	Occ	L+L 2.0 4.0 4.0	T
PED125	2018 Fall	Strength and Conditioning for Sport Performance: Intermediate		Principles and training techniques of strength and conditioning for sport performance. Emphasis is placed on instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity.	Prerequisites: A grade of C or better in PED124.	PED125 may be repeated for a total of eight (8) credit hours.	Occ	L+L 2.0 4.0 4.0	T

PED133	2018 Fall	Olympic Style Weight Lifting		Advanced study of the science, strategy, and techniques of Olympic Style Weightlifting. For the fitness professional who is interested in competing, or is seeking to incorporate advanced strength and conditioning modalities. Addresses current topics, theories and techniques	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
PED158	2023 Fall	Tradition and Practice of Yoga III		A deep exploration of the yogic path as it relates to the self, to teaching yoga, and to society as a whole. Emphasis on the early and modern intellectual foundations of yoga.	Prerequisites: A grade of C or better in YOG150 and YOG250.		Occ	LEC 2.0 2.0 2.0	S
PED191	2018 Fall	Corrective Exercise for Athletes: Basic		Evaluation of functional movement ability and corrective activity to improve specific functional movements. Optimize functional movement abilities by designing corrective activity to improve weaknesses, correct imbalances and asymmetries in order to contribute to athletic and fitness performance.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T
PED192	2018 Fall	Corrective Exercise for Athletes: Intermediate		Evaluation of functional movement ability and corrective activity to improve functional movement at the intermediate level. Optimize functional movement abilities and dynamic sport movement by designing corrective activity at the intermediate level to improve weaknesses, correct imbalances and asymmetries in order to contribute to athletic and fitness performance.	Prerequisites: A grade of C or better in PED191 or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T
PED201BA	2018 Fall	Baseball - Advanced		To improve upon intermediate skills and game strategy of baseball at the advanced level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	PED201B A may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED201BB	2018 Fall	Basketball - Advanced		To improve upon intermediate skills and game strategy of basketball at the advanced level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	PED201B B may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T

						COMMON COMPET ENCY COURSE			
PED201BD	2018 Fall	Ballroom Dancing - Advanced		Advanced level instruction on ballroom dancing footwork, timing, techniques, and style. Partners rotate.	Prerequisites: None. Prior experience at competitive level recommended.	PED201B D may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED201CH	2018 Fall	Cheerleaders - Advanced		Advanced skills of cheerleading with instruction, practice, and performance including proper body mechanics, choreography, and behavioral competencies.	Prerequisites: None. Prior experience at competitive level recommended.	PED201C H may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED201GO	2018 Fall	Golf - Advanced		Experienced golfers gain helpful hints and practice to improve their game.	Prerequisites: None. Prior experience at competitive level recommended.	PED201G O may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED201PC	2018 Fall	Physical Conditioning - Advanced		Advanced level training program with access to free weights, strength machines and cardio equipment.	Prerequisites: None. Prior experience at competitive level recommended.	PED201P C may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED201SA	2018 Fall	Salsa - Advanced		Learn the advanced dance moves for Salsa.	Prerequisites: None. Prior experience at competitive level recommended.	PED201S A may be repeated for credit. COMMON COMPET ENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED201SB	2018 Fall	Softball - Advanced		Improve upon intermediate skills and game strategy of softball at the	Prerequisites: None. Prior experience at	PED201S B may be	Occ	L+L 1.0	T

				advanced level. Class emphasis on competition and drills.	competitive level recommended.	repeated for credit. COMMON COMPETENCY COURSE		2.0 2.0	
PED201SO	2018 Fall	Soccer - Advanced		To improve upon intermediate skills and game strategy of soccer at the advanced level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	PED201SO may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED201ST	2018 Fall	Strength Training - Advanced		Advanced techniques of strength training, concentrating on incorporating a vigorous exercise regimen for increasing muscle strength and endurance.	Prerequisites: None. Prior experience at competitive level recommended.	PED201ST may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED201SU	2018 Fall	Scuba Diving: Advanced		Additional training in SCUBA techniques. Pool sessions and weekend open water dives will provide training in: Underwater Navigation, Underwater Naturalist, Deep Dive, and other specialties.	Prerequisites: None. Prior experience at competitive level recommended.	PED201SU may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED201TC	2018 Fall	Tai Chi - Advanced		Advanced level techniques of Tai Chi including moves, breathing and meditation.	Prerequisites: None. Prior experience at competitive level recommended.	PED201TC may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED201TF	2018 Fall	Track and Field - Advanced		Advanced level training in track and field events. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	PED201TF may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T

PED201VB	2018 Fall	Volleyball - Advanced		Improve upon intermediate skills and game strategy of volleyball at the advanced level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	PED201V B may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED201WT	2018 Fall	Weight Training - Advanced		Advanced level training with a qualified instructor on the use of Olympic and Free Weights.	Prerequisites: None. Prior experience at competitive level recommended.	PED201W T may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED201YO	2018 Fall	Yoga - Advanced		Advanced yoga postures.	Prerequisites: None. Prior experience recommended.	PED201Y O may be repeated for credit. COMMON COMPETENCY COURSE	Occ	L+L 1.0 2.0 2.0	T
PED202	2018 Fall	Physical Activities: Elite		Individual, dual, or team sports activities at the elite level.	Prerequisites: None. Prior experience at competitive level recommended.	PED202 may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED202BA	2018 Fall	Baseball - Elite		Improve upon advanced skills and game strategy of baseball at the elite level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	PED202B A may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED202BB	2018 Fall	Basketball - Elite		Improve upon advanced skills and game strategy of basketball at the elite level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	PED202B B may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED202SB	2018 Fall	Softball - Elite		Improve upon advanced skills and game strategy of softball at the elite level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	PED202S B may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED202SO	2018 Fall	Soccer - Elite		Improve upon advanced skills and game strategy of soccer at the elite level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	PED202S O may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED202TF	2018 Fall	Track and Field - Elite		Improve upon advanced skills and game strategy of track and field at the	Prerequisites: None. Prior experience at	PED202T F may be	Occ	L+L 1.0	T

				elite level. Class emphasis on competition and drills.	competitive level recommended.	repeated for credit.		2.0 2.0	
PED202VB	2018 Fall	Volleyball - Elite		Improve upon advanced skills and game strategy of volleyball at the elite level. Class emphasis on competition and drills.	Prerequisites: None. Prior experience at competitive level recommended.	PED202V B may be repeated for credit.	Occ	L+L 1.0 2.0 2.0	T
PED224	2018 Fall	Strength and Conditioning for Sport Performance: Advanced		Principles and training techniques of strength and conditioning for sport performance. Emphasis placed on instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity; and injury prevention.	Prerequisites: A grade of C or better in PED124 and PED125.	PED224 may be repeated for a total of eight (8) credit hours.	Occ	L+L 2.0 4.0 4.0	T
PED225	2018 Fall	Strength and Conditioning for Sport Performance: Elite		Principles and training techniques of strength and conditioning for sport performance. Emphasis placed on instructional techniques and safety of Olympic lifts; plyometrics; muscular endurance, strength and power development; anaerobic and aerobic capacity; injury prevention; and assessment techniques.	Prerequisites: A grade of C or better in PED124, PED125 and PED224.	PED225 may be repeated for a total of eight (8) credit hours.	Occ	L+L 2.0 4.0 4.0	T
PED280	2023 Fall	Introduction to Yoga Therapy		Introduction to the therapeutic use of yoga. Includes basic concepts of yoga therapy, identification of common therapeutic problems and application of yoga asana as a modality of healing. Demonstration and practice of therapeutic techniques and sequences to improve movement and promote health and well-being.	Prerequisites: A grade of C or better in YOG170 or permission of Instructor.		Occ	L+L 2.0 2.0 2.0	T
PED281	2018 Fall	Yoga Therapy - Upper Body Principles		Basic concepts of yoga therapy, review of therapeutic interventions, identification of common therapeutic problems, and application of yoga asana as a modality of healing. Demonstration and practice of therapeutic techniques and sequences to improve movement capability and promote health and well-being of the upper body. Emphasis on the study of chronic problem areas and therapeutic issues with shoulders and upper body.	Prerequisites: A grade of C or better in PED280 or permission of Instructor.		Occ	L+L 2.0 2.0 2.0	T

PED282AA	2016 Summer	Service-Learning Experience in Physical Education		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	PED282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 1.0 1.0 0.0	L
PED282AB	2016 Summer	Service-Learning Experience in Physical Education		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	PED282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 2.0 2.0 0.0	L
PED282AC	2016 Summer	Service-Learning Experience in Physical Education		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	PED282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 3.0 3.0 0.0	L

PED283	2018 Fall	Yoga Therapy - Low Back Principles		Basic concepts of yoga therapy, review of therapeutic interventions, identification of common therapeutic problems, and application of yoga asana as a modality of healing. Demonstration and practice of therapeutic techniques and sequences to improve movement capability and promote health and well-being. Emphasis on the study of chronic problem areas and therapeutic issues associated with the lower back.	Prerequisites: A grade of C or better in PED280 or permission of Instructor.		Occ	L+L 2.0 2.0 2.0	T
PED284	2018 Fall	Yoga Therapy - Knee Principles		Basic concepts of yoga therapy, review of therapeutic interventions, identification of common therapeutic problems of the knee, and application of yoga asana as a modality of healing. Demonstration and practice of therapeutic techniques and sequences to improve movement capability and promote health and well-being. Emphasis on the study of chronic problem areas and therapeutic issues.	Prerequisites: A grade of C or better in PED280 or permission of Instructor.		Occ	L+L 2.0 2.0 2.0	T
PED288	2013 Fall	Yoga Therapy Practicum		Focus on immersion in the area of Yoga Therapy. Yoga Therapy application onsite at the community college with a current instructor of Yoga. Requires minimum of 150 contact hours.	Prerequisites: A grade of C or better in (PED280, PED281, PED283, and PED284) or permission of Program Director.	PED288 may be repeated for a total of eight (8) credit hours.	Occ	LAB 2.0 10.0 0.0	C
PED291	2018 Fall	Corrective Exercise for Athletes: Advanced		Evaluation of functional movement ability and corrective activity to improve functional movement at an advanced level. Optimize functional movement abilities by designing advanced corrective activity to improve weaknesses, correct imbalances and asymmetries in order to contribute to athletic and fitness performance. Self-assessment at an advanced level of imbalances and selection of appropriate corrective exercises.	Prerequisites: A grade of C or better in PED192 or permission of Instructor.		Occ	L+L 1.0 2.0 2.0	T

PED296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
PED296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
PED296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6		Occ	LAB 3.0 15.0 0.0	Z

				related to the career objectives of the students.	grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
PED296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
PED298AA	2011 Summer I	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				aspects of independent study and individualized learning to be combined to maximize student development.					
PED298AB	2011 Summer I	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
PED298AC	2011 Summer I	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
PHC101	2021 Fall 1	Pharmacology for Pharmacy Technicians		Overall history of pharmacy from ancient times to today; pharmacy technician job ethics and responsibilities; state and national drug laws and regulations; pharmacy information reference material; pharmaceutical abbreviations and introduction to prescription sig codes.	Prerequisites: 1. Successful completion of RDG100 or higher or appropriate reading placement into CRE101. 2. Successful completion of MAT090, MAT091, MAT092, MAT095, MAT096 or higher, or appropriate math placement into MAT103.		CLK	60	
PHC102	2020 Fall 1	Pharmacy Tech I		Technical aspects of prescription dispensing and drug distribution in the retail and hospital setting utilizing the	Prerequisites: PHC101 or with		CLK	120	

				computer. Bulk compounding, packaging, inventory control, drug storage and a variety of drug delivery systems. Laws that relate to specific technical tasks.	Program Manager approval.				
PHC102AB	2020 Fall 1	Pharmacy Tech II		Responsibilities of a pharmacy technician specific to working in a hospital and community setting; common drugs and their uses; drug routes of administration; basic biopharmaceutics; billing and reimbursement; sterile and non-sterile compounding; pharmacy career development; introduction to resume building, job search training.	Prerequisites: PHC102 or with Program Manager approval.		CLK	128	
PHC107	2020 Fall 1	Math and Dosages		Principles of household, metric and apothecary measurements, medical symbols and abbreviations. Emphasizes drug dose unit calculations and drug pricing.	Prerequisites: PHC102AB or with Program Manager approval.		CLK	90	
PHC114	2021 Fall 1	Pharmacy Tech Externship		This course will give students hands-on experience with patients, staff, and other pharmacy professionals while using their skills and techniques they obtain from the pharmacy program coursework. Students are assigned to the site of an approved pharmacy partner. This will prepare the student for the transition from school to industry, to gain valuable work experience, and to provide an opportunity to network in the workforce.	Prerequisites: 1. PHC102AB, PHC107, PHC122, or with Program Manager approval. 2. Background check requirements in compliance with the Maricopa County Community College District Supplemental Background Check Policy. 3. Students also must provide a copy of an Arizona Department of Public Safety Level One Fingerprint Clearance Card. Students must maintain current fingerprint clearance throughout the externship(s). 4. Complete and submit the Allied Health Student Health and	Externship hours are site specific and may require attendance any day of the week, including during unscheduled days and times.	CLK	200	

					Safety Documentation Checklist, with included documentation. 5. Students are responsible to meet the requirements of the background check, fingerprint clearance card, and health and safety documentation.				
PHC120	2021 Fall 1	Pharmacology and Pharmacy Technology		This course is designed to offer incumbent pharmacy technician trainees foundational knowledge in pharmacy history, evolving roles and responsibilities of the pharmacy technician, ethics, and state and national drug laws and regulations in order to prepare for the national certification examination. Students will focus on learning the top 200 prescribed medications, pharmaceutical abbreviations, and prescription sig codes. Additionally, students will practice prescription dispensing, adjudication with insurance companies, and medication distribution in retail and hospital pharmacy settings. Students will practice computer skills, bulk compounding, packaging, inventory control, medication storage, and drug delivery systems. Students will practice pharmaceutical math to calculate drug dosing, as well as the principles of household, metric, and apothecary measurements to safely compound sterile and non-sterile medications.	Prerequisites: Successful completion of RDG100 or higher or appropriate reading placement into CRE101. Successful completion of MAT090, MAT091, MAT092, MAT095, MAT096 or higher, or appropriate math placement into MAT103.	Lab fees for this course include materials such as Pharmaserv, Pharmamath, Personality, online study guide, lab supplies, and a take-home lab kit.	CLK	230	
PHC122	2024 Fall	Pharmacy Technician Certification Review		This course is designed to prepare Pharmacy Technician trainees, incumbent workers, or Pharmacy Technician certificate students for the NHA Exam for the Certification of	Prerequisites: A grade of C or better PHC155 or Pharmacy Technician Training License or	Course fees include certification practice	CLK	30	

				Pharmacy Technicians (ExCPT) and the PTSB Pharmacy Technician Certification Exam (PTCE), both recognized by the Arizona State Board of Pharmacy.	permission of Department or Division.	exams and first time attempt at the NHA ExCPT certification exam conducted via remote proctoring on location at GWCC campus.			
PHC150	2024 Fall	Introduction to Pharmacy Practice		This course provides a basic overview of the pharmacy industry to prepare students for an entry level pharmacy technician role. Students will be introduced to the knowledge and skills required for a pharmacy technician including roles and responsibilities, anatomy, physiology and health science, as well as pharmacology, scope of practice and federal laws and regulations.	Prerequisites: 1. Successful completion of RDG100 or higher or appropriate reading placement into CRE101. 2. Successful completion of MAT090, MAT091, MAT092, MAT095, MAT096 or higher, or appropriate math placement into MAT103.		CLK	90	
PHC153	2024 Fall	Basic Pharmacy Practice		Technical aspects of prescription dispensing and drug distribution in the retail and hospital setting utilizing the computer. Bulk compounding, packaging, inventory control, drug storage and a variety of drug delivery systems. Laws that relate to specific technical tasks.	Prerequisites: A grade of C or better in PHC150.		CLK	132	
PHC155	2024 Fall	Advanced Pharmacy Practice		Responsibilities of a pharmacy technician specific to working in a hospital and community setting; common drugs and their uses; drug routes of administration; basic biopharmaceutics; billing and reimbursement; sterile and non-sterile compounding; pharmacy career	Prerequisites: A grade of C or better in PHC153.		CLK	150	

				development; introduction to resume building, job search training.					
PHC253	2022 Fall	Pharmacy Technician Practicum		Consists of 160 hours at a clinical site, under the supervision of a pharmacist or senior pharmacy technician. Includes hands-on experience with patients, staff, and other healthcare professionals while applying the knowledge and skills obtained in the pharmacy technician program. Preparation for work experience in a pharmacy setting.	Prerequisites: A grade of C or better in PHC155.		CLK	160	
PHC253DC	2024 Fall	Pharmacy Technician Practicum		Consists of 200 hours at a clinical site, under the supervision of a pharmacist or senior pharmacy technician. Includes hands-on experience with patients, staff, and other healthcare professionals while applying the knowledge and skills obtained in the pharmacy technician program. Preparation for work experience in a pharmacy setting.	Prerequisites: A grade of C or better in PHC155.		CLK	200	
PHI101	2011 Fall	Introduction to Philosophy		General consideration of human nature and the nature of the universe. Knowledge, perception, freedom and determinism, and the existence of God	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Humanitie s, Arts and Design - [HU] Arizona Shared Unique Number SUN#: PHI 1101	Acad	LEC 3.0 3.0 3.0	S
PHI103	2011 Fall	Introduction to Logic		Informal logic, logical fallacies, elementary symbolic logic, analysis of argument forms, and construction of proofs for validity	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	Course Attribute(s)): General Education Designatio n: Humanitie	Acad	LEC 3.0 3.0 3.0	S

						s, Arts and Design - [HU] General Education Designation: Literacy and Critical Inquiry - [L] Arizona Shared Unique Number SUN#: PHI 1103			
PHI104	2001 Fall	World Philosophy		Examination of questions such as the meaning of life and death, social justice, appearance and reality, human nature, the identity of the self freedom and destiny, the ethical life, and the relationship of science and religion. Comparative analysis of diverse Eastern and Western viewpoints	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
PHI105	2013 Summer I	Introduction to Ethics		A survey of ethical theory in Western Philosophy, including the major normative theories and selected metaethical theories.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
PHI201	2004 Spring	History of Ancient Philosophy		Historical survey of the intellectual history of the Greco-Roman world, focusing on the philosophical tradition and social/historical context	Prerequisites: None.	Course Attribute(s): General Education Designation: Historical	Acad	LEC 3.0 3.0 3.0	S

						Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]			
PHI212	2004 Spring	Contemporary Moral Issues		Philosophical consideration of such moral issues as civil disobedience, preferential treatment, abortion, privacy, sexual morality, and poverty and hunger	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
PHI213	2010 Summer I	Medical and Bio-Ethics		A philosophical consideration of moral problems that arise in relation to medicine and biology, e.g., death, patient's rights and biological experimentation	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
PHI214	2023 Summer	Business Ethics		Philosophical consideration of moral problems arising in business practice, including corporate responsibility, government regulation, hiring practices, and advertising. Application to both the United States and other countries	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] General Education	Acad	LEC 3.0 3.0 3.0	S

						Designation: Literacy and Critical Inquiry - [L]			
PHI215	1995 Fall	Legal Ethics		Philosophical considerations of moral problems encountered in the law and the legal system by legal professionals and other involved parties	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
PHI216	2014 Summer	Environmental Ethics		Philosophical consideration of diverse theories and perspectives on the environment, and application of these theories to global moral issues such as animal rights, preservation of wilderness and species, population, world hunger and poverty, and air and water pollution.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
PHI218	2018 Spring	Philosophy of Sexuality		Philosophical examination of sexuality in human life. Historical and critical survey of philosophical and theological views. Comparison and evaluation of contemporary theories about the nature of sexual desire and sexual acts. Implications of theories for contemporary moral problems.	Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of instructor.	PHI218 may contain adult content. All students under 18 years old are required to have a signed parental consent form on file, which is on the back of the Students Under The Age of 18 Enrollment	Acad	LEC 3.0 3.0 3.0	S

						t Form. Course Attribute(s)): General Education Designatio n: Humanitie s, Arts and Design - [HU] General Education Designatio n: Literacy and Critical Inquiry - [L]			
PHI224	2017 Spring	Political Philosophy		Predominant figures and theories in Euroamerican political philosophy from Plato to contemporary social/political philosophers.	Prerequisites: A grade of C or better in ENG101, or ENG107, or permission of Instructor.	Course Attribute(s)): General Education Designatio n: Humanitie s, Arts and Design - [HU] General Education Designatio n: Humanitie s and Fine Arts - [L]	Acad	LEC 3.0 3.0 3.0	S
PHI233AA	1995 Fall	Metaphysics: An Introduction		Metaphysical issues which have concerned philosophers from the time of the ancient Greeks until the present; topics selected from the following: the nature and function of metaphysics, reality, universals, space, time and the infinity, rational	Prerequisites: A grade of C or better in PHI101 or permission of Instructor.	Course Attribute(s)): General Education Designatio n: Humanitie s, Arts	Acad	LEC 3.0 3.0 3.0	S

				theology, the nature of the mind, causation and the nature of things		and Design - [HU]			
PHI233AB	1995 Fall	Theory of Knowledge		Epistemological issues which have concerned philosophers from the time of the ancient Greeks until the present. Topics selected from the following: the technical terminology of epistemology, the nature of knowledge, knowledge of past events, knowledge of other minds, and knowledge of physical objects	Prerequisites: A grade of C or better in PHI101 or permission of Instructor.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
PHI233AC	1994 Fall	Philosophical Psychology		Philosophical principles and tools used in analyzing the nature of the mind	Prerequisites: A grade of C or better in PHI101 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
PHI234AA	1995 Fall	Plato		The ideas of Plato and Socrates and their impact on western thought	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
PHI244	1997 Fall	Philosophy of Religion	REL244	Religious language, the existence of God, miracles, and human destiny	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
PHI245	2004 Spring	Introduction to Eastern Philosophy		Fundamental theories of Indian and Chinese metaphysics, epistemology, ethics and aesthetics	Prerequisites: None.	Course Attribute(s): General Education Designation	Acad	LEC 3.0 3.0 3.0	S

						n: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]			
PHI250	2005 Fall	Ethics in Higher Education		Philosophical consideration of and diverse perspectives on moral problems that arise in higher education, including academic freedom, hiring practices, diversity, sexual harassment, community responsibilities, stewardship of public trust, intellectual property, and other related issues	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
PHI251	2010 Fall	Philosophy of Sport		General consideration of sport in its philosophical dimensions. Possible topics include the Zen of sport, strategy and competition, sport, practice, and play, and cheating versus fair play	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
PHI282AC	2008 Summer I	Service Learning Experience in Philosophy		Service learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: A grade of C or better in PHI101 or permission of Instructor.	PHI282AC may be repeated for a total of six (6) PHI282 credit hours; may not repeat specific agency assignment for	Acad	LAB 3.0 3.0 0.0	L

						more than three (3) credit hours.			
PHI296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
PHI296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z

PHI296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
PHI296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z
PHI298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z

				and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
PHI298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
PHI298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
PHS110	2020 Spring	Fundamentals of Physical Science		Survey of the principles of physics and chemistry.	Prerequisites: A grade of C or better in MAT090 or higher level mathematics course or eligibility for MAT120 or higher as indicated by appropriate placement.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
PHS115	2021 Spring	The Science of Musical Instruments		A science class set in a musical context where students learn about music, musical instruments, and about the underlying scientific and mathematical principles of sound.	Prerequisites: A grade of C or better in MAT090, or higher level mathematics course, or eligibility	Course Attribute(s): General Education Designatio	Acad	LEC 4.0 3.0 3.0 LAB	T

					for MAT120 or higher as indicated by appropriate placement.	n: Natural Sciences (Quantitative) - [SQ]		0.0 3.0 3.0	
PHS120	2018 Fall	Introduction to Physical Science: Astronomy, Meteorology, Geology and Oceanography		Designed primarily for students with limited background in physical science and mathematics and for nonscience majors. Topics from astronomy, meteorology, geology and oceanography. A laboratory course designed to help the students learn the basic laws and facts of the physical sciences which provide the starting points for scientific thought and speculations.	Prerequisites: None.	Students may not receive credit for both PHS120 and GLG106. Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
PHS298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
PHS298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z

PHS298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
PHT104	2008 Spring	Pharmacology for Pharmacy Technicians		Overview of pharmacology for pharmacy technicians. Includes drug conversion factors and dosage calculations as well as disease states and biopharmaceutics	Prerequisites: Permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
PHT109	1993 Fall	Drug Actions and Effects		Drug names, dosage forms, indications, routes of administration and side effects of drugs. Basic anatomy and functions of body systems relevant to most commonly prescribed drugs	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
PHT120	2005 Fall	Pharmacy Technician Responsibilities		Responsibilities and skills of pharmacy technicians. Emphasis on federal and state laws, prescription entry and fulfillment, drug regulations, and drug calculations, as well as pharmaceutical products, abbreviations, and terminology. Includes inventory management, administration routes, financial issues, and pharmacy environments	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
PHT150	2022 Fall	Introduction to Pharmacy Practice		This course provides a basic overview of the pharmacy industry to prepare students for an entry level pharmacy technician role. Students will be introduced to the knowledge and skills required for a pharmacy technician including roles and responsibilities, anatomy, physiology and health science, as well as pharmacology, scope of practice and federal laws and regulations.	Prerequisites: Acceptance into the Pharmacy Technician program.		Occ	L+L 3.0 4.0 4.0	T

PHT153	2022 Fall	Basic Pharmacy Practice		Technical aspects of prescription dispensing and drug distribution in the retail and hospital setting utilizing the computer. Bulk compounding, packaging, inventory control, drug storage and a variety of drug delivery systems. Laws that relate to specific technical tasks.	Prerequisites: A grade of C or better in PHT150.		Occ	L+L 5.0 8.0 8.0	T
PHT155	2022 Fall	Advanced Pharmacy Practice		Responsibilities of a pharmacy technician specific to working in a hospital and community setting; common drugs and their uses; drug routes of administration; basic biopharmaceutics; billing and reimbursement; sterile and non-sterile compounding; pharmacy career development; introduction to resume building, job search training.	Prerequisites: A grade of C or better in PHT153.		Occ	L+L 5.0 8.0 8.0	T
PHT225	2024 Fall	Accelerated Pharmacy Technology		Overview of the pharmacy industry and entry-level pharmacy technician roles and responsibilities. Covers anatomy, physiology and health science, as well as pharmacology, scope of practice, and federal laws and regulations. Includes technical aspects of prescription dispensing and drug distribution in the retail and hospital setting. Also provides coverage of computer use, bulk compounding, packaging, inventory control, drug storage and a variety of drug delivery systems.	Prerequisites: Acceptance into the Accelerated Pharmacy Technology program.		Occ	L+L 7.0 9.0 9.0	T
PHT250	2022 Fall	Pharmacy Technician Certification Review		This course is designed to prepare Pharmacy Technician trainees, incumbent workers, or Pharmacy Technician certificate students for the NHA Exam for the Certification of Pharmacy Technicians (ExCPT) and the PTSB Pharmacy Technician Certification Exam (PTCE), both recognized by the Arizona State Board of Pharmacy.	Prerequisites: A grade of C or better PHT155, or Pharmacy Technician Training License, or permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
PHT253	2024 Fall	Pharmacy Technician Externship		Consists of 200 hours at a clinical site, under the supervision of a pharmacist or senior pharmacy technician. Includes hands-on	A grade of C or better required in all Prerequisites. Prerequisites or		Occ	LAB 2.0 15.0 0.0	C

				experience with patients, staff, and other healthcare professionals while applying the knowledge and skills obtained in the pharmacy technician program. Preparation for work experience in a pharmacy setting.	Corequisites: PHT155 or PHT225.				
PHT296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
PHT296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with		Occ	LAB 2.0 10.0 0.0	Z

					permission of Instructor.				
PHT296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
PHT296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
PHT298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual	Prerequisites: Permission of		Occ	LAB 1.0	Z

				student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			1.0 0.0	
PHT298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
PHT298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
PHY101	2020 Spring	Introduction to Physics		A survey of physics emphasizing applications of physics to modern life.	Prerequisites: A grade of C or better in MAT090 or higher level mathematics course or eligibility for MAT120 or higher as indicated by appropriate placement.	Students may receive credit for only one of the following: PHY101 or PHY101A A. Course Attribute(s)	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T

) : General Education Designation: Natural Sciences (Quantitative) - [SQ]			
PHY101AA	2020 Spring	Introduction to Physics		A survey of physics emphasizing applications of physics to modern life.	Prerequisites: A grade of C or better in MAT090 or higher level mathematics course or eligibility for MAT120 or higher as indicated by appropriate placement.	Students may receive credit for only one of the following: PHY101 or PHY101A A Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 5.0 4.0 4.0 LAB 0.0 3.0 3.0	T
PHY111	2020 Spring	General Physics I		Includes motion, energy, and properties of matter.	Prerequisites: A grade of C or better in MAT182 or MAT187 or MAT220 or MAT221 or eligibility for MAT220 as indicated by appropriate placement or one year high school Trigonometry with a grade of C or better or permission of Department or Division.	PHY111 is recommended for preprofessional and suggested for certain other majors. Students may receive credit for only one of the following: PHY111 or PHY111A A. Course	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T

						Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ] Arizona Shared Unique Number SUN# PHY1111			
PHY111AA	2020 Spring	General Physics I		Includes motion, energy, and properties of matter.	Prerequisites: A grade of C or better in MAT182 or MAT187 or MAT220 or MAT221 or eligibility for MAT220 as indicated by appropriate placement or one year high school Trigonometry with a grade of C or better or permission of Department or Division.	Recommended for preprofessional and suggested for certain other majors. Students may receive credit for only one of the following: PHY111 or PHY111A. Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 5.0 4.0 4.0 LAB 0.0 3.0 3.0	T
PHY112	2018 Fall	General Physics II		Includes electricity, electromagnetism, and modern physics.	Prerequisites: A grade of C or better in PHY111.	Course Attribute(s): General Education Designation	Acad	LEC 4.0 3.0 3.0 LAB	T

						n: Natural Sciences (Quantitative) - [SQ] Arizona Shared Unique Number SUN#: PHY 1112		0.0 3.0 3.0	
PHY115	2018 Fall	University Physics I		General physics course using calculus to develop the principles of mechanics and thermodynamics. Recommended for majors in the sciences and mathematics. Required for Engineering majors.	Prerequisites: A grade of C or better in MAT220 or MAT221 or permission of Department or Division. Corequisites: MAT230 or MAT231. One year of High School physics or PHY111 and PHY112 is strongly recommended.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 5.0 4.0 4.0 LAB 0.0 3.0 3.0	T
PHY116	2019 Fall	University Physics II		Principles of electricity, magnetism, waves, and optics. Required for Engineering majors.	A grade of C or better required in all Prerequisites. Prerequisites: (MAT230 or MAT231) and PHY115. Prerequisite or Corequisites: MAT240 or MAT241 or permission of Instructor.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ]	Acad	LEC 5.0 4.0 4.0 LAB 0.0 3.0 3.0	T
PHY121	2025 Fall	University Physics I: Mechanics		Kinematics, Newton's laws, work, energy, momentum, conservation laws, dynamics of particles, solids, fluids, mechanical waves, and sound.	Prerequisites: A grade of C or better in MAT220, or MAT221, or permission of Department or Division. One year of high school physics suggested but not required.		Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T

PHY131	2018 Fall	University Physics II: Electricity and Magnetism		Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves.	Prerequisites: A grade of C or better in MAT230 or MAT231 or permission of Department or Division and PHY121. Corequisites: MAT241 or permission of Department or Division.	Course Attribute(s): General Education Designation: Natural Sciences (Quantitative) - [SQ] Arizona Shared Unique Number SUN#: PHY 1131	Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
PHY195AA	2018 Fall	Principles and Practice of Scientific Research		Students will learn the use of the scientific method; how, why and where research is conducted; the ethical protocol in the scientific process; how peer review works, and how to formulate scientifically testable hypotheses and design supporting experiments. Students will apply the scientific method in laboratory and/or field research projects, will learn and use appropriate laboratory techniques, and will communicate research design, data collection, and data interpretation in conventional scientific formats.	Prerequisites: A grade of C or better in PHY121 or permission of Instructor.	PHY195A A may be repeated for credit.	Acad	L+L 1.0 2.0 2.0	T
PHY195AB	2018 Fall	Principles and Practice of Scientific Research		Students will learn the use of the scientific method; how, why and where research is conducted; the ethical protocol in the scientific process; how peer review works, and how to formulate scientifically testable hypotheses and design supporting experiments. Students will apply the scientific method in laboratory and/or field research projects, will learn and use appropriate laboratory techniques, and will communicate research design, data collection, and data interpretation in conventional scientific formats.	Prerequisites: A grade of C or better in PHY121 or permission of Instructor.	PHY195A B may be repeated for credit.	Acad	L+L 2.0 4.0 4.0	T

PHY195AC	2018 Fall	Principles and Practice of Scientific Research		Students will learn the use of the scientific method; how, why and where research is conducted; the ethical protocol in the scientific process; how peer review works, and how to formulate scientifically testable hypotheses and design supporting experiments. Students will apply the scientific method in laboratory and/or field research projects, will learn and use appropriate laboratory techniques, and will communicate research design, data collection, and data interpretation in conventional scientific formats.	Prerequisites: A grade of C or better in PHY121 or permission of Instructor.	PHY195A C may be repeated for credit.	Acad	L+L 3.0 6.0 6.0	T
PHY241	2019 Fall	University Physics III: Thermodynamics, Optics, and Wave Phenomena		Heat, entropy, and laws of thermodynamics; wave propagation; geometrical and physical optics; introduction to special relativity.	Prerequisites: A grade of C or better in PHY116 or PHY131 or permission of Instructor.		Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
PHY282AA	2014 Summer	Service-Learning Experience in Physical Science		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	PHY282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
PHY282AB	2014 Summer	Service-Learning Experience in Physical Science		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	PHY282A B may be repeated for a total of six (6) credit hours. Standard	Acad	LAB 2.0 2.0 0.0	L

						grading available according to procedures outlined in catalog.			
PHY282AC	2014 Summer	Service-Learning Experience in Physical Science		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	PHY282AC may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
PHY285	2018 Fall	Introduction to Astrodynamics	AST285 ECE285	Introduction to celestial mechanics and the dynamics of spacecraft navigation. Introduction to rocket propulsion and spacecraft design. Orbital and interplanetary celestial mechanics and maneuvers. Astrophysics and characteristics of the space environment. Lab is project-based, utilizing a real-time spacecraft simulation environment.	Prerequisites: A grade of C or better in ENG101 and (PHY115 or PHY121).		Acad	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
PHY294	2010 Fall	Special Topics in Physics		Conceptual, experimental, and computational aspects of a special topic in physics.	Prerequisites: Permission of Department or Division.	PHY294 may be repeated for credit.	Acad	LEC 3.0 3.0 3.0	S
PHY294AA	2010 Fall	Special Topics in Physics		Conceptual, experimental, and computational aspects of a special topic in physics.	Prerequisites: Permission of Department or Division.	PHY294A may be repeated for credit.	Acad	LEC 2.0 2.0 2.0	S
PHY294AB	2010 Fall	Special Topics in Physics		Conceptual, experimental, and computational aspects of a special topic in physics.	Prerequisites: Permission of Department or Division.	PHY294A B may be repeated for credit.	Acad	LEC 1.0 1.0 1.0	S

PHY294AC	2010 Fall	Special Topics in Physics		Conceptual, experimental, and computational aspects of a special topic in physics.	Prerequisites: Permission of Department or Division.	PHY294A C may be repeated for credit.	Acad	LEC 0.5 0.5 0.5	S
PHY298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional- type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
PHY298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional- type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
PHY298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional- type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
PIM115	1995 Fall	Beginning Pima Conversation I		Conversational Pima. Basic sentence structure, pronunciation, and vocabulary necessary to develop speaking ability in Pima. Designed to develop speaking and listening	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

				abilities, with little emphasis on grammar					
PIM116	2014 Fall	Beginning Pima Conversation II		Reviews basic Pima vocabulary, pronunciation, and sentence structure. Designed to develop speaking, listening, and writing skills in O'Odham for effective communication in Pima.	Prerequisites: A grade of C or better in NAV201 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
PLB109	2023 Fall	Phlebotomy: Basic Skills		Theory and practice of basic phlebotomy including laboratory test codes, equipment, and procedures.	Prerequisites: (Acceptance into the Laboratory Assisting or Phlebotomy program or permission of Instructor) and permission of Program Director.		Occ	L+L 2.0 4.0 4.0	T
PLB110	2017 Fall	Practicum: Fundamental Phlebotomy Skills		Application of fundamental phlebotomy techniques in a clinical laboratory setting or health care environment.	Prerequisites: A grade of C or better in PLB109 and submit to a drug screening and demonstrate negative results and acceptance into the Medical Assisting or Phlebotomy program or permission of Program Director.	PLB110 may be repeated for credit.	Occ	LAB 0.5 3.0 0.0	C
PLB110AA	2015 Fall	Practicum: Basic Phlebotomy: Training for Law Enforcement Officers		Application of basic phlebotomy techniques in a clinical laboratory setting or health care environment for law enforcement purposes.	Prerequisites: Certified Law Enforcement Officer or permission of Program Director. Corequisites: PLB109.		Occ	LAB 2.0 6.0 0.0	C
PLB111	2018 Fall	Specimen Processing and Advanced Techniques in Phlebotomy Procedures		Theory and practice of advanced techniques in phlebotomy and specimen processing including laboratory test codes, equipment, and procedures.	Prerequisites: A grade of C or better in PLB109 and permission of Program Director.		Occ	L+L 2.0 4.0 4.0	T

PLB112	2017 Fall	Practicum: Specialized Phlebotomy Techniques		Application of specialized phlebotomy techniques in a clinical laboratory setting or health-care environment.	Prerequisites: A grade of C or better in PLB109 and PLB110. Corequisites: PLB111 and PLB121, or permission of Program Director.		Occ	LAB 0.5 3.0 0.0	C
PLB114	2020 Spring	Refresher Course for Phlebotomists		Review of phlebotomy theory and practices including equipment, procedures, and special considerations. Reinforces and updates basic skills and competencies of phlebotomy techniques for individuals who have not worked in the field for between 6 months and 24 months and for those who have completed a formal structured phlebotomy training program but have not worked in the field.	Prerequisites: (Must provide proof of 2 years employment as a phlebotomist within the last 4 years or completion of a formal structured phlebotomy training program within the last 2 years with proof of a minimum of 100 successful venipunctures) and permission of Program Director.	PLB114 may be repeated for credit.	Occ	L+L 1.0 1.0 1.0	T
PLB115	2018 Fall	Developmental Skills for Law Enforcement Phlebotomy		Provides an update for specific law enforcement phlebotomy. Includes phlebotomy theory and practices including equipment, procedures, and special considerations of phlebotomy techniques.	Prerequisites: Permission of Program Director.	PLB115 may be repeated for credit.	Occ	L+L 1.0 1.0 1.0	T
PLB121	2014 Fall	Practicum: Basic Specimen Processing		Application of specimen processing techniques in a clinical laboratory setting or health care environment.	Prerequisites: A grade of C or better in PLB109 and PLB110. Corequisites: PLB111 and PLB112 or permission of Program Director.	PLB121 supports Medical Assisting program completers seeking the Certificate of Completion in Phlebotomy and requires formal acceptanc	Occ	LAB 2.0 8.0 0.0	C

						e into the program.			
PLB122	2014 Fall	Practicum: Phlebotomy and Specimen Processing		Application of phlebotomy and specimen processing techniques in a clinical laboratory setting or health care environment.	Prerequisites: A grade of C or better in PLB109 or permission of Program Director. Prerequisites: A grade of C or better in PLB111 or Corequisites: PLB111 or permission of Program Director.		Occ	LAB 3.0 12.0 0.0	C
PLB250	2020 Spring	Phlebotomy Program Review		Provides review of phlebotomy theory fundamental knowledge, and advanced concepts required for phlebotomy national certification examinations. Topics include anatomy and physiology, specimen collection, specimen processing and handling, non-blood specimens, and laboratory operations related to phlebotomy.	Prerequisites: (A grade of C or better in PLB122 or current employment with a minimum of one (1) year experience as a phlebotomist) and permission of Program Director.	PLB250 may be repeated for credit.	Occ	LEC 1.0 1.0 1.0	S
PLB280	2015 Fall	Quality Assurance for Phlebotomy		Components, tests, and procedures for evaluation of phlebotomy to assure consistency in the collection, processing, and analysis process.	Prerequisites: Current employment in a law enforcement agency with a minimum of one (1) year of experience as a law enforcement phlebotomist or permission of Instructor.	PLB280 may be repeated for credit.	Occ	LEC 3.0 3.0 3.0	S
PLC109	2021 Fall 1	Phlebotomy Basic Skills		Theory and practice of basic phlebotomy including laboratory test codes, equipment, and procedures.	Prerequisites: Admission into the Phlebotomy program. Successful completion of RDG100 or higher or appropriate reading placement into CRE101.		CLK	90	
PLC111	2020 Fall 1	Specimen Processing and Advanced		Theory and practice of advanced techniques in phlebotomy and specimen processing including	Prerequisites: PLC109 or with Program Manager approval.		CLK	90	

		Techniques in Phlebotomy		laboratory test codes, equipment, and procedures.					
PLC122	2022 Fall	Phlebotomy Practicum		Application of phlebotomy and specimen processing techniques in a clinical laboratory setting or health care environment.	Prerequisites: 1. PLC111 or with Program Manager approval. 2. Background check requirements in compliance with the Maricopa County Community College District Supplemental Background Check policy. 3. Students also must provide a copy of an Arizona Department of Public Safety Level One Fingerprint Clearance Card. Students must maintain current fingerprint clearance throughout the externship(s). 4. Complete and submit the Allied Health Student Health and Safety Documentation Checklist, with included documentation 5. Students are responsible to meet the requirements of the background check, fingerprint clearance card, and health and safety documentation.		CLK	120	
PLC211	2024 Fall	Advanced Phlebotomy Skills		This phlebotomy training course is tailored to healthcare clinicians with training in another field. This course is designed to further develop the knowledge and skill necessary to perform the art of obtaining blood			CLK	40	

				samples for laboratory analysis in a medical laboratory environment. The learning experience includes 40 hours of class and lab instruction. The course is also designed to prepare you to take the National HealthCareer Certification exam to become a Certified Phlebotomy Technician.					
PLG124	2020 Fall 1	Plumbing: Pipes and Fittings		This course introduces the various types of plumbing materials, pipe schedules and material properties, and applications of piping. Trainees will learn how to determine the appropriate types of fittings, valves, hangers, and supports needed for piping jobs. Trainees will learn to properly measure, cut, prep, and join piping.	Prerequisites: None.		CLK	81	
PLG125	2020 Fall 1	Plumbing: Fixtures		This course introduces commonly used fixtures in plumbing systems. Students will select and operate each type of fixture for a variety of installations. The course provides an overview of plumbing system installation, maintenance and water heating systems.	Prerequisites: None.		CLK	61	
PLG126	2020 Fall 1	Plumbing: Drain, Waste, and Vent		This course addresses drainage, waste movement and ventilation for construction application. Course provides instruction in locating, installing, connecting, and testing a complete drain, waste, and vent (DWV) system.	Prerequisites: None.		CLK	81	
PLG127	2020 Fall 1	Plumbing: Water Distribution Systems		This course discusses the processes through which potable water is distributed. Students will learn to identify the components and functions of a water distribution system and explain the relationships among the components. The course also includes installation and testing of water distribution systems.	Prerequisites: None.		CLK	61	
PLG224	2020 Fall 1	Plumbing: Pipe Systems and Controls		This course covers applied calculations to determine size, types and service of pipe systems. Course also includes the application of	Prerequisites: None.		CLK	81	

				drawings, codes, and specifications for assembly and installation of gas, air, and water systems.					
PLG225	2020 Fall 1	Plumbing: Water Disposal Systems		Course covers water disposal and drainage systems, to include the types, components, functions, codes, safety, design, installation and repair.	Prerequisites: None.		CLK	102	
PLG226	2020 Fall 1	Plumbing: Fixtures and Appliances		Course covers the safety, codes, installation, maintenance, and repair of appliances, fixtures, and gas piping.	Prerequisites: None.		CLK	81	
PLG227	2020 Fall 1	Plumbing: Water Resource Solutions		Course introduces water supply disinfection, filtration systems, and sustainable water practices.	Prerequisites: None.		CLK	40	
PME190	2020 Fall	Introduction to ECG Rhythm Analysis and Interpretation for EMS Professionals		Designed to provide an overview of the anatomy and physiology of the cardiovascular system and electrophysiology of the cardiac conduction system for Emergency Medical Service (EMS) professionals. Basic electrocardiograph (ECG) multi-lead acquisition, analysis, and interpretation of various dysrhythmias and cardiovascular conditions.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
PME191	2020 Fall	Introduction to Pharmacology for EMS Professionals		Designed to provide an overview of the principles of pharmacology and pharmacologic agents utilized in patient management plans. Includes pharmacokinetics, pharmacodynamics, physiology of pharmacology, calculating drug dosages, and drug profiles.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
PME201	2020 Fall	Advanced Cardiac Life Support (ACLS) Initial Provider in Paramedicine		Designed to provide the knowledge and skills needed to recognize and manage cardiopulmonary arrest, acute dysrhythmia, stroke, and acute coronary syndromes according to current emergency cardiovascular care (ECC) guidelines. Integrates knowledge of basic electrocardiographic rhythm interpretation, pharmacologic agents, and other interventions used in advanced cardiac life support.	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 1.0 2.0 2.0	T
PME202	2020 Fall	Pediatric Advanced Life		Designed to provide the knowledge and skills needed to recognize and	Prerequisites: Admission into the		Occ	L+L 1.0	T

		Support (PALS) Initial Provider in Paramedicine		manage an infant, child or adolescent in respiratory compromise, circulatory compromise, or cardiopulmonary arrest according to current Pediatric Advanced Life Support (PALS) and emergency cardiovascular care (ECC) guidelines. Integrates knowledge of basic electrocardiographic rhythm interpretation, pharmacologic agents, and other interventions used in pediatric emergencies.	Paramedic Education Program.			1.5 1.5	
PME203	2020 Fall	Pediatric Emergencies for Prehospital Professionals (PEPP) Initial Provider in Paramedicine		Designed to provide the knowledge and skills needed to recognize and manage an infant, child or adolescent in respiratory compromise, circulatory compromise, or cardiopulmonary arrest according to current Pediatric Emergencies for Prehospital Professionals (PEPP) and emergency cardiovascular care (ECC) guidelines. Integrates knowledge of basic electrocardiographic rhythm interpretation, pharmacologic agents, and other interventions used in pediatric emergencies.	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 1.0 1.5 1.5	T
PME204	2020 Fall	Neonatal Resuscitation Provider (NRP) in Paramedicine		Designed to provide the knowledge and skills needed to recognize and manage a neonate with respiratory compromise, circulatory compromise, or cardiopulmonary arrest according to current American Academy of Pediatrics (AAP) and emergency cardiovascular care (ECC) guidelines. Integrates knowledge of basic electrocardiographic rhythm interpretation, pharmacologic agents, and other interventions used in neonatal resuscitation.	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 0.5 1.5 1.5	T
PME205	2020 Fall	Advanced Medical Life Support (AMLS) Initial Provider in Paramedicine		Designed to provide the knowledge and skills needed to recognize and manage various medical conditions according to the National Association of EMTs (NAEMT) Advanced Medical Life Support (AMLS) guidelines. Skills	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 1.0 1.5 1.5	T

				are sequenced and synthesized into simulations.					
PME206	2020 Fall	International Trauma Life Support (ITLS) Provider/Pre-Hospital Trauma Life Support (PHTLS)		Designed to provide the knowledge and skills needed to recognize and manage various trauma conditions and environmental injuries according to the International Trauma Life Support (ITLS) or Provider/ Pre-Hospital Trauma Life Support (PHTLS) guidelines. Skills are sequenced and synthesized into simulations.	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 1.0 1.5 1.5	T
PME211	2020 Fall	Advanced Cardiac Life Support (ACLS) Refresher		Designed to meet Advanced Cardiac Life Support (ACLS) refresher requirements for the healthcare provider who initiates, directs, or participates in the management of cardiopulmonary arrest and other cardiovascular emergencies according to current cardiopulmonary resuscitation and emergency cardiovascular care guidelines. Provides the healthcare provider with the knowledge and skills needed to recognize and manage cardiopulmonary arrest, acute dysrhythmia, stroke, and acute coronary syndromes according to current emergency cardiovascular care (ECC) guidelines. Integrates knowledge of basic electrocardiographic rhythm interpretation, pharmacologic agents, and other interventions used in advanced cardiac life support.	Prerequisites: None.	PME211 may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
PME212	2020 Fall	Pediatric Advanced Life Support (PALS) Refresher		Designed to meet Pediatric Advanced Life Support (PALS) refresher requirements for the healthcare provider who initiates, directs, or participates in the management of an infant, child or adolescent in respiratory compromise, circulatory compromise, or cardiopulmonary arrest according to current emergency cardiovascular care (ECC) guidelines. Integrates knowledge of basic	Prerequisites: None.	PME212 may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T

				electrocardiographic rhythm interpretation, pharmacologic agents, and other interventions used in pediatric emergencies.					
PME213	2020 Fall	Pediatric Emergencies for Prehospital Professionals (PEPP) Refresher		Designed to meet Pediatric Emergencies for Prehospital Professions (PEPP) refresher requirements for the healthcare provider who initiates, directs, or participates in the management of an infant, child or adolescent in respiratory compromise, circulatory compromise, or cardiopulmonary arrest according to current PEPP and emergency cardiovascular care (ECC) guidelines. Integrates knowledge of basic electrocardiographic rhythm interpretation, pharmacologic agents, and other interventions used in pediatric emergencies.	Prerequisites: None.	PME213 may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
PME215	2020 Fall	Advanced Medical Life Support (AMLS) Refresher		Designed to meet the National Association of EMTs (NAEMT) Advanced Medical Life Support (AMLS) refresher requirements for the healthcare provider who performs assessment and management of the most common medical crises in patients. Skills are sequenced and synthesized into simulations.	Prerequisites: None.	PME215 may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
PME216	2020 Fall	International Trauma Life Support (ITLS)/Pre-Hospital Trauma Life Support (PHTLS) Refresher		Designed to meet International Trauma Life Support (ITLS) or Pre-Hospital Trauma Life Support (PHTLS) refresher requirements for the healthcare provider who performs assessment and management of various trauma conditions and environmental injuries. Skills are sequenced and synthesized into simulations.	Prerequisites: None.	PME216 may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
PME221	2020 Fall	Basic Level and Advanced Level Skills Course for the EMS Instructor and Examiner		Designed to provide an overview of the roles and responsibilities of basic level and advanced level instructors and examiners. Includes instructional strategies and methodologies, methods of evaluation, documentation	Prerequisites: None.	PME221 may be repeated for credit.	Occ	LEC 2.0 2.0 2.0	S

				of skill competency, and management strategies of emergency medical services (EMS) programmatic, state, and national scope of practice basic level and advanced level skills stations.					
PME222	2020 Fall	Advanced Cardiac Life Support (ACLS) Instructor Preparation		Designed to prepare Advanced Cardiac Life Support (ACLS) instructor candidates to deliver American Heart Association (AHA) instructor-led and blended learning courses. Provides an overview of the roles and responsibilities of the ACLS instructor. Includes instructional considerations, methods of evaluation, documentation of ACLS student skill competency, and ACLS Course management according to AHA guidelines.	Prerequisites: None.	PME222 may be repeated for credit.	Occ	LEC 2.0 2.0 2.0	S
PME223	2020 Fall	Pediatric Advanced Life Support (PALS) Instructor Preparation		Designed to prepare Pediatric Advanced Life Support (PALS) instructor candidates to deliver American Heart Association (AHA) instructor-led and blended learning courses. Provides an overview of the roles and responsibilities of the PALS instructor. Includes instructional considerations, methods of evaluation, documentation of PALS student skill competency, and PALS Course management according to AHA guidelines.	Prerequisites: None.	PME223 may be repeated for credit.	Occ	LEC 2.0 2.0 2.0	S
PME240	2020 Fall	Pharmacology in Paramedicine		Designed to provide an overview of the pathophysiologic principles of pharmacology, pharmacologic agents in the Paramedic scope of practice, and the practice of medication administration. Develops psychomotor skills in the paramedic scope of practice through sequenced lab simulations. Prepares students to integrate comprehensive knowledge of the pathophysiologic principles of pharmacology and pharmacologic agents to formulate a differential diagnosis and to implement a	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 3.0 5.0 5.0	T

				management plan for medical emergencies and trauma.					
PME245	2020 Fall	Airway and Ventilatory Management in Paramedicine		Designed to prepare students to integrate knowledge of the respiratory system, comprehensive assessment practices, and pharmacologic agents to formulate a differential diagnosis and implement airway and ventilatory management plans for medical emergencies and trauma. Develops psychomotor skills in the paramedic scope of practice through sequenced lab simulations. Prepares students to perform comprehensive assessment and techniques in the paramedic scope of practice for assuring airway patency, adequate mechanical ventilation, and respiration for all age groups.	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 3.0 4.0 4.0	T
PME250	2020 Fall	Comprehensive Patient Assessment in Paramedicine		Designed to provide an overview of comprehensive patient assessment. Develops psychomotor skills in the paramedic scope of practice. Integrates the pathophysiological significance of comprehensive assessment findings to formulate a differential diagnosis and implement a management plan for medical emergencies and trauma.	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 1.0 3.0 3.0	T
PME251	2020 Fall	Medical Emergencies in Paramedicine I		Designed to provide an overview of pathophysiologic principles, epidemiology, comprehensive assessment, differential diagnosis, and pharmacology for respiratory and cardiovascular emergencies. Develops psychomotor skills in the paramedic scope of practice through sequenced lab simulations. Prepares students to implement a management plan in the Paramedic scope of practice for respiratory and cardiovascular emergencies.	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 4.0 8.0 8.0	T
PME252	2020 Fall	Medical Emergencies in Paramedicine II		Designed to provide an overview of pathophysiologic principles, epidemiology, comprehensive assessment, differential diagnosis,	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 4.0 6.0 6.0	T

				and pharmacology for various medical emergencies. Develops psychomotor skills in the paramedic scope of practice through sequenced lab simulations. Prepares students to implement a management plan in the Paramedic scope of practice for various medical emergencies.					
PME253	2020 Fall	Medical Emergencies in Paramedicine III		Designed to provide an overview of pathophysiologic principles, epidemiology, comprehensive assessment, differential diagnosis, and pharmacology for various medical conditions. Develops psychomotor skills in the paramedic scope of practice through sequenced lab simulations. Prepares students to implement a management plan in the Paramedic scope of practice for gynecologic, obstetric, pediatric, and geriatric emergencies, neonatal care, and patients with special challenges.	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 4.0 4.0 4.0	T
PME254	2020 Fall	Technical Operations in Paramedicine		Designed to provide an overview of transport operations, incident management, multi-casualty incidents, extrication, special rescue, hazardous materials incidents, terrorism incidents, and disaster response. Examines the Paramedic's operational roles and responsibilities.	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 2.5 3.0 3.0	T
PME260	2020 Fall	Trauma Patient Management in Paramedicine		Designed to provide an overview of pathophysiologic principles, epidemiology, comprehensive assessment, differential diagnosis, and pharmacology for various trauma conditions. Develops psychomotor skills in the paramedic scope of practice through sequenced lab simulations. Prepares students to implement a management plan in the Paramedic scope of practice for hemorrhage, soft tissue trauma, burns, face and neck trauma, head and spine trauma, chest trauma, abdominal and genitourinary trauma,	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 2.0 2.0 2.0	T

				orthopedic trauma, and environmental emergencies.					
PME270	2020 Fall	Immersive Total Patient Management Experience (ITPME)		Designed to provide immersive-simulated live patient interactive out-of-hospital scenarios. This course creates an environment which facilitates incident stress inoculation and interdisciplinary collaboration.	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 2.0 2.0 2.0	T
PME280	2020 Fall	Preparation for Paramedicine Practicum		Designed to provide an overview of Emergency Medical Service (EMS) systems, safety and wellness, resiliency, health, medical/legal and ethical issues, EMS communications, documentation, and crime scene awareness. Examines the Paramedic's roles and responsibilities to assure personal, patient, and public health and safety in the provision of professional emergency care.	Prerequisites: Admission into the Paramedic Education Program.		Occ	LEC 1.0 1.0 1.0	S
PME281	2020 Fall	Paramedicine Clinical Practicum: Comprehensive		Designed as the precepted Paramedicine clinical practicum in which the student synthesizes standard of care and scope of practice with comprehensive assessment and diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical emergencies and trauma in a clinical setting.	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 2.0 15.0 15.0	T
PME281AA	2020 Fall	Paramedicine Clinical Practicum: Phase I		Designed as the precepted Paramedicine clinical practicum in which the student synthesizes standard of care and scope of practice with comprehensive assessment and diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical emergencies and trauma in a clinical setting.	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 1.0 7.5 7.5	T
PME281AB	2020 Fall	Paramedicine Clinical Practicum: Phase II		Designed as the precepted Paramedicine clinical practicum in which the student synthesizes standard of care and scope of practice with comprehensive	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 1.0 7.5 7.5	T

				assessment and diagnostic technology, patient advocacy, ethical and professional behaviors, critical thinking, decision-making, and patient management of medical emergencies and trauma in a clinical setting.					
PME288	2020 Fall	Paramedicine Comprehensive Field Internship Practicum		Designed as the precepted Paramedicine field internship in which the student synthesizes standard of care and scope of practice with comprehensive assessment and diagnostic technology, patient advocacy, ethical and professional behavior, critical thinking, decision-making, and patient management of medical emergencies and trauma in the out-of-hospital setting.	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 5.0 34.0 34.0	T
PME289	2020 Fall	Preparation for Paramedic National Credentialing		Designed to provide preparation for the national cognitive and psychomotor examinations, and other credentials required for national and state Paramedic certification/licensure.	Prerequisites: Admission into the Paramedic Education Program.		Occ	L+L 2.0 3.0 3.0	T
PME290	2020 Fall	Advanced Life Support (ALS) Refresher		Designed to provide a refresher of Advanced Life Support (ALS) to meet national and Arizona Department of Health Services Bureau of Emergency Services and Trauma System (AzDHS/BEMSTS) requirements for Paramedicine recertification.	Prerequisites: None.	PME290 may be repeated for credit.	Occ	L+L 1.0 1.0 1.0	T
PME291	2020 Fall	Community Health Paramedicine		Designed as the capstone Community Health Paramedicine experience in which the student synthesizes standard of care and expanded scope of practice with comprehensive assessment, diagnostic technology, patient advocacy, ethical and professional behaviors, to practice patient-centered evidence-based paramedicine in the community setting.	Prerequisites: None.	PME291 may be repeated for credit.	Occ	L+L 8.0 11.0 11.0	T
PME292	2020 Fall	Critical Care Paramedicine		Designed as the capstone Critical Care Paramedicine experience in which the student synthesizes standard of care and expanded scope	Prerequisites: None.		Occ	L+L 8.0 11.0 11.0	T

				of practice with comprehensive assessment, diagnostic technology, patient advocacy, ethical and professional behaviors, to practice patient-centered evidence based paramedicine in the clinical, out-of-hospital, and inter-facility transport settings.					
PME293	2020 Fall	Tactical Emergency Casualty Care (TECC)		Designed to provide strategies, skills, and simulations to decrease preventable death in the prehospital unstable environment according to National Association of EMTs (NAEMT) and Tactical Emergency Casualty Care (TECC) guidelines. Strategies include integration of rapid patient assessment with trauma patient management in tactical and hazardous environments. Promotes a common approach for the transition of rescue to patient care while limiting the risk of further casualties. Examines the impact of tactical and environmental factors on trauma patient management.	Prerequisites: None.	PME293 may be repeated for credit.	Occ	L+L 2.5 2.5 2.5	T
PME298AA	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
PME298AB	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				individualized learning to be combined to maximize student development.					
PME298AC	2020 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
PMP120	2023 Fall	Massage Therapy Basics		A massage basics course covering: sanitation, hygiene, safety, contraindications, ethics, healthy therapeutic relationships, professional communication, overview of the human body (integumentary, muscular, and skeletal systems), healthcare terminology, muscle theory, client care, self-care, and Swedish massage.	Prerequisites: Admission into the Massage Therapy program.		CLK	175	
PMP121	2023 Fall	Massage Therapy Advanced		Advanced anatomy and massage, focusing in greater detail on the skeletal and muscular components and manipulations of the body. Students are taught all the bones and muscles of the body and introduced to the kinesiology that develops from their interactions. Deep tissue, Thai massage, and reflexology are introduced. Recently learned skills will be practiced on the public during clinic with coaching.	Prerequisites: PMP120 or Program Manager's permission.		CLK	175	
PMP220	2023 Fall	Massage Therapy Mastery I		An advanced anatomy and massage course focusing in detail on the skeletal and muscular components and manipulations of the upper body. Students will review the bones and muscles of the upper body and the kinesiology that develops from their interactions. Corresponding deep-tissue massage for the upper body is	Prerequisites: PMP121 or Program Manager's permission.		CLK	175	

				<p>taught in conjunction with the advanced anatomy to ensure its practical application. Integration of deep tissue, Thai massage, myofascial, and structural massage are emphasized. Subjective, Objective, Assessment, Plan (S.O.A.P.) notes are introduced. The course concludes with two weeks of supervised clinic with coaching.</p>					
PMP221	2023 Fall	Massage Therapy Mastery II		<p>An advanced anatomy and massage course focusing in detail on the skeletal and muscular components and manipulations of the lower body. Students will review all of the bones and muscles of the lower body and the kinesiology that develops from their interactions. Corresponding deep-tissue massage for the lower body is taught in conjunction with the advanced anatomy to ensure its practical application. Students combine all of their program skills, integrating anatomy, kinesiology, concepts, theories, and techniques to properly assess clients and apply critical thinking in tailoring treatments to individuals with documentation. Clients with unique needs are covered such as athletes, expecting mothers, infants, older adults, obese individuals, people with disabilities, and end of life care. Persons with common injuries and conditions are also covered, teaching specific strategies and protocols to address them. Entrepreneurial skills conducive to the industry of massage therapy will continue to be reinforced while an exit plan is created for the student's entrance into the industry. The course concludes with two weeks of supervised clinic with coaching to gain practical experience working on the general public and applying the</p>	Prerequisites: PMP220 or Program Manager's permission.		CLK	175	

				assessment/treatment approaches focused on in the course.					
PNT101	2014 Summer	Introduction to Painting-Decorating Trade		Orientation to the trade, apprentice responsibilities and professionalism, communication skills and workplace behavior. Tools and equipment used in the trade. Preparation and application procedures of various types of surfaces, utilizing various types of materials used in the trade.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 4.0 4.0 4.0	A
PNT102	2014 Summer	Surface Preparation and Cleaning		Overview of surface preparation and cleaning, emphasis on materials, coating applications, various surface finishes, and safety procedures. Causes of paint failures and remedies. Also preparation procedures of plaster drywall, masonry and metal. Residential and commercial applications.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 4.0 4.0 4.0	A
PNT104	2018 Fall	Wood and Decorative Finishes		Wood and decorative finishing techniques including glazing, antiquing, wood graining and marbelizing. Sanding techniques of hardwoods and softwoods including fillers, sealers, stains and finishes.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
PNT105	2014 Summer	Painting and Drywalling Orientation		Overview of the painting and drywalling labor history, workplace performance, green construction, work place issues and sexual harassment.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
PNT106	2018 Fall	Health and Safety for Drywall Finishers		Purpose and limitation of Material Safety Data Sheet (MSDS). Occupational Safety and Health Administration (OSHA). Common safety and fall hazards. Requirements for erecting and dismantling scaffolds.	Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
PNT107	2018 Fall	Introduction to the Drywall Trade		Basic terminology and tools used in the drywall trade. Exhibiting professionalism in the trade in appearance, dealing with difficult customers, following workplace protocol and procedure.	Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
PNT108	2018 Fall	Materials of the Drywall Trade		Characteristics of drywall panels, types of fillers and proper lighting	Prerequisites: Registered apprentice status or		Occ	L+L 2.0	T

				requirements. Surface preparation, ventilation and materials handling.	permission of the Apprenticeship Coordinator.			2.0 2.0	
PNT109	2018 Fall	Tools of the Drywall Trade		Selection, use, maintenance and safety procedures for common tools of the drywall trade.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
PNT118	2018 Fall	OSHA Standards and Regulations	ABC118	Provisions of and implementation of Occupational Safety and Health Administration (OSHA) Act in the work place. Rights and responsibilities under the OSHA Act. Appeals process, record keeping, and voluntary protection programs. OSHA's construction and general industry standards. Overview of the requirements of the more frequently referenced standards.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 1.5 1.5 1.5	T
PNT120	2020 Fall	Basic Calculations for Construction	ABC120 MEC120	Addition, subtraction, multiplication and division of whole, decimal, fraction and metric numbers. Percentage and fraction conversions. Metric units of length, weight, volume and temperature. Metric system as it relates to the construction trade. Basic algebra and geometry operations and equations. Area and volume calculations of shapes.	Prerequisites: None.		Occ	L+L 1.5 1.5 1.5	T
PNT121	2014 Fall	Introduction to Hand and Power Tools	ABC121 MEC121	Overview of the use, maintenance and safety procedures for common hand and power tools.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
PNT123	2022 Fall	Introduction to Blueprints		Basic concepts of blueprints, including terms and symbols, grid line systems and blueprint production techniques. Dimensions and blueprint reading	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
PNT150	2014 Fall	Construction Foreman	IND150	Examine the basic supervisory and leadership concepts and skills needed to manage a construction project. Includes basic theories of motivation,	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S

				role of communications in construction project management, decision making process, planning and organizing, strategies, developing production schedules to control production, discussing accident prevention and loss control					
PNT201	2018 Fall	Coverings and Blasting		Application, installation, and estimating procedures for wallcoverings including abrasive and wet blasting guidelines and systems.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
PNT202	2014 Summer	Spray Painting		Operating and maintenance procedures for spray painting equipment and materials. Use of specialized painting systems and equipment. Application procedures for special coatings and parking lots.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	A
PNT203	2018 Fall	Non-Spray Application of Coatings		Best practices in the application of stain, clear coat, and wood finish application on wood substrates.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
PNT205	2018 Fall	Paints, Coatings and Materials		Coating products and solvent type and compatibility following Product Data Sheet and Material Safety Data Sheet for products. Including common failures, causes and corrections, weatherization, properties and functions of paints or coatings.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
PNT208	2018 Fall	Filling, Taping and Sanding Applications		Characteristics of fillers, filling compounds, drying times. Taping techniques including taping and wiping procedures, tools and equipment. Functions and operations of boxes and fasteners as well as sanding application and bead and trim installation.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 4.0 4.0 4.0	T
PNT209	2018 Fall	Automatic Taping Tools of the Drywall Trade		Inspection and maintenance procedures for keeping automatic taping tools in proper working condition.	Prerequisites: Registered apprentice status or permission of the		Occ	L+L 3.0 3.0 3.0	T

					Apprenticeship Coordinator.				
PNT210	2018 Fall	Advanced Drywall Applications and Systems		Methods for making repairs, mixing procedures, and recognizing common defects in drywall finishing and wallboards. General texture spraying techniques and basics of Exterior Insulated and Finish Systems (EIFS) and Expanded Polystyrene (EPS).	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 3.0 3.0	T
PNT296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
PNT296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class		Occ	LAB 2.0 10.0 0.0	Z

					which is related to students major or career interest or with permission of Instructor.				
PNT296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
PNT296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with		Occ	LAB 4.0 20.0 0.0	Z

					permission of Instructor.				
PNT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
PNT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
PNT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
PON105	2018 Fall	Surgical Technology for the Operating Room Nurse		Direct observation of principles and culture of operating room. Traffic patterns, aseptic techniques, roles, professional surgical team work, case management, perioperative record, instrument handling, safety precautions with regard to exposure,	Acceptance into the Surgical Technology for the Operating Room Nurse Program, or permission of Department or Division.		Occ	L+L 2.0 2.0 2.0	T

				surgical attire, surgical regimen and chain of command.					
PON210	2016 Spring	PeriOperative Principles I		Role and responsibilities of the professional nurse in the perioperative setting. Team concepts, patient care, nursing process and impact of quality assurance. Role of Association of Operating Room Nurse Standards of Practice.	Prerequisites: Acceptance into the Surgical Technology for the Operating Room Nurse program or permission of Department or Division. Corequisites: PON214.		Occ	LEC 3.0 3.0 3.0	S
PON212	2016 Spring	PeriOperative Principles II		Common pathogenic organisms and methods of sanitation/sterilization. Instruments, procedures intervention measures related to the operating room. State and Federal regulating agencies. Moral and ethical issues.	Prerequisites: A grade of C or better in PON210 or permission of Department or Division. Corequisites: PON214.		Occ	LEC 3.0 3.0 3.0	S
PON214	2018 Fall	PeriOperative Laboratory		Practical application of perioperative nursing. Aseptic technique. Scrubbing, gowning, gloving, instrumentation, and maintenance of a sterile field. Accountability emphasized.	Prerequisites: Acceptance into the Surgical Technology for Operating Room Nurse Program. Corequisites: PON210 and PON212.		Occ	LAB 4.0 9.5 9.5	T
PON218	2016 Spring	PeriOperative Clinical Practice I		Application of the nursing process in care of surgical patients during the perioperative period. Statements of competency established by the Association of Operating Room Nurses.	Prerequisites: A grade of C or better in PON214.		Occ	LAB 3.0 15.0 0.0	C
PON220	2011 Fall	PeriOperative Clinical Practice II		Application of the nursing process in care of surgical patients during the perioperative period. Statements of competency established by the Association of Operating Room Nurses.	Prerequisites: A grade of C or better in PON214 or permission of Department or Division.		Occ	LAB 3.0 15.0 0.0	C
PON230	2018 Fall	Surgical Technology Materials Update	SGT230	Current surgical technology materials. Surgical specialty modifications, introductions, technology. Specific uses, handling, application to surgical procedures.	Prerequisites: Currently enrolled in Surgical Technology or Surgical Technology for the Operating Room		Occ	LEC 2.0 2.0 2.0 LAB 1.0	T

					Nurse program, or Certified Surgical Technologist, or permission of Program Director.			3.0 3.0	
PON296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
PON296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with		Occ	LAB 2.0 10.0 0.0	Z

					permission of Instructor.				
PON296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
PON296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
PON298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual	Prerequisites: Permission of		Occ	LAB 1.0	Z

				student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			1.0 0.0	
PON298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
PON298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
POR101	2018 Fall	Elementary Portuguese I		Basic grammar, pronunciation, and vocabulary of the Portuguese language. Includes study of Lusophone culture. Practice in listening, speaking, reading, and writing skills	Prerequisites: None.		Acad	L+L 5.0 6.0 6.0	T
POR102	2018 Fall	Elementary Portuguese II		Continued study of basic grammar, pronunciation, and vocabulary of the Portuguese language. Includes study of Lusophone cultures and practice in listening, speaking, reading and writing skills	Prerequisites: A grade of C or better in POR101 or permission of Department or Division. Completion		Acad	L+L 5.0 6.0 6.0	T

					of prerequisites within the last three years is required.				
POR201	2016 Spring	Intermediate Portuguese I		Review of essential grammar of the Portuguese language and study of the Portuguese cultures. A continued practice and development of reading, writing, and speaking skills. Emphasis on both fluency and accuracy in the spoken language.	Prerequisites: A grade of C or better in POR102 or permission of the Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 5.0 6.0 5.7	S
POR296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
POR296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor.		Acad	LAB 2.0 10.0 0.0	Z

					Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
POR296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
POR296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's		Acad	LAB 4.0 20.0 0.0	Z

					major or career interest or with permission of the Instructor.				
POR298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
POR298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
POR298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
POS100	1994 Fall	Introduction to Political Science		Introduction to the discipline of political science and its relation to other disciplines with emphasis on the major philosophies and institutions of government.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social	Acad	LEC 3.0 3.0 3.0	S

						and Behavioral Sciences - [SB]			
POS101	1996 Spring	Current Issues		Introduction to current issues in politics, economics, social relations, foreign affairs. Presentations by local, state and national civic and cultural leaders.	Prerequisites: None.	POS101 may be repeated for a total of two (2) credit hours.	Acad	LEC 1.0 1.0 1.0	S
POS110	2023 Fall	American National Government		Study of the historical backgrounds, governing principles, and institutions of the national government of the United States.	Prerequisites: None.	Arizona Shared Unique Number SUN#: POS 1110	Acad	LEC 3.0 3.0 3.0	S
POS113	2016 Fall	United States and Arizona Social Studies	GCU113	Overview of government, history, and geography of the United States and Arizona. Includes the relationship of government to the United States economic system as well as the influences and developments that have shaped U.S. and Arizona history. Also covers geographical systems, regions, and study techniques.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
POS114	2017 Fall	World Social Studies		Introduction to the world from the integrated social science perspectives of history, geography, and government.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Historical Awareness - [H] General Education Designation: Social-	Acad	LEC 3.0 3.0 3.0	S

						Behavioral Sciences - [SB]			
POS115	2001 Fall	Issues in American Politics		Examination of major issues in current affairs in the fields of politics, economics, social relations, foreign affairs, aesthetics, and others through the reading and viewing of secondary information sources	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	Course Attribute(s): General Education Designation: Literacy and Critical Inquiry - [L] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
POS120	2024 Fall	International Relations		Introduction to the principles and issues relating to the study of international relations. Evaluation of the political, economic, national, and transnational rationale for international interactions.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Social and Behavioral Sciences - [SB] Arizona Shared Unique Number SUN#: POS 1120	Acad	LEC 3.0 3.0 3.0	S
POS125	1995 Fall	Issues in World Politics		Contemporary issues and factors in international relations. Stress	Prerequisites: None.	POS125 may be repeated	Acad	LEC 3.0	S

				conditions in civil order, trade, and international institutions.		for a total of six (6) credit hours. Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Social and Behavioral Sciences - [SB]		3.0 3.0	
POS130	2017 Fall	State and Local Government		Survey of state and local government in the United States. Special attention on Arizona State government.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
POS140	2011 Fall	Comparative Government		Overview and evaluation of the sub-field of comparative politics. Covers various national governments from around the world: their structure, system, method of governance. Examines methods of assessing these governments	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S

						Arizona Shared Unique Number SUN#: POS 2204			
POS180	2018 Fall	United Nations Studies		Historical origins, structural makeup, political and operational characteristics, and legal activities of the United Nations. Analysis of the overall institution's ongoing utility, productivity and creativity.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G]	Acad	L+L 3.0 3.0 3.0	T
POS210	2019 Summer	Political Ideologies		Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
POS220	1994 Fall	U.S. and Arizona Constitution		Examination of the United States Constitution and the constitution and government of the State of Arizona.	Prerequisites: None.	Students may not enroll in POS220 and POS222 concurrently.	Acad	LEC 3.0 3.0 3.0	S
POS221	1993 Fall	Arizona Constitution		Examination of the Constitution of the State of Arizona. Equivalent to the second part of POS220. May not enroll in POS220 and POS221 concurrently	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
POS222	1994 Fall	U.S. Constitution		Examination of the United States Constitution. Equivalent to the first part of POS220.	Prerequisites: None.	Students may not enroll in POS220 and POS222 concurrently.	Acad	LEC 2.0 2.0 2.0	S
POS223	2019 Summer	Civil Rights and Liberties		The historic background and current status of major civil rights and civil liberties issues in the United States.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
POS281AB	2013 Spring	Public Policy/Service Internship		Field experience in community service, public policy or public service.	Prerequisites: Minimum of 15 credit hours at college	POS281A B may be repeated	Acad	LAB 3.0	L

					granting internship with minimum GPA of 3.0 and permission of Instructor.	for a total of nine (9) credit hours; may not repeat specific internship assignment.		3.0 0.0	
POS282AA	1993 Fall	Volunteerism for Political Science: A Service Learning Experience		Service-learning field experience within government agencies, political organizations, citizen advocacy groups, and human service organizations/agency.	Prerequisites: Permission of Instructor.	POS282A A may be repeated for a total of four (4) credit hours; may not repeat specific agency assignment for more than two (2) credit hours. Standard grading available according to procedures outlined in catalog	Acad	LAB 1.0 1.0 0.0	L
POS282AB	1993 Fall	Volunteerism for Political Science: A Service Learning Experience		Service-learning field experience within government agencies, political organizations, citizen advocacy groups, and human service organizations/agency.	Prerequisites: Permission of Instructor.	POS282A B may be repeated for a total of four (4) credit hours; may not repeat specific agency	Acad	LAB 2.0 2.0 0.0	L

						assignment for more than two (2) credit hours. Standard grading available according to procedures outlined in catalog.			
POS282AC	2004 Spring	Volunteerism for Political Science: A Service Learning Experience		Service-learning field experience within government agencies, political organizations, citizen advocacy groups, and human service organizations/agency.	Prerequisites: Permission of Instructor.	POS282A C may be repeated for a total of four (4) POS282 credit hours; may not repeat specific agency assignment for more than two (2) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
POS285	2018 Fall	Political Issues and Public Policy		Introduction to public policy, how policy is made, and how public policy decisions are affected.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social	Acad	L+L 3.0 3.0 3.0	T

						and Behavioral Sciences - [SB]			
POS296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
POS296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z

POS296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
POS296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z
POS298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z

				and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
POS298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
POS298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
PPT101	2003 Fall	Hand and Power Tools		Identification and use of hand and hand-held power tools used in a power plant. Tool construction and purpose. Maintenance of hand and power tools	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
PPT103	2003 Fall	Print Reading and Plant Drawings		Introduction to print reading and plant drawings. Flow diagrams and symbols on drawings. Dimension, tolerance and clearance on drawings. Amendments to drawings. Specific types of drawings. Proper procedures when using plant drawings	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
PPT107	2003 Fall	Lubrication		Principles, properties, and safe handling requirements of lubricants.	Prerequisites: None.		Occ	LEC 1.0	S

				Lubrication of bearings, lubrication systems, and system components. Oil settling systems. Construction, operation, and maintenance of oil purifiers				1.0 1.0	
PPT108	2003 Fall	Turbines		Operations, steam properties, energy transfer, parts, and types of turbines. Components and function. Turbine maintenance for oil and hydraulic systems, inspection of casings, nozzles and rotors. Turbine alignment and the tightening of joints using appropriate tools and equipment	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
PPT112	2003 Fall	Principles of Machining		Safety practices, machining methods, and principles of material removal. Types of cutting tools, lathe, milling, drill, and bandsaw components. Principles of operation of specific machines found in the machine shop including turning, milling, drilling and cutting machines	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
PPT114	2003 Fall	Drive and Gear Components		Terminology, identification and inspection of the component parts of a drive and gear system. Operation, maintenance and inspection of couplings, clutches, brakes, belt drives, chain drives, shafts and gears. Operation and configurations of variable speed drives	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
PPT115	2003 Fall	Hydraulics and Pneumatics		Hydraulic and pneumatic safety, physical concepts, and fluid laws. Hydraulic and pneumatic system components and operation. Troubleshooting procedures of hydraulic and pneumatic systems	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
PPT117	2021 Fall	Forklift Operations		Safe and proper operation of forklift. Parts and function of forklift, principles of operation, and safety precautions. Inspection procedures, proper care, and industry standards. On-hands operation of a forklift	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
PPT118	2003 Fall	Conduct of Maintenance		Safety and management expectations. Defense in Depth strategy and Conduct of Verifications. Maintenance procedures. Work control process. Performance of work	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S

				standards and documentation including pre-job preparation, pre-job notification, job review, job verification and job close out specific to nuclear power plant operations					
PPT119	2003 Fall	Instrument Air Compressor Maintenance		Purpose, function, and identification of system drawings. Identification of major components. Instrument air compressor components and function. Air flow operations. Free air unloader components and function. Fluids and flow paths. Compressor cooling water and lubricating oil. Inspection and repair of parts. Troubleshooting	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
PPT124	2019 Fall	Power Systems Components I		Principles, properties, and safe handling requirements of lubricants. Lubrication of bearings, lubrication systems, and system components. Oil settling systems. Construction, operation, and maintenance of oil purifiers. Terminology, identification and inspection of the component parts of a drive and gear system. Application, inspection, maintenance, and failure modes of plant bearings. Design and operation of sliding and anti-friction bearings and seals.	Prerequisites: None.	PPT124 may be repeated for credit.	Occ	L+L 3.0 3.0 3.0	T
PPT126	2019 Fall	Power Systems Components II		Functional components of turbines, including parts, steam properties and maintenance of oil and hydraulic systems. Heat exchanger theory, including types, operations, and maintenance of heat transfer systems. Operational principles of pneumatic and hydraulic valve actuators, including modulation control terminology and inspection testing.	Prerequisites: None.	PPT126 may be repeated for credit.	Occ	L+L 3.0 3.0 3.0	T
PPT128	2019 Fall	Power Systems Components III		Hydraulic and pneumatic safety, physical concepts, and fluid laws. Hydraulic and pneumatic system components and operation. Troubleshooting procedures of hydraulic and pneumatic systems. Mechanical component types and	Prerequisites: None.	PPT128 may be repeated for credit.	Occ	L+L 3.0 3.0 3.0	T

				characteristics, common failure mechanisms, and operating principles of plant components.					
PPT170	2020 Summer	Instrumentation and Process Control		Principles and practices of instrumentation and process control systems used in industry. Topics cover the proper installation, troubleshooting, repair, and maintenance of various industrial process instrumentation (temperature, pressure, level, flow, etc.) and control circuits.	Prerequisites: A grade of C or better in college-level math course, or appropriate District placement, or permission of Department/Division Chair.		Occ	LEC 3.0 3.0 3.0	S
PPT202	2018 Fall	Power Plant Systems I		Components and function of reactor coolant, volume control, safety injection, and nuclear sampling systems. Function and operation of main steam and turbine systems, main and auxiliary feedwater systems, pressurizer, control rod drive, and recirculation systems. Operation and function of steam and heater drain systems. Reactor plant safety concepts.	Prerequisites: A grade of C or better in PPT120 and PPT121, or permission of Program Director.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]	Occ	LEC 3.0 3.0 3.0	S
PPT203	2018 Fall	Power Plant Systems II		Advanced plant systems. Water, electrical and cooling systems. Safe shutdown cooling water system. Waste drain system. Fuel handling and storage systems. Fuel pool cooling and cleanup. Purpose and operation of radioactive waste management. Service air and gas systems. Ventilation and fire protection systems. Containment, Containment Spray, Emergency Core Cooling, Emergency Power, Environmental Monitoring, Off-gas, Post-accident, Radiation Monitoring, Residual Heat Removal, and Suppression Pool systems.	Prerequisites: A grade of C or better in PPT120 and PPT121, or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S

PPT204	2003 Fall	Measuring and Test Equipment		Administrative controls for precision measurement. Use of precision measuring equipment. Emphasis on proper use, accurate reading, and calculations using precision measuring devices	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
PPT205	2003 Fall	Rigging		Safe and proper operation of lifting equipment. Weight calculations. Identification and proper location of rigging equipment. Hand signals and industry standards. Safe rigging practices. Inspection and maintenance procedures. Operation of pendant cranes	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
PPT206	2003 Fall	Bearings		Application, inspection and maintenance of plant bearings. Design and operation of sliding and anti-friction bearings. Function, design and applications of bearing seals. Reasons for bearing failure and related preventative maintenance procedures	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
PPT207	2003 Fall	Heat Exchangers		Heat exchanger theory including heat transfer and operating principles. Classification of heat exchangers including types, construction, and operation. Inspection of heat exchangers. Cleaning of exchanger tubes and shells. Cleaning of component parts. Troubleshooting tubes. Maintenance of exchangers	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
PPT209	2003 Fall	Pipefitting Auxiliaries II		Purpose, terminology and system stress factors related to piping systems. Principles of fluid flow, and piping inspection procedures. Fabrication and installation of tubing materials, specific joints, and flanges. Basic piping system component maintenance, rework and installation procedures	Prerequisites: A grade of C or better in PPT109.		Occ	LEC 2.0 2.0 2.0	S
PPT211	2003 Fall	Couplings		Types, functions, and specific applications of couplings. Coupling removal and inspection procedures. Coupling rework and installation	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
PPT212	2003 Fall	Control Valves and Actuators		Modulating control terminology. Disassembly, inspection and	Prerequisites: None.		Occ	LEC 1.0	S

				assembly processes. Construction and operation of specific actuators. Maintenance of pneumatic and hydraulic valve actuators. Principles of operation, inspection and testing of control valves. Bench testing				1.0 1.0	
PPT214	2018 Fall	Machine Alignment		Calculations and practical lab exercises using alignment principles. Determination of indicator sag and thermal growth. Obtaining readings for alignment or misalignment. Rim-face method of alignment stressed and practiced	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
PPT215	2003 Fall	Relief and Safety Valves		Concepts of pressure and pressure measurement. Components and operation of rupture discs, relief valves, and safety valves. Maintenance procedures	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
PPT218	2018 Fall	Lathe Operations		Safe and proper operation of the lathe. Component and accessories and their functions. Cutting tools and methods. Processes of machining including mounting, aligning, knurling, grooving, turning, thread cutting, drilling, reaming boring, and tapping. Machining techniques using a chuck	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
PPT219	2003 Fall	Milling Machine Operations		Components of horizontal and vertical milling machines. Common milling machine accessories and cutters. Cutting speeds, feeds and depths for materials and cutters. Machine set up and operations. Common cutter failure. Operation of horizontal and vertical milling machines. Milling safety	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
PPT220	2020 Summer	Heat Transfer and Fluid Flow		Course covers topics in heat transfer, fluid flow and thermodynamics. Topics include the properties of fluids, modes of heat transfer, and the energy relationships in fluid systems.	Prerequisites: A grade of C or better in college-level math course, or appropriate District placement, or permission of Department/Division Chair.		Occ	LEC 3.0 3.0 3.0	S
PPT221	2017 Fall	Reactor Theory		Basic nuclear reactor theory to include atomic and nuclear physics,	Prerequisites: A grade of C or better		Occ	LEC 3.0	S

				thermodynamics, and heat transfer and fluid flow.	in PPT120 and GTC108, or permission of Program Director.			3.0 3.0	
PPT222	2019 Fall	Reactor Plant Chemistry and Materials		Basic nuclear reactor theory to include reactor chemistry, water chemistry, radiation detection and protection principles, and reactor plant materials.	Prerequisites: A grade of C or better in PPT120 or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
PPT224EI	2018 Fall	Components for Maintenance Technicians		Electrical component types and characteristics, such as circuit breakers and fuses, instrumentation schematics, protective relaying, and inverters.	Prerequisites: A grade of C or better in PPT202 or PPT203, or permission of Program Director.		Occ	LEC 1.0 1.0 1.0	S
PPT224EM	2018 Fall	Electrical Components for Maintenance Technicians		In-depth reading and troubleshooting of electrical engineering and vendor prints. Operation and control of emergency power systems. Diesel Generators will also be covered.	Prerequisites: A grade of C or better in PPT202 or PPT203, or permission of Program Director.		Occ	LEC 1.0 1.0 1.0	S
PPT224MM	2013 Summer I	Mechanical Components for Maintenance Technicians		Mechanical component types and characteristics, common failure mechanisms, and operating principles of plant components.	Prerequisites: A grade of C or better in PPT202 or PPT203.		Occ	LEC 1.0 1.0 1.0	S
PPT225	2020 Summer	Industrial Plant Chemistry and Materials		Fundamentals of industrial chemistry and materials to include chemistry principles, water chemistry control, cooling water chemistry, chemical hazards, and material science.	Prerequisites: A grade of C or better in college-level math course, or appropriate District placement, or permission of Department/Division Chair.		Occ	LEC 3.0 3.0 3.0	S
PPT230	2020 Summer	Nuclear Plant Systems		Operation, components, instrumentation and controls, automatic features, and precautions and limitations of nuclear plant systems.	Prerequisites: A grade of C or better in college-level math course, or appropriate District placement, or permission of Department/Division Chair.		Occ	LEC 3.0 3.0 3.0	S
PPT235	2020 Summer	Nuclear Physics		Course provides a foundation for understanding atomic and nuclear physics, neutron characteristics,	Prerequisites: A grade of C or better in college-level math		Occ	LEC 3.0	S

				reactor theory, reactor operation, and radiation fundamentals.	course, or appropriate District placement, or permission of Department/Division Chair.			3.0 3.0	
PPT242	2020 Summer	Components for Maintenance Technicians		Electrical component types and characteristics, such as circuit breakers and fuses, instrumentation schematics, protective relaying, and inverters. In-depth reading and troubleshooting of electrical engineering and vendor prints. Operation and control of emergency power systems. Diesel Generators will also be covered.	Prerequisites: A grade of C or better in (ELC119 and ELC120) or permission of Program Director.		Occ	L+L 2.0 2.0 2.0	T
PPT250	2019 Summer	Power Plant Position Preparation		Prepares students for the Power Plant Maintenance Positions Selection System (MASS) examination. Reading comprehension, mechanical concepts, spatial ability, and mathematical usage.	Prerequisites: None.	PPT250 may be repeated for a total of four (4) credit hours.	Occ	LEC 2.0 2.0 2.0	S
PPT255	2019 Fall	Fossil Systems		Upon completion, the student will be able to explain how fossil plant systems operate in accordance with reference materials.	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	S
PPT270AA	2019 Fall	Power Systems Technology Internship		Work experience in power plant industry and / or related field. Five (5) hours of work weekly. Approval, supervision and evaluation by an internship coordinator.	Prerequisites: Permission of Department or Division.		Occ	L+L 1.0 5.0 0.0	C
PPT270AB	2019 Fall	Power Systems Technology Internship		Work experience in power plant industry and / or related field. Ten (10) hours of work weekly. Approval, supervision and evaluation by an internship coordinator.	Prerequisites: Permission of Department or Division.		Occ	L+L 2.0 10.0 0.0	C
PPT270AC	2019 Fall	Power Systems Technology Internship		Work experience in power plant industry and / or related field. Fifteen (15) hours of work weekly. Approval, supervision and evaluation by an internship coordinator.	Prerequisites: Permission of Department or Division.		Occ	L+L 3.0 15.0 0.0	C
PPT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
PPT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
PPT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
PSA301	2023 Fall	Foundations of Public Safety Administration		Foundation in the principles and study of public safety administration including legal, political, and social factors. Overview of organizational theory and management, human capital management, resource management, leadership, and ethics that guide administration of diverse public safety organizations.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
PSA305	2023 Fall	Communication Strategies for Public Safety Professionals		Overview of communication and public relations for public safety professionals. Topics include organization's internal and external environment and identifying and	Prerequisites: A grade of C or better in [(COM100, or COM110, or COM230, or		Occ	LEC 3.0 3.0 3.0	S

				addressing public relations situations that emerge in these environments including the use of social media and other news media channels. Emphasis on developing, implementing, and evaluating public relations plans and strategies.	COM225) and (ENG102 or ENG108)] or permission of Program Director or Department/Division.				
PSA310	2023 Fall	Research Methods for Public Safety Administration		Overview of research methods and presentation of research results for public safety administration. Introduction to quantitative and qualitative methods including statistics for conducting and analyzing discipline-specific research within the fields of public safety.	Prerequisites: A grade of C or better in [(ENG102 or ENG108), and (MAT14+, or MAT15+, or equivalent), and [MAT206, or PSY230, or (PSY230 and PSY231), or PSY230WL, or SWU225]], or permission of Instructor or Program Director or Department/Division Chair.		Occ	L+L 4.0 6.0 6.0	T
PSA315	2023 Fall	Public Policy and Public Safety Organizations		Overview of public policy as it relates to the administration and management of public safety organizations. Topics include the political environment, laws and regulations, and the interrelationship among law, regulations, budget and finance, and public policy. Focus on current issues surrounding public administration and bureaucracy, as well as how public constituencies can affect public policy decision-making.	Prerequisites: A grade of C or better in [PAD100 and (ENG102 or ENG108)], or permission of Instructor or Program Director or Department/Division Chair.		Occ	LEC 3.0 3.0 3.0	S
PSA320	2023 Fall	Human Capital Management for Public Safety Organizations		Examination of the role and functions of human capital management in public safety organizations including recruitment, hiring, retention, and training. Focus on the impact and intersections of strategic planning, employee benefits and compensation, personnel issues, performance management, employment laws, labor relations, and responding to internal	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				and external inquiries as it relates to the administration of public safety organizations.					
PSA398AA	2024 Fall	Special Topics in the Public Safety Administration		Explores special topics including current issues within the field of public safety administration. Focuses on examination and investigation of existing and innovative program solving techniques also related to the field.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
PSA398AB	2024 Fall	Special Topics in the Public Safety Administration		Explores special topics including current issues within the field of public safety administration. Focuses on examination and investigation of existing and innovative program solving techniques also related to the field.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
PSA398AC	2024 Fall	Special Topics in the Public Safety Administration		Explores special topics including current issues within the field of public safety administration. Focuses on examination and investigation of existing and innovative program solving techniques also related to the field.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
PSA401	2023 Fall	Public Safety Leadership		Examines the nature and roles of leadership in public safety, including concepts of organizational culture, leadership principles, and management strategies unique to public safety organizations.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
PSA405	2023 Fall	Public Safety Finance and Budget		Overview of the public finance system at all levels of government as it relates to the development of a budget for a public safety department. Topics include state and local budget process, revenue and funding sources involving taxes and revenue forecasting, as well as capital planning, projects, and budgets related to public safety. The course will consider alternative sources of public safety funding available to local government entities and stewardship of funds.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
PSA410	2023 Fall	Program Planning and Evaluation for		Focus on knowledge and skills required of public safety leaders in	Prerequisites: A grade of C or better		Occ	LEC 3.0	S

		Public Safety Organizations		strategic planning for the design, development, implementation, and evaluation of social intervention initiatives related to public safety, health, and disaster management. Exploration of theories related to public services considered in the development of programs, the application of evaluation findings, and prioritization of community concerns and resources.	in PSA310 or permission of Instructor or Program Director or Department/Division Chair.			3.0 3.0	
PSA439	2023 Fall	Critical Incident Management for Public Safety Professionals		In-depth examination of the process of critical incident management for supervisors, encompassing a variety of events that impact public safety organizations. Focus on the four phases of emergency management in relation to critical incident management.	Prerequisites: A grade of C or better in (AJS/FSC147 and AJS/FSC148), or permission of Program Director or Department/Division Chair. Prerequisites or Corequisites: AJS/FSC149 or permission of Program Director or Department/Division Chair.		Occ	LEC 3.0 3.0 3.0	S
PSA449	2023 Fall	Strategic Hazard Mitigation		In-depth examination of the process of strategic hazard mitigation for supervisors, encompassing a variety of events that impact Public Safety Organizations. Focus on mitigation planning to address community risks and vulnerabilities including the stakeholders involved and strategies employed to improve community resilience.	Prerequisites: A grade of C or better in PSA439 or permission of Program Director or Department/Division Chair.		Occ	LEC 3.0 3.0 3.0	S
PSA450	2023 Fall	21st Century Public Safety Practices		Examination of emerging trends in public safety administration and organizational responsiveness through policy and practice. Topics include an overview of public safety administration, components of ethical leadership, sustainable and evolving practices, internal and external influences on policy, technology, effective data collection, and strategic planning to address societal and	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				cultural changes in the community and workforce.					
PSA460	2023 Fall	Crime Scene Coordination for Public Safety Professionals		Overview of the crime scene logistics needed to effectively coordinate the work of law enforcement officers, police dispatch, forensic science services personnel, emergency medical personnel, and others present during crime scene investigations.	Prerequisites: A grade of C or better in AJS275, or LET225, or permission of Program Director or Department/Division Chair.		Occ	LEC 3.0 3.0 3.0	S
PSA470	2023 Fall	Administrative Law for Public Safety Professionals		Introduction to the basic principles of administrative law for public safety professionals including the structure of federal, state, and local administrative institutions. Topics include the sources of law for administrative agencies, the basic procedures for administrative rulemaking, adjudication, and compliance, as well as judicial review of agency action.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
PSA490	2023 Fall	Public Safety Administration Capstone		Completion of a professional project within the field of public safety administration applying concepts covered throughout the program. Students will demonstrate the steps for issue identification, related research, analysis, and presentation of information. Project topics will follow an instructor approval process.	Prerequisites: Permission of Program Director or Department/Division Chair.		Occ	L+L 3.0 4.0 4.0	T
PSG140	2018 Fall	Respiratory Care Fundamentals and Physiology for Polysomnography		Introduction to the development and implementation of prescribed care plans for sleep-related breathing disorders. Administration of basic respiratory therapeutic modalities for sleep-related breathing disorders and non-invasive assisted breathing. Use and maintenance of all forms of positive airway pressure therapy with specific knowledge of how algorithms function when using advanced positive pressure therapies. Basic respiratory physiology as it relates to sleep-related breathing disorders.	Prerequisites: Admission to the Polysomnographic Technology program.		Occ	LEC 4.0 3.0 3.0 LAB 0.0 3.0 3.0	T
PSG150	2018 Fall	Introduction to Sleep Medicine		Introduction to the fundamental concepts of polysomnography, sleep	Prerequisites: Admission into the		Occ	LEC 3.0	S

				technology and sleep medicine. Emphasis on nomenclature, technical and medical roles, normal sleep, sleep disorders, and professional organizations and resources.	Polysomnographic Technology program. Corequisites: PSG150LL.			3.0 3.0	
PSG150LL	2018 Fall	Introduction to Sleep Medicine Laboratory		Introduction to the fundamental concepts of polysomnography, sleep technology and sleep medicine in the laboratory setting. Emphasis on nomenclature, technical and medical roles, normal sleep, sleep disorders, and professional organizations and resources.	Prerequisites: Admission to the Polysomnographic Technology program. Corequisites: PSG150.		Occ	LAB 1.0 3.0 3.0	T
PSG160	2024 Fall	Polysomnographic Procedures		Practical application of clinical procedures germane to the performance of polysomnography. Emphasis on patient assessment and communications, pre-test preparations, patient hook-up, instrument calibration and operation, test termination, cleanup and troubleshooting.	Prerequisites: Admission into the Polysomnographic Technology program. Corequisites: PSG160LL.		Occ	LEC 3.0 3.0 3.0	S
PSG160LL	2018 Fall	Polysomnographic Procedures Laboratory		Practical application of clinical procedures germane to the performance of polysomnography. Emphasis on patient assessment and communications, pre-test preparations, patient hook-up, instrument calibration and operation, test termination, cleanup and troubleshooting.	Prerequisites: Admission to the Polysomnographic Technology program. Corequisites: PSG160.		Occ	LAB 1.0 3.0 3.0	T
PSG165	2009 Fall	Clinical Polysomnographic I		Introduction to a sleep disorders center, observation of a center conducting polysomnography, and participation in performance of associated procedures. Emphasis on patient preparation, testing protocol, instrument calibration and operation, documentation, and patient interactions	Prerequisites: Admission into the Polysomnography Technology program.		Occ	LAB 3.0 15.0 0.0	C
PSG170	2018 Fall	Sleep Therapeutics		Review of sleep therapies to include medical treatment of insomnia, hypersomnia, restless legs syndrome, periodic limb movement disorder, rapid eye movement sleep behavior disorder, parasomnias, and the use of	Prerequisites: Admission into the Polysomnographic Technology program. Corequisites: PSG170LL.		Occ	LEC 2.0 2.0 2.0	S

				positive airway pressure therapy and/or oxygen therapy to treat sleep-disordered breathing.					
PSG170LL	2018 Fall	Sleep Therapeutics Laboratory		Perform sleep therapies to include medical treatment of insomnia, hypersomnia, restless legs syndrome, periodic limb movement disorder, rapid eye movement sleep behavior disorder, parasomnias, the use of positive airway pressure therapy and/or oxygen therapy to treat sleep-disordered breathing.	Prerequisites: Admission to the Polysomnographic Technology program. Corequisites: PSG170.		Occ	LAB 1.0 3.0 3.0	T
PSG250	2018 Fall	Record Scoring		Polysomnographic record scoring including visual, arousal, cardiac, movement, and respiratory scoring rules outlined by the American Academy of Sleep Medicine. Polysomnogram report generation and calculations, technical and digital specifications, multiple sleep latency test/maintenance of wakefulness test scoring and reporting, and archive and data storage, abnormal polysomnographic record events, and artifact recognition.	Prerequisites: Admission into the Polysomnographic Technology program. Corequisites: PSG250LL.		Occ	LEC 2.0 2.0 2.0	S
PSG250LL	2018 Fall	Record Scoring Laboratory		Polysomnographic record scoring including visual, arousal, cardiac, movement, and respiratory scoring rules outlined by the American Academy of Sleep Medicine (AASM). Polysomnogram report generation and calculations, technical and digital specifications, multiple sleep latency test/maintenance of wakefulness test scoring and reporting, and archive and data storage, abnormal polysomnographic record events, and artifact recognition.	Prerequisites: Admission to the Polysomnographic Technology program. Corequisites: PSG250.		Occ	LAB 1.0 3.0 3.0	T
PSG260	2009 Fall	Special Topics in Polysomnography		Specialized techniques, equipment and procedures used in polysomnography. Emphasis on infant, pediatric and geriatric populations, disabled and emotionally/mentally challenged, Polysomnograms with legal	Prerequisites: Admission into the Polysomnography Technology program.		Occ	LEC 2.0 2.0 2.0	S

				implications, research, and less commonly performed procedures.					
PSG265	2009 Fall	Clinical Polysomnography II		Participation in clinical polysomnography testing. Emphasis on patient preparation, troubleshooting, therapeutics, proper documentation, record review, scoring and report generation.	Prerequisites: Admission into the Polysomnography Technology program.		Occ	LAB 2.0 10.0 0.0	C
PSG275	2009 Fall	Clinical Polysomnography III		Clinical polysomnography testing. Emphasis on independent function and decision making, time management, record review, scoring and report preparation.	Prerequisites: Admission into the Polysomnography Technology program.		Occ	LAB 3.0 15.0 0.0	C
PSG280	2024 Fall	PSG Board Exam Review		Includes a review of all material covered in the Sleep Medicine Technology program. Taught during students' final semester of coursework to prepare them for their board examination.	Prerequisites: Admission into the Sleep Medicine Polysomnographic Technology program or permission of Program Director.		Occ	LEC 2.0 2.0 2.0	S
PSG282AA	2018 Fall	Volunteerism for Polysomnographic Technology: Service Learning Experience		Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	PSG282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 1.0 1.0 1.0	T
PSY101	2025 Fall	Introduction to Psychology		Overview of the methods, concepts, and applications of psychological science. Includes an introduction to key domains of psychology: Biological, Cognitive, Developmental, Social and Personality, and Mental and Physical Health.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
PSY102	2025 Fall	Introduction to Psychology Lab		Application of psychology as a science in areas such as: learning, memory, emotion, motivation, cognition, intelligence, development,	A grade of C or better required in all Prerequisites. Prerequisites or		Acad	LAB 1.0 1.0 1.0	T

				personality, physical and mental health in a socially and culturally diverse world.	Corequisites: PSY101 or permission of Instructor.				
PSY123	2024 Fall	Psychology of Parenting		The study of major psychological theories that pertain to parenting. Includes current research findings to foster effective relationships within modern families. Explores evidence-based practices for parenting individuals from birth through emerging adulthood.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
PSY132	2014 Fall	Psychology and Culture		Presents current knowledge about human diversity in behavior and culture using examples from a variety of contexts within western and global societies. Highlights topics in cross-cultural psychology, such as intergroup relations, diverse cognitive styles, ethnocentrism, gender, personality, emotion, language, communication, work and health. The role of enculturation throughout the lifespan will be explored to increase awareness of how behavioral and cognitive principles affect interactions in a multicultural world.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
PSY143	2023 Fall	Psychology of Sexual Orientation and Gender Identity		Introduction to the psychological study of sexual orientation and gender identity. Focus on psychological, developmental, social, biological, historical, and cultural aspects. Includes topics related to the recognition and development of sexual orientation and gender identity throughout the lifespan and lived experiences of LGBTQIA+ individuals and communities. Examines prejudice, discrimination, family dynamics, contributions, and current issues impacting LGBTQIA+ individuals, their allies, and communities.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

PSY156	2022 Fall	Understanding Death and Dying		Designed to give the student an understanding of the research and theories of death, dying, bereavement process, and aspects of end-of-life care and decision-making.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social-Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
PSY157	2009 Fall	African/Black Psychology		Historical overview of the development of Black Psychology and the African-American "frame of reference." Includes topics such as family, psychological assessment, mental health, male/female relationships, personality and community development as well as educational, ethical and contemporary issues. Critical examination of psycho-cultural forces which have helped to shape and determine the unique thought, styles, behavior of African-Americans and to gain a greater appreciation of the theories, research, writings, and activities of Black Psychologists.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
PSY201AC	1996 Fall	Selected Issues in Psychology		In-depth investigation of topical issues in Psychology. Promotes understanding of the psychological theory, application, and critical reasoning about the selected psychological issues and topics. Potential topics may include, but not limited to, parenting, gender, applied cognitive psychology, personality, perception, applied-experimental interventions, motivation, emotion, cultural psychology, methodology paradigms, history and systems, development, and intelligence.	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.	PSY201A C may be repeated for credit with change of topic.	Acad	LEC 3.0 3.0 3.0	S
PSY210	2001 Summer I	Educational Psychology		Scientific research and psychological principles as they apply to teaching and learning. The role of psychology in educational settings, human diversity, theories of learning, intelligence, memory, creativity,	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S

				assessment, and factors influencing effective instruction and learning.					
PSY215	2022 Fall	Sports Psychology		Application of the physiological, behavioral, social, cognitive, and humanistic perspectives in psychology to sport. Includes topics such as optimal performance, correlation, motivation, co-action effect, self-actualization, psycho-behavioral techniques, self-efficacy, and the general health benefits of sport participation.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
PSY218	2025 Fall	Health Psychology		Behavioral and mental foundations of health, wellness, illness, and disease, and psychological dimensions of medical intervention.	Prerequisites: A grade of C or better in PSY101, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
PSY225	2010 Summer I	Psychology of Religion		Provides an introduction to the history, varieties and theories of the psychology of religion from an empirical, research-based perspective. Specific areas of study include the role of gender, age, socioeconomic status, and personality on religious experience, the effects of religion and prayer on mental and physical health, the development of religious thought and behavior over the lifespan, and the social psychology of new religious movements. In addition, the role of cultural differences on religious attitudes both within the USA and around the world is also addressed.	Prerequisites: A grade of C or better in PSY101 or Permission of Instructor.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
PSY230	2023 Fall	Introduction to Statistics		An introduction to basic concepts in descriptive and inferential statistics, with emphasis upon application to psychology. Consideration given to the methods of data collection, sampling techniques, graphing of data, and the statistical evaluation of data collected through experimentation. Required of psychology majors.	Prerequisites: A grade of C or better in (PSY101 and eligibility for MAT14+ or higher as indicated by appropriate district mathematics placement) or permission of Instructor.	Student may receive credit for only one (1) of the following courses: PSY230 or PSY230WL.	Acad	LEC 3.0 3.0 3.0	S

PSY230WL	2023 Fall	Introduction to Statistics with Lab		An introduction to basic concepts in descriptive and inferential statistics, with emphasis upon application to psychology. Consideration given to the methods of data collection, sampling techniques, graphing of data, use of statistical software, and the statistical evaluation of data collected through experimentation. Required of psychology majors.	Prerequisites: A grade of C or better in (PSY101 and eligibility for MAT14+ or higher as indicated by appropriate district mathematics placement) or permission of Instructor.	Student may receive credit for only one (1) of the following courses: PSY230 or PSY230WL.	Acad	L+L 4.0 5.0 5.0	T
PSY231	2022 Fall	Laboratory for Statistics		Applications of inferential and descriptive statistics to statistical software in the field of psychology.	Prerequisites: None. Corequisites: PSY230.		Acad	LAB 1.0 2.0 2.0	T
PSY235	2007 Fall	Psychology of Gender		To assess historical and psychological perspectives on women and men and to evaluate contemporary viewpoints regarding the psychology of women and men.	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB] General Education Designation: Cultural Diversity - [C]	Acad	LEC 3.0 3.0 3.0	S
PSY240	2022 Fall	Developmental Psychology		Human development from conception through death. Includes biological, physical, cognitive, emotional, and sociocultural development across various ages.	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.	PSY240 is recommended for students majoring in nursing, education, behavioral, pre-med, and psychology.	Acad	LEC 3.0 3.0 3.0	S

PSY241	2022 Spring	Understanding and Changing Behavior		Theory and methods for observing, analyzing, and modifying behavior.	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
PSY242	2021 Fall	Understanding and Changing Behavior Lab		Advanced course designed to enable students to apply the principles of Applied Behavior Analysis (ABA) in a lab setting. Incorporates case studies and hands-on employment of best practices. Reviews current research in areas including, but not limited to, schedules of reinforcement, functional behavior assessment, stimulus discrimination and generalization.	Prerequisites: A grade of C or better in PSY241.	PSY242 students will complete in-class role-plays, practice exam questions, and submit videos of themselves performing specific procedures.	Acad	LAB 1.0 1.0 1.0	T
PSY243	2022 Spring	The Psychology of Developmental Disabilities		The interrelationships among the physical, intellectual, social, and psychological aspects of developmental disabilities (DD). Various service approaches, policies, and programs designed to foster an adequate adjustment for individuals with DD and their families. Values and beliefs relating to persons with developmental disabilities.	Prerequisites: A grade of C or better in PSY101.		Acad	LEC 3.0 3.0 3.0	S
PSY244	2023 Fall	Internship in Psychology		Experience in working in a wide variety of settings including but not limited to schools, non-profit agencies, advocacy agencies and other governmental agencies. 80 hours of designated volunteer or paid work.	Prerequisites: A grade of C or better required in all prerequisites. Prerequisites or Corequisites: Any two (2) 200-level PSY courses and permission of Instructor.	PSY244 may be repeated for a total of two (2) credit hours.	Acad	L+L 1.0 1.0 0.0	C
PSY248	2004 Fall	Psychology of Adolescent Development		Explores the highly specialized developmental stage of adolescence. Includes biological, cognitive,	Prerequisites: A grade of C or better in PSY101 or		Acad	LEC 3.0	S

				psychosexual, and sociocultural factors as well as current theories and research.	permission of Instructor.			3.0 3.0	
PSY250	1999 Fall	Social Psychology		The scientific study of how people's thoughts, feelings, and behaviors are influenced by other people and situations. Includes how we think about ourselves and others, persuasion and influence, sexual and romantic attraction, friendship and helping others, aggression and prejudice.	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
PSY260	2025 Fall	Psychology of Personality		Introduction to theories of personality with emphasis upon application of specific theories towards the understanding of individuals.	Prerequisites: A grade of C or better in PSY101, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
PSY262	2021 Fall	Positive Psychology: The Science of Well-Being		Overview and application of psychological principles based on strengths and resilience of human beings as opposed to dysfunction and symptoms of mental disorders. Topics include happiness, relationships, resilience, optimism, well-being, and brain research explaining positive emotions.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
PSY266	2022 Fall	Psychological Disorders		Distinguishes between healthy psychological functioning and psychological disorders. Includes topics in psychopathology such as problems with anxiety and depression, eating disorders, substance-use, schizophrenia, sexuality, and personality. Also covers causes and treatments of psychological disorders.	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
PSY267	2017 Summer	Introduction to Forensic Psychology		Overview of the practice of psychology in the law, by the law, and of the law. Focuses on the complementary functions and distinctions between psychology and the legal justice system. Topics include, but are not limited to, criminal investigations, risk and level of danger, competency, interrogations,	Prerequisites: A grade of C or better in PSY101.		Acad	LEC 3.0 3.0 3.0	S

				confessions, assessment, eyewitness testimony, child custody, and domestic violence.					
PSY270	2013 Summer I	Personal and Social Adjustment		Surveys the basic mental health principles as they relate to coping with stress, interpersonal relationships, sex, marriage, and working. Emphasis on learning to become a more competent and effective person.	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
PSY275	2025 Fall	Biopsychology		Biological basis of behavior and mental functions. Biological foundations of sensation, perception, motivation, emotion, cognition, and psychopathology. Designed for students in the life and behavioral sciences.	Prerequisites: A grade of C or better in PSY101, or permission of Instructor.		Acad	L+L 4.0 5.0 5.0	T
PSY277	2018 Fall	Psychology of Human Sexuality		Survey of psychological and physiological aspects of human sexual behavior. Emphasis placed on the integration of the cognitive, emotional, and behavioral factors in sexual functioning.	Prerequisites: A grade of C or better in PSY101.	PSY277 may contain adult content. All students under the age of 18 are required to have a signed parental consent form on file, which is on the back of the Under the Age of 18 Enrollment Form.	Acad	LEC 3.0 3.0 3.0	S
PSY280	2024 Fall	Industrial/Organizational Psychology		The application of psychological principles to business and industry practices including organizational structure, leadership, personnel, employee stress and conflict,	Prerequisites: A grade of C or better in PSY101, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S

				workplace conditions and job performance.					
PSY282AA	1994 Fall	Volunteerism Service Learning Experience in Psychology		Service learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: A grade of C or better in PSY101 and permission of Instructor.	PSY282A A may be repeated for a total of three (3) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
PSY282AB	1994 Fall	Volunteerism Service Learning Experience in Psychology		Service learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: A grade of C or better in PSY101 and permission of Instructor.	PSY282A B may be repeated for a total of three (3) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L
PSY282AC	1994 Fall	Volunteerism Service Learning Experience in Psychology		Service learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: A grade of C or better in PSY101 and permission of Instructor.	Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
PSY290AB	2023 Fall	Research Methods		Planning, execution, analysis, and written reporting of psychological research using American Psychological Association guidelines (APA). Surveys the literature, procedures, and instruments in	A grade of C or better required in all Prerequisites: Prerequisites: ENG101 or ENG107. Prerequisites or	Course Attribute(s): General Education Designation: Literacy	Acad	LEC 4.0 3.0 3.0 LAB 0.0	T

				representative areas of psychological research.	Corequisites: PSY230 or PSY230WL or permission of Instructor.	and Critical Inquiry - [L] General Education Designation: Natural Sciences (General) - [SG] Arizona Shared Unique Number SUN#: PSY 2290		3.0 3.0	
PSY290AC	2023 Fall	Research Methods		Planning, execution, analysis, and written reporting of psychological research using American Psychological Association guidelines (APA). Surveys the literature, procedures, and instruments in representative areas of psychological research.	A grade of C or better required in all Prerequisites. Prerequisites: ENG101 or ENG107. Prerequisites or Corequisites: PSY230 or PSY230WL or permission of Instructor.	Course Attribute(s): General Education Designation: Literacy and Critical Inquiry - [L] General Education Designation: Natural Sciences (General) - [SG] Arizona Shared Unique Number SUN# PSY 2290	Acad	LEC 3.0 3.0 LAB 1.0 2.0 2.0	T
PSY292	1999 Fall	Psychology of Altered States of Consciousness		Examines phenomena and history of altered states of consciousness. Surveys scientific principles, methods and applications in altered states research. Reviews current psychological research in topics	Prerequisites: A grade of C or better in PSY101 or permission of Instructor.	Course Attribute(s): General Education Designation: Social	Acad	LEC 3.0 3.0 3.0	S

				related to sensory deprivation, daydreaming, meditation, hypnosis, sleep and dreams, and the effects of drugs.		and Behavioral Sciences - [SB]			
PSY295AA	2018 Spring	Independent Research in Psychology		Original scientific investigation of psychology-related phenomenon.	Prerequisites: A grade of C or better in PSY290++ or Corequisites: PSY290++ or permission of Instructor.	PSY295A A requires a minimum of 80 hours of laboratory/research study. PSY295A A may be repeated for credit.	Acad	LAB 1.0 1.0 0.0	C
PSY298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
PSY298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
PSY298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

				expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
PTA101	2022 Fall	Survey of Physical Therapy		History of physical therapy. Purpose, benefits, and goals of the Arizona and American Physical Therapy Associations (APTA). Roles and responsibilities of physical therapists (PT) and physical therapist assistants (PTA). Patient care, legal issues, principles of physical therapy treatment, education requirements, and functions of the American Physical Therapy Association. Clinical practice settings used in the provision of physical therapy services. Common medical conditions and injuries treated by PT's and PTA's. Emerging opportunities in the practice of physical therapy.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Program Director.		Occ	LEC 1.5 1.5 1.5	S
PTA102	2006 Fall	Structured Physical Therapist Assisting Review		Structured physical therapist assisting tutorial assistance and physical therapist assisting study skills related to physical therapist assisting courses. Physical therapist assisting process and critical thinking application skills emphasized.	Prerequisites: None. Corequisites: Enrollment in the Physical Therapist Assisting program or permission of Department Chair.	PTA102 offered as Credit (P) No credit (Z) basis. PTA102 may be repeated for a total of eight (8) credit hours.	Occ	LEC 1.0 1.0 1.0	S
PTA103	2018 Fall	Kinesiology		Physical principles of human motion. Emphasis on structure, movement, and stability of specific joints. Normal and abnormal human locomotion. Stabilizing and motion producing forces upon extremities and the spine including muscles, ligaments, and cartilage. Discussion of common joint deformities. Kinesiological analysis of	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Program Director.		Occ	LEC 3.0 3.0 3.0	S

				functional movement of the human body.					
PTA104	2018 Fall	Musculo-Skeletal Assessment Techniques		Theory and principles of goniometry and manual muscle testing. Measure range of motion of joints and strength of muscles of the head, face, neck, trunk and extremities. Normal range of motion of the spine and extremities. Assess posture and common postural deviations. Palpate and identify pertinent bony and soft tissue structures. Document results of goniometric measurement, muscle testing, palpation and posture assessment. Perform data collection in a time efficient manner following the plan of care established by the supervising physical therapist. Communicate effectively with patients and the supervising physical therapist.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Program Director.		Occ	LAB 1.5 4.5 4.5	T
PTA152	2018 Fall	Musculoskeletal Kinesiology and Assessment Techniques in Sonographic Imaging		Joint movements and planes of motion. Normal anatomy of the extremities. Tissue physiology. Pathological structures and their relationships. External palpation and relation to imaging.	Prerequisites: Admission to Diagnostic Medical Sonography program or permission of the Program Director.		Occ	L+L 4.0 6.0 6.0	T
PTA200	2018 Fall	Patient Mobility Techniques		Theory, principles and practice of proper body mechanics. Principles and techniques of gait training, bed mobility and transfers, wheelchair mobility. Theory, principles, and techniques of therapeutic exercise. Patient instruction, data collection, assistive devices and equipment used by the physical therapist assistants and their patients. Safety and first aid in physical therapy practice settings including contraindications for therapeutic interventions. Document physical therapy interventions. Perform physical therapy interventions in a time efficient manner following the plan of care established by the supervising physical therapist. Communicate	Prerequisites: A grade of C or better in (PTA101, PTA103, and PTA104) or permission of the Program Director.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 6.0 6.0	T

				effectively with patients and the supervising physical therapist.					
PTA202	2018 Fall	Therapeutic Modalities		Stages of inflammation responses and tissue repair. Theories on pain. Guidelines for patient positioning and safety. Physiological effects of therapeutic modalities. Principles and application of thermal agents. Apply superficial and deep thermal agents, cryotherapy, ultrasound, electromagnetic radiation, massage, hydrotherapy, light, intermittent venous compression therapies, and traction. Indications and contraindications for treatment methods. Concepts in research in physical therapy. Document physical therapy interventions. Perform physical therapy interventions including relevant data collection in a time efficient manner following the plan of care established by the supervising physical therapist. Communicate effectively with patients and the supervising physical therapist.	Prerequisites: A grade of C or better in (PTA101, PTA103, and PTA104) or permission of the Program Director.		Occ	LEC 5.0 3.0 3.0 LAB 0.0 6.0 6.0	T
PTA203	2022 Fall	Clinical Pathology		Terminology and definitions used in discussion of human pathology. Disease processes frequently encountered in physical therapy practice. Functional anatomy, select medical tests for diagnoses, and medication and effects in providing physical therapy. Principles of disease prevention.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Program Director.		Occ	LEC 3.0 3.0 3.0	S
PTA204	2023 Fall	Preclinical Practicum I		Supervised physical therapy clinical practice in the Healthcare United at GateWay (HUG) Clinic with moderate to maximal supervision with emphasis on performance of data collection and treatment interventions for a diverse patient population in an outpatient treatment setting.	Prerequisites: A grade of C or better in (PTA101, PTA103, and PTA104) or permission of the Program Director. Corequisites: PTA202.		Occ	LAB 0.5 1.5 1.5	T
PTA205	2013 Fall	Communication in Physical Therapy		Communication skills in the Physical Therapy setting. Self-image in communication. Active listening,	Prerequisites: Admission to the Physical Therapist		Occ	LEC 1.5	S

				responding to problems, body language, patient interview skills. Communicating with chronically ill and dying patients and their families. Communicating with persons with disabilities. Cultural differences in communication and views of Health Care.	Assisting program or permission of Department or Division.			1.5 1.5	
PTA206	2023 Fall	Clinical Practicum I		Clinical experience with advanced beginner or higher level of performance for physical therapist assisting students. Application of physical therapy skills and techniques in specific clinical settings including outpatient, hospital, rehabilitation and skilled nursing care.	Prerequisites: A grade of C or better in (PTA200, PTA202, PTA203, PTA204, and PTA205) or permission of the Program Director. Corequisites: PTA207.		Occ	LAB 3.0 15.0 0.0	C
PTA207	2018 Fall	Clinical Practicum Seminar I		Integration of non-clinical aspects of clinical practicums with clinical performance in Clinical Practicum I. Emphasis on clinical journaling, in-service and case presentations, and documentation of patient care interventions.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Program Director. Corequisites: PTA206.		Occ	LEC 1.0 1.0 1.0	S
PTA208	2018 Fall	Rehabilitation of Special Populations		Rehabilitation strategies for brain injured patients. Neurodevelopmental treatment emphasized. Theories and alternative physical therapy treatment for neurologically impaired patients. Clinical applications and treatment of patients. Proprioceptive neuromuscular facilitation (PNF), cardiopulmonary rehabilitation, spinal cord injury and amputee management, and prosthetics/orthotics. Motor development and changes across the lifespan including developmental motor milestones and normal reflexes and reactions. Emphasis on proficiency in hands-on techniques.	Prerequisites: A grade of C or better in (PTA200, PTA202, PTA203, and PTA205), or permission of the Program Director.		Occ	LEC 5.0 3.0 3.0 LAB 0.0 6.0 6.0	T
PTA210	2018 Fall	Orthopedic Physical Therapy		Response of human bone and soft-tissue to injury. Orthopedic and medical management and physical therapy interventions for common	Prerequisites: A grade of C or better in (PTA206 and PTA207) or		Occ	LEC 4.0 3.0 3.0	T

				injuries of the extremities and spine. Common orthopedic surgeries. Joint mobilization techniques. Body mechanics and therapeutic exercise programs. Documentation procedures. Perform physical therapy interventions including relevant data collection in a time efficient manner following the plan of care established by the supervising physical therapist. Communicate effectively with patients and the supervising physical therapist.	permission of the Program Director.			LAB 0.0 3.0 3.0	
PTA214	2018 Fall	Electromodalities		Electrical currents for physical therapy. Types of human muscular contractions. Safety stressed. Application of electrical currents for physical therapy. Uses and implications of electrical nerve tests. Biophysical effects of transcutaneous electrical nerve stimulation. Use of low volt, high volt, and interferential electrical stimulation devices. Neuromuscular electrical stimulation (NMES). Use of biofeedback in physical therapy. Perform physical therapy interventions using including relevant data collection in a time efficient manner following the plan of care established by the supervising physical therapist. Communicate effectively with patients and the supervising physical therapist.	Prerequisites: A grade of C or better (PTA206 and PTA207) or permission of the Program Director.		Occ	LEC 2.5 1.5 1.5 LAB 0.0 3.0 3.0	T
PTA215	2010 Summer I	Wound Care for the Physical Therapist Assistant		Introduction to current concepts in wound care management techniques for the physical therapist assistant including skin anatomy and physiology, principles of healing, types of wounds, and therapeutic interventions.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
PTA217	2024 Fall	Clinical Neurology		Anatomy and function of the brain, spinal cord and peripheral nervous system. Review of motor and sensory innervation and spinal tracts. Specific diseases of the central and peripheral nervous systems related to the	Prerequisites: A grade of C or better in (PTA101, PTA103, PTA104, and PTA203) or		Occ	LEC 2.0 2.0 2.0	S

				physical therapy plan of care. Emphasis on clinical signs and symptoms of neurological disorders.	permission of the Program Director.				
PTA230	2018 Fall	Physical Therapy Seminar		Current practices and issues in physical therapy. Clinical problem solving, ethics, legal aspects, reimbursement, management, research. Resume preparation and job interviewing skills. Stress management techniques. Total quality management principles. Employment issues. Prevention of fraud and abuse. Career and professional development. Job descriptions, performance assessments, and wage and salary administration.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Program Director.		Occ	LEC 2.0 2.0 2.0	S
PTA240	2018 Fall	Peripheral Joint Mobilization Techniques for the Physical Therapist Assistant		Peripheral joint mobilization techniques for the upper and lower extremity joints. Concepts, indications, and contraindications. Documentation. Statutes and policies regarding joint mobilizations.	Prerequisites: Certification or licensure as a Physical Therapist Assistant and six months clinical practice.		Occ	L+L 1.0 1.0 1.0	T
PTA279	2023 Fall	Preclinical Practicum II		More advanced supervised physical therapy clinical practice in the Healthcare United at GateWay (HUG) Clinic with minimal supervision with emphasis on performance of data collection and treatment interventions for a diverse patient population in an outpatient treatment setting.	Prerequisites: A grade of C or better in PTA206 or permission of the Program Director. Corequisites: PTA210.		Occ	LAB 0.5 1.5 1.5	T
PTA280	2023 Fall	Clinical Practicum II		Clinical experience requiring an intermediate or higher level of clinical performance by the physical therapist assisting students. Application of physical therapy skills and techniques in various clinical settings including outpatient, hospital, rehabilitation and skilled nursing.	Prerequisites: A grade of C or better in (PTA208, PTA210, PTA214, PTA217, and PTA279) or permission of Program Director. Corequisites: PTA281.		Occ	LAB 3.0 15.0 0.0	C
PTA281	2018 Fall	Clinical Practicum Seminar II		Integration of non-clinical aspects of clinical practicums with clinical performance in Clinical Practicum II. Emphasis on clinical journaling, in-service and case presentations, and	Prerequisites: Admission to the Physical Therapist Assisting program, or permission of Department or		Occ	LEC 1.0 1.0 1.0	S

				documentation of patient care interventions.	Division. Corequisites: PTA280.				
PTA290	2022 Fall	Clinical Practicum III		Clinical experience with entry-level performance for physical therapist assisting students. Application of physical therapy skills and techniques in specific clinical settings including outpatient, hospital, rehabilitation and skilled nursing.	Prerequisites: A grade of C or better in: PTA208, PTA210, PTA214, and PTA217 or permission of Department or Division. Corequisites: PTA292.		Occ	LAB 3.0 15.0 0.0	C
PTA292	2018 Fall	Clinical Practicum Seminar III		Integration of non-clinical aspects of clinical practicums with clinical performance in Clinical Practicum III. Emphasis on clinical journaling, in-service and case presentations, and documentation of patient care interventions.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Department or Division. Corequisites: PTA290.		Occ	LEC 1.0 1.0 1.0	S
PTA295	2018 Fall	Physical Therapist Assistant Examination Review		Preparation for the physical therapist assistant examination administered by the Federation of State Boards of Physical Therapy. Topics include physical therapy management of patients with musculoskeletal, neurological, integumentary and cardiopulmonary system diseases and complications. Therapeutic modalities, therapeutic exercise, functional mobility activities, and data collection techniques. Documentation and ethical/legal considerations in practice of physical therapy.	Prerequisites: Admission to the Physical Therapist Assisting program or permission of the Program Director.		Occ	LEC 2.0 2.0 2.0	S
QCT296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job		Occ	LAB 1.0 5.0 0.0	Z

					may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
QCT296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
QCT296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be		Occ	LAB 3.0 15.0 0.0	Z

					concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
QCT296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
QCT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
QCT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
QCT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
QST200	2024 Spring	Introduction to Queer Studies		Provides a general introduction to queer studies, including review of queer theory, intersectionality, social and political institutions, representation, and identity related to sex, gender, and sexual orientation.	Prerequisites: A grade of C or better in ENG101 or ENG107.	Course Attributes: General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Social-Behavioral Sciences [SB]	Acad	LEC 3.0 3.0 3.0	S
QST210	2024 Spring	Queer Media Studies		Brings together media studies and queer studies to examine the history and ongoing development of media produced by queer and non-queer	Prerequisites: A grade of C or better in ENG101 or ENG107.	Course Attributes: General Education	Acad	LEC 3.0 3.0 3.0	S

				creators in national and global contexts. Interrogates the relationship between sex, gender, and sexuality as it is and has been represented in media. Offers an overview of popular media and queerness.		Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Social-Behavioral Sciences [SB]			
RAD100	2020 Fall	Introduction to Radiologic Science and Health Care		Provides an overview of the foundations of radiography and the practitioner's role in health care delivery. Principles, practices and policies of health care organizations will be examined and discussed in addition to the professional responsibilities of the radiographer.	Prerequisites: Admission to the Radiologic Technology Program.		Occ	LEC 3.0 3.0 3.0	S
RAD101	2020 Fall	Ethics and Law in the Radiologic Sciences		Foundation in ethics and law related to the practice of medical imaging. An introduction to terminology, concepts and principles will be presented.	Prerequisites: Admission to the Radiologic Technology Program.		Occ	LEC 1.0 1.0 1.0	S
RAD102	2020 Fall	Structured Diagnostic Medical Imaging Skills Enhancement I		Structured medical imaging cognitive and non-cognitive learning, study skills, and strategies to help students achieve success in their respective imaging courses. Medical imaging learning process and critical thinking application skills are emphasized.	Prerequisites: Admission to the Radiologic Technology Program.		Occ	LEC 1.0 1.0 1.0	S
RAD103	2024 Fall	Radiation Biology and Health Physics I		Overview of the principles of radiation protection, including the responsibilities of the radiographer for patients, personnel and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation	Prerequisites: Admission to the Radiologic Technology program.		Occ	LEC 2.0 2.0 2.0	S

				agencies and health care organizations are incorporated.					
RAD104	2024 Fall	Image Production I		Comprehensive exploration of the fundamental principles and techniques governing radiographic exposure factors and their effect on creating radiographic images.	Prerequisites: Admission to the Radiologic Technology program.		Occ	LEC 2.5 2.0 2.0 LAB 0.0 1.5 1.5	T
RAD105	2024 Fall	Radiation Physics and Instrumentation		Basic knowledge of atomic structure and terminology, the nature and characteristics of radiation, x-ray production, and the fundamentals of photon interactions with matter. Establishes a knowledge base in radiographic and mobile equipment, as well as exposure controls.	Prerequisites: Admission to the Radiologic Technology program.		Occ	LEC 2.0 2.0 2.0	S
RAD106	2024 Fall	Patient Care in Radiologic Sciences I		Foundational concepts of optimal patient care, including consideration for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures are described, as well as infection control procedures using standard precautions. The role of the radiographer in patient education is identified.	Prerequisites: Admission to the Radiologic Technology program.		Occ	LEC 2.5 2.0 2.0 LAB 0.0 1.5 1.5	T
RAD107	2020 Fall	Radiographic Procedures I		Content provides the knowledge base necessary to perform standard imaging procedures. Focus is on upper extremities, lower extremities, shoulder, and thorax. Consideration is given to the evaluation of optimal diagnostic images.	Prerequisites: Admission to the Radiologic Technology Program.		Occ	LEC 3.0 3.0 3.0 LAB 0.0 3.0 3.0	T
RAD109	2020 Fall	Radiography Practicum I		Clinical practice experience to develop and apply concepts and theories in the performance of radiologic procedures. Concepts of team practice, patient-centered clinical practice, and professional development are discussed, examined and evaluated. Focus is on patient care and assessment and competent performance of radiologic	Prerequisites: Admission to the Radiologic Technology Program.		Occ	LAB 3.5 19.0 0.0	C

				imaging. Imaging procedures are performed under the appropriate supervision of a qualified radiographer.					
RAD112	2020 Fall	Structured Diagnostic Medical Imaging Skills Enhancement II		Focus is on the application of structured medical imaging cognitive and non-cognitive learning, study skills, and strategies to help students achieve success in their respective imaging courses and their first clinical experience. Medical imaging learning process and critical thinking application skills introduced in the Structured Diagnostic Medical Imaging Skills Enhancement I course are reinforced; and advanced concepts are introduced.	Prerequisites: Admission to the Radiologic Technology Program.		Occ	LEC 1.0 1.0 1.0	S
RAD114	2024 Fall	Image Production II		Components, principles, and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving, and retrieval are discussed.	Prerequisites: Admission to the Radiologic Technology program.		Occ	LEC 2.0 2.0 2.0	S
RAD116	2024 Fall	Patient Care in Radiologic Sciences II		Content provides advanced concepts of optimal patient care, including consideration for assessment of vital signs. Trauma and emergency patient care procedures are described, as well as surgical asepsis concepts. The role of the radiographer in surgical settings is also discussed.	Prerequisites: Admission to the Radiologic Technology program.		Occ	LEC 2.5 2.0 2.0 LAB 0.0 1.5 1.5	T
RAD117	2020 Fall	Radiographic Procedures II		Content provides the knowledge base necessary to perform standard imaging procedures. Focus is on abdomen, pelvic girdle, vertebral column, and cranium. Contrast studies specific to the gastrointestinal system are also addressed. Consideration is given to the evaluation of optimal diagnostic images.	Prerequisites: Admission to the Radiologic Technology Program.		Occ	LEC 3.0 3.0 3.0 LAB 0.0 3.0 3.0	T
RAD119	2020 Fall	Radiography Practicum II		Clinical practice experience to develop, apply, reinforce, and integrate concepts and theories in the performance of radiologic procedures. Concepts of team practice, patient-centered clinical practice, and	Prerequisites: Admission to the Radiologic Technology Program.		Occ	LAB 6.0 36.0 0.0	C

				professional development are practiced, examined, and evaluated. Focus is on patient care and assessment and competent performance of radiologic imaging. Imaging procedures are performed under the appropriate supervision of a qualified radiographer.					
RAD203	2024 Fall	Radiation Biology and Health Physics II		Provides an overview of the principles of the interaction of radiation with living systems. Radiation effects on molecules, cells, tissues and the body as a whole are presented. Factors affecting biological response are presented, including acute and chronic effects of radiation.	Prerequisites: Admission to the Radiologic Technology program.		Occ	LEC 2.0 2.0 2.0	S
RAD206	2020 Fall	Pharmacology and Venipuncture		Content provides basic concepts of pharmacology, venipuncture and administration of diagnostic contrast agents and intravenous medications. The appropriate delivery of patient care during these procedures is emphasized.	Prerequisites: Admission to the Radiologic Technology Program.		Occ	LEC 1.0 1.0 1.0 LAB 0.0 1.0 1.0	T
RAD207	2024 Fall	Radiographic Procedures III		Content provides the knowledge base necessary to perform advanced imaging procedures. Focus is on special studies, trauma, and surgical procedures. Contrast studies specific to the urinary system are also addressed. Consideration is given to the evaluation of optimal diagnostic images.	Prerequisites: Admission to the Radiologic Technology program.		Occ	LEC 3.0 3.0 3.0 LAB 0.0 1.5 1.5	T
RAD208	2020 Fall	Image Analysis I		Provides a basis for analyzing radiographic images. Included are the importance of optimal imaging standards, the use of problem-solving techniques for image evaluation, and the factors that can affect image quality. Focus on the analysis of images for the upper extremity, shoulder, lower extremity, bony thorax, upper airway, and chest.	Prerequisites: Admission to the Radiologic Technology Program.		Occ	LEC 1.0 1.0 1.0	S
RAD209	2020 Fall	Radiography Practicum III		Continued clinical practice experience to further develop, apply, reinforce, and integrate concepts and theories	Prerequisites: Admission to the		Occ	LAB 5.0	C

				in the performance of radiologic procedures. Concepts of team practice, patient-centered clinical practice, and professional development are practiced, examined, and evaluated. Focus remains on patient care and assessment and competent performance of radiologic imaging. New experiences in special procedural environments. Imaging procedures are performed under the appropriate supervision of a qualified radiographer.	Radiologic Technology Program.			29.0 0.0	
RAD212	2020 Fall	Structured Diagnostic Medical Imaging Skills Enhancement III		Use of skills and resources for preparing for the American Registry of Radiologic Technologists (ARRT) exam. Utilization of career and educational planning resources is emphasized.	Prerequisites: Admission to the Radiologic Technology Program.		Occ	LEC 1.0 1.0 1.0	S
RAD214	2024 Fall	Image Production III		Imparts knowledge on how to optimize image quality while managing radiation exposure during digital imaging exams and procedures. Emphasis is placed on quality management and continuous quality improvement. Fluoroscopic systems are discussed and quality control tests are performed.	Prerequisites: Admission to the Radiologic Technology program.		Occ	LEC 2.0 2.0 2.0 LAB 0.0 1.5 1.5	T
RAD217	2020 Fall	Radiographic Pathology and Additional Modalities		Introduces concepts related to disease and etiological considerations with emphasis on radiographic appearance of disease. Additional modalities are also discussed.	Prerequisites: Admission to the Radiologic Technology Program.		Occ	LEC 2.0 2.0 2.0	S
RAD218	2020 Fall	Image Analysis II		Provides a basis for analyzing radiographic images. Included are the importance of optimal imaging standards, the use of problem-solving techniques for image evaluation, and the factors that can affect image quality. Focus on analysis of images for the abdomen, pelvic girdle, vertebral column, cranium, and special studies.	Prerequisites: Admission to the Radiologic Technology Program.		Occ	LEC 1.0 1.0 1.0	S
RAD219	2020 Fall	Radiography Practicum IV		Continued clinical practice experience to further develop, apply, reinforce,	Prerequisites: Admission to the		Occ	LAB 5.0	C

				and integrate concepts and theories in the performance of radiologic procedures. Concepts of team practice, patient-centered clinical practice, and professional development are practiced, examined, and evaluated. Focus remains on patient care and assessment and competent performance of radiologic imaging. Continued experiences in special procedural environments. Imaging procedures are performed under the appropriate supervision of a qualified radiographer.	Radiologic Technology Program.			29.0 0.0	
RBT296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
RBT296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job		Occ	LAB 2.0 10.0 0.0	Z

					may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
RBT296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
RBT296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be		Occ	LAB 4.0 20.0 0.0	Z

					concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
RBT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
RBT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
RBT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
RDG100	2024 Spring	Successful College Reading		Emphasis on reading study strategies for any introductory class in any subject area. Introduction to Learning	Prerequisites: A grade of C or better in ALT100, or	RDG100 satisfies RDG091	Acad	LEC 3.0	S

				Management System (LMS), how to successfully read course textbooks and assessments, how to navigate information technology and development of academic vocabulary.	RDG081, or ESL202, or appropriate reading placement, or permission of Instructor. Corequisites: Any 100-level course in another content area, or permission of Instructor.	requirement. RDG100 may be repeated for a total of twelve (12) credit hours.		3.0 3.0	
RDG100AA	2024 Fall	Successful College Reading - Organizing for Success		Includes goal setting, time management, college orientation, reading content materials. Emphasis on organizational skills and strategies for any introductory class in any subject area. Introduction to Learning Management System (LMS), how to organize and manage college reading assignments, and how to navigate information literacy using campus resources.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
RDG100AB	2024 Fall	Successful College Reading - Notetaking and Studying for Success		Emphasis on reading study and notetaking techniques applicable to any introductory class in any subject area. Includes effective use of textbooks, notetaking, and development of academic vocabulary.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
RDG100AC	2024 Fall	Successful College Reading - Taking College Exams with Success		Emphasis on successful lecture notetaking and synthesis of information, studying skills and strategies, types of exams, and exam taking strategies for success in any college introductory class.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
RDG100LL	2020 Summer	Disciplinary Literacy Lab		Supplemental instruction for college-level discipline courses. Focus on developing effective reading processes to address a range of literacy needs including reading, writing, digital, numerical, financial and informational literacies.	Prerequisites: None. Corequisites: Any 100-level course in another content area or permission of Instructor.		Acad	LAB 1.0 3.0 3.0	T
RDG111	2020 Fall	Successful College Reading for Cultural or Social Sciences		Emphasis on reading study strategies for an introductory class in the Cultural and Social Sciences. Introduction to Learning Management System (LMS), how to successfully read course textbook and	Prerequisites: A grade of C or better in ALT100 or RDG081 or appropriate reading placement score or	RDG111 satisfies RDG091 requirement.	Acad	LEC 3.0 3.0 3.0	S

				assessments and development of academic vocabulary.	permission of Instructor. Corequisites: Any 100-level course in Cultural Science or Social Science area or permission of Instructor.				
RDG112	2020 Fall	Successful College Reading for Life Sciences, Mathematics, Physical Sciences or Technology		Emphasis on reading study strategies for an introductory class in the Life Science, Mathematics, Physical Sciences, or Technology. Introduction to Learning Management System (LMS), how to successfully read course textbook and assessments and development of academic vocabulary.	Prerequisites: A grade of C or better in ALT100 or RDG081 or appropriate reading placement or permission of Instructor. Corequisites: Any 100-level class in the Life Sciences or Mathematics or Physical Sciences or Technology or permission of Instructor.	RDG112 satisfies RDG091 requirement.	Acad	LEC 3.0 3.0 3.0	S
RDG113	2020 Fall	Successful College Reading for Communication, Humanities or Behavioral Science		Emphasis on reading study strategies for an introductory class in the Communication, Humanities, or Behavioral Science. Introduction to Learning Management System (LMS), how to successfully read course textbook and assessments and development of academic vocabulary.	Prerequisites: A grade of C or better in ALT100 or RDG081 or appropriate reading placement or permission of Instructor. Corequisites: Any 100-level course in Communication or Humanities or Behavioral Sciences or permission of Instructor.	RDG113 satisfies RDG091 requirement.	Acad	LEC 3.0 3.0 3.0	S
RDG282AA	2014 Summer	Service-Learning Experience in Reading		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	RDG282A A may be repeated for a total of six (6) credit hours.	Acad	LAB 1.0 1.0 0.0	L

						Standard grading available according to procedures outlined in catalog.			
RDG282AB	2014 Summer	Service-Learning Experience in Reading		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	RDG282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L
RDG282AC	2014 Summer	Service-Learning Experience in Reading		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	RDG282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
RDG296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or		Acad	LAB 1.0 5.0 0.0	Z

					career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
RDG296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z
RDG296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of		Acad	LAB 3.0 15.0 0.0	Z

					instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
RDG296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z
RDG298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
RDG298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z

				and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
RDG298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
REA150	2018 Fall	Supervisory Appraiser/Appraiser Trainee		Examine the national minimum requirements, responsibilities, and expectations for Trainee Appraisers and Supervisory Appraisers that are included in the Appraiser Qualifications Board (AQB) Criteria.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
REA179	2021 Spring	Real Estate Principles I		Basics of real estate principles including introduction to the profession and license law, definition of real property, legal descriptions, rights and interests in property, ownership, contracts, title transfer and escrow procedures. Also covers an introduction to water rights and environmental hazards as well as procedures for various real estate calculations.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
REA180	2021 Spring	Real Estate Principles II		Advanced work in real estate including governmental restrictions and limitations, property management, insurance and warranties, appraisal procedures, financing and loan security instruments. Also covers Deed of Trust foreclosure options and consumer protection provisions.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

REA201	2021 Spring	Real Estate Principles I and II		Comprehensive survey of real estate principles to include careers in real estate, nature and description of real estate, rights and interests in land, forms of real property ownership, forms of business organization, methods of title transfer, title search and insurance, contract law, real estate sales contracts, mortgage and notes payable, deeds of trust, lending practices, loans and consumer rights, sources of financing real estate loans, types of financing instruments, real property taxes and assessments, title closing, escrow and settlement procedures, property management and real estate leases, real estate appraisal, state licensing laws and professional affiliations, real estate brokerage, real estate agency, fair housing and equal credit laws, types of residential real estate, real property insurance, land use control, economics of real estate, and investment considerations.	Prerequisites: None.		Occ	LEC 6.0 6.0 6.0	S
REA205	2022 Fall	Introduction to Commercial Real Estate		Introduces key features of the commercial real estate industry and its differences from residential real estate. Provides residential agents with a starting point to transition into commercial real estate.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
REA208	2023 Fall	Ethics in Commercial Real Estate		Course covers ethics in commercial real estate. Review of National Association of Realtors (NAR) code of ethics and scenarios common in commercial real estate transactions.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
REA211	2023 Fall	Compliance in Commercial Real Estate		Course covers compliance in commercial real estate. Review of federal, state, and municipal regulations and scenarios common in commercial real estate transactions.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
REA214	2023 Fall	Finances in Commercial Real Estate		Course covers finances in commercial real estate, including funding sources, taxes, and relevant data and analytic tools. Also includes review of financial presentations to clients.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S

REA220	2023 Fall	Multiunit Properties in Commercial Real Estate		This course covers various considerations of the multiunit commercial properties industry sector. Overview of the types of properties, financial considerations, transaction processes, resources, and compliance considerations.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
REA225	2023 Fall	Industrial Properties in Commercial Real Estate		Covers various aspects of the industrial commercial properties industry sector. Overview of the types of properties, financial considerations, transaction processes, resources, and compliance considerations.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
REA230	2023 Fall	Land Properties in Commercial Real Estate		Covers various aspects of the land commercial properties industry sector. Overview of the types of land and land use, financial considerations, transaction processes, resources, and compliance considerations.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
REA235	2023 Fall	Commercial Real Estate Essential Tools		Covers various tools for research, analysis, and presentation of data relevant to commercial real estate.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
REA240	2022 Fall	Introduction to Commercial Property Management		Provides an overview of the commercial property management industry. Covers the key aspects of commercial property management, including compliance requirements, financial considerations, and ethical practices. Includes application of commercial property management knowledge and skills in a variety of settings such as medical, office, mixed-used, industrial, bio-science, and non-profit company buildings.	Prerequisites: An Arizona real estate license, or completion of MCCC'D's CCL Real Estate: Prelicense (5139N) or its equivalent, or a real estate license from another state, or completion of pre licensure coursework from another approved Arizona real estate school.		Occ	LEC 2.0 2.0 2.0	S
REA260	2025 Fall	Real Estate Broker Pre- Licensing		Advanced study of the real estate industry in Arizona which focuses on the duties and responsibilities of a real estate broker. Designed to meet Arizona Department of Real Estate (ADRE) requirements to take the Arizona Real Estate Broker Examination.	Prerequisites: Permission of Instructor.		Occ	LEC 6.0 6.0 6.0	S

REA261	2025 Fall	Broker Management		Exploration of Real Estate Broker topics. Provides an in-depth study of Arizona statutes, rules, policies and supervision.	Prerequisites: Permission of Instructor.		Occ	LEC 0.5 0.5 0.5	S
REA270	2007 Summer II	Basic Appraisal Principles		Overview of real property concepts and characteristics, legal considerations, value influences, real estate finance, types of value, economic principles, real estate markets and analysis, and ethics in appraisal practice	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
REA271	2008 Summer I	Basic Appraisal Procedures		Overview of real estate appraisal approaches to valuation procedures, value, property description, residential applications, commercial applications, improvement construction, home inspection, and appraisal math. Practical application of appraisal procedures including case studies, and examples	Prerequisites: A grade of C or better in REA270 or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
REA272	2018 Fall	Uniform Standards of Professional Appraisal Practice (USPAP)		Basic rules for ethical behavior and competent performance. USPAP requirements for state certified appraisers. Highlights role of the appraiser and implied impartiality of this role. Requirements of the Uniform Standards of Professional Appraisal Practice (USPAP) affect appraisal businesses.	Prerequisites: None.		Occ	LEC 1.0 2.0 1.7	S
REA273	2007 Summer II	Residential Market Analysis Highest and Best Use		Recognize and evaluate market conditions affecting the buyers' and sellers' activities in understanding and reporting values. Gather and evaluate market data. Markets, sub-markets, market segmentation, supply side analysis, demand analysis and the importance of market examination to the appraisal process	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
REA274	2007 Summer II	Residential Appraiser Site Valuation and Cost Approach		Learn theories and methodologies for arriving at residential site values and applying the Cost Approach for new and reproduction factors. The advantages and disadvantages of using the cost methods for estimating accrued depreciation. Reading of	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S

				residential building plans and specifications					
REA275	2018 Summer	Residential Sales Comparison and Income Approaches		Basic understanding and knowledge of the residential sales comparison and income approaches to appraisal including valuation principles and procedures applicable to these approaches. Development of market analysis, including the application and use of matched pairs and capitalization rates, and gross rent multipliers. Includes organizing market data and reconciling value indications.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
REA276AA	2007 Summer II	Residential Report Writing and Case Studies I		Exposes appraiser to realistic writing skills essential to producing realistic appraisal reports in their practice. Includes study of writing techniques, grammar, punctuation, and analytical techniques. Actual report writing and case studies are applied	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
REA281	1993 Fall	Principles of Real Estate Law		Incidents of ownership and use of real estate, legal principles, procedures, and methods of acquisition and disposition of real estate	Prerequisites: A grade of C or better in REA179 or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
REA282	1995 Fall	Real Estate Finance		Study of lending institutions, including banks, savings and loans, conventional loans, Federal Housing Administration (FHA), Veterans Administration (VA) for residential, commercial and industrial property	Prerequisites: A grade of C or better in REA179 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
REA283	1995 Fall	Property Management		Emphasizes realty laws, survey of rentals, housing needs, and rents in Phoenix metropolitan area	Prerequisites: A grade of C or better in REA179 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
REA290AH	2008 Summer I	Real Estate Seminar: Contract Writing		Contract writing skills, techniques, and requirements. Writing of basic real estate contracts, including purchase offers, counter offers, sales listing agreements, and riders	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
REC120	1999 Fall	Leisure and the Quality of Life		Overview of the historical, psychological, social, and cultural aspects of play, leisure, and	Prerequisites: None.	Course Attribute(s): General	Acad	LEC 3.0	S

				recreation and their role in contemporary society. Nature of play and leisure behavior in human development within different cultures and the contribution play, recreation, and leisure make to the quality of life for individuals in today's society.		Education Designation: Social and Behavioral Sciences - [SB]		3.0 3.0	
REC210	2023 Fall	Leisure Delivery Systems		Systematic study of Delivery of Leisure Services in public, commercial, and independent sectors; particular emphasis placed on the urban setting.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
REC230	2023 Fall	Programming of Recreation Services		Foundations for designing, planning, delivering and managing recreational and leisure events. Emphasis on application of recreation programming concepts and practices in a variety of settings and situations for a diversity of participants.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
REC250	2023 Fall	Recreation Leadership		An examination of roles and methods of leadership in leisure services settings. Overview of theories and models of leadership, group dynamics, participant motivation, communication, and face-to-face leadership. Exploration of leadership contexts, including coaching and officiating sports, leading community groups and volunteers, working with persons in various life stages and with varying abilities, and leading different recreation activity areas.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
REL100	2023 Fall	World Religions		The development of various religions from the prehistoric to modern times. Political, economic, social and geographic relationships among world religions. Consideration of both Eastern and Western religions.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts	Acad	LEC 3.0 3.0 3.0	S

						and Design - [HU] Arizona Shared Unique Number SUN#: REL 1101			
REL101	1999 Fall	Introduction to Religion		Various religious expressions of humankind. Focuses on basic religious themes common to religions, such as encounter with the Holy, search for self and community, mystical illumination, spiritual discipline	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
REL151	2012 Summer I	Religion in the Hispanic World		Survey of various religious traditions within Spain and the Spanish-settled world. Considers the impact of and impact on both major world religions and indigenous traditions.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
REL200	2011 Spring	Religion and Film		A course examining the relationships between religion and film, with particular attention to representations of religious beliefs, institutions, and practices in film and their reception by various audiences.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and	Acad	LEC 3.0 3.0 3.0	S

						Design - [HU]			
REL201	2008 Spring	Classics of Western Religions		Academic study of the scriptures of Judaism, Christianity and Islam, and works from later phases of these religious traditions.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
REL202	1999 Fall	Classics of Asian Religions		Academic study of selected works from Hindu, Buddhist, Taoist and Confucian traditions. Study of cultural and concepts of the world, history, culture, and human nature as represented in these works.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
REL203	2013 Summer I	American Indian Religions	AIS213	An examination of the historical and cultural background of diverse lifeways and worldviews belonging to the peoples indigenous to the North American continent over time, including a study of modern day American Indian beliefs and practices.	Prerequisites: A grade of C or better in ENG101, or ENG107, or equivalent.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design -	Acad	LEC 3.0 3.0 3.0	S

						[HU] General Education Designatio n: Literacy and Critical Inquiry - [L]			
REL205	2009 Spring	Religion and the Modern World		Introduction to the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	Course Attribute(s)): General Education Designatio n: Humanitie s, Arts and Design - [HU] General Education Designatio n: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
REL206	2011 Fall	Religion in America		Introduction of the rich tapestry of religious traditions and movements that have helped to shape the United States of America. Investigate how religion has impacted American culture and institutions, and how the United States has in turn transformed long-standing religious traditions.	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Humanitie s, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
REL207	2011 Spring	Ritual, Symbol, and Myth		Introduction to the academic study of religion through the study of myths, symbols, and rituals. Includes methods and theories used by scholars to study the complex subject of religion. Attention to literate and nonliterate cultures.	Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Department or Division.	Course Attribute(s)): General Education Designatio n: Humanitie	Acad	LEC 3.0 3.0 3.0	S

						s, Arts and Design - [HU] General Education Designation: Literacy and Critical Inquiry - [L]			
REL210	2016 Fall	Introduction to Judaism		Introduction to the history, scriptures, practices and impact of Judaism.	Prerequisites: A grade of C or better in ENG101 or ENG107 or permission of Department or Division.	Course Attribute(s): General Education Designation: Historical Awareness - [H] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
REL211	2010 Spring	Introduction to the Old Testament (Hebrew Bible)		The historical context, development, canonization, historical transmission, translation and interpretation of the Hebrew Bible.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
REL212	2017 Fall	Introduction to Islam		Introduction to History, scriptures, practices and impact of Islam.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation:	Acad	LEC 3.0 3.0 3.0	S

						Humanities, Arts and Design - [HU]			
REL213	2010 Summer I	Introduction to the Qur'an		Historical context, development, canonization, historical transmission, translation and Interpretation of the Qur'an.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
REL214	2009 Summer I	Introduction to Mormonism (The Church of Jesus Christ of Latter-day Saints)		History, scriptures, doctrines, and organization of the Church of Jesus Christ of Latter-day Saints as a modern American religious movement	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
REL218	2009 Summer I	Religion and Culture		Examination of the relationship between religion and culture, with a particular emphasis on how culture influences religion and how religion influences culture historically and in modern settings	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
REL223	2009 Summer I	Spiritual But Not Religious		Explore the historical, social, and cultural context for the emergence of spiritual but not religious segment, and examine who identifies with this movement and why. Identify what variety of attitudes and beliefs this group holds, and explore the varieties of private and public spiritual practices and civic engagement this group participates in	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
REL225	2010 Summer II	African-American Religions		Leaders, movements, traditions, and controversies in the religious history of African-Americans	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and	Acad	LEC 3.0 3.0 3.0	S

						Design - [HU]			
REL230	1998 Fall	Religions Of Indigenous Peoples		Sacred story as experienced in ritual and daily practice of various contemporary groups, such as African, Native American, Native Australian, Native South American, Icelandic and Japanese. Power of sacred story to create and re-create religious and social perspectives	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
REL240	2011 Fall	Religion and Science		Consideration of the relationship of religion and science from the beginnings of the historical period to the present. Includes consideration of various contemporary religious perspectives on current scientific issues	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
REL244	1997 Fall	Philosophy of Religion	PHI244	Religious language, the existence of God, miracles, and human destiny	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
REL245	2009 Fall	Eco Religion		Consideration of the perspectives of various religious traditions toward the origins, destiny and value of the earth and its non-human life. Includes exploration of contemporary issues in the interaction of humans with the environment	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
REL248	2011 Fall	Religion, Peace and Violence		Exploration of the understandings and attitudes toward peace, war and violence in religious traditions from the pre-historical to the present. Includes consideration of a variety of religious scripture traditions,	Prerequisites: A grade of C or better in ENG101, or ENG107, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S

				theological and philosophical reflections, and religious symbolism.					
REL250	2012 Spring	Religion in Ireland: Neolithic to Early Medieval		Survey of the Ancient religious traditions of Ireland. Students investigate the beliefs and practices of Irish Religions in the context of their social, economical and political systems from the late Neolithic to the early Medieval periods (4000 BCE-700 CE).	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Historical Awarenes s - [H] General Education Designatio n: Humanitie s, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
REL251	2007 Summer I	History of Religion in Ireland: Medieval to Modern		Development of Christianity in Ireland from 400 AD to present, focusing on political, economic, social, and cultural factors.	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Historical Awarenes s - [H] General Education Designatio n: Humanitie s, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
REL270	1998 Fall	Introduction to Christianity		The nature and content of the Christian tradition developed over time, with overview of the New Testament, major historical trends and figures, major Christian ideas and practices, and survey of denominations.	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Humanitie s, Arts	Acad	LEC 3.0 3.0 3.0	S

						and Design - [HU]			
REL271	2017 Spring	Introduction to the New Testament		Focuses on the origins, development, and selection of the New Testament (NT) books in the Christian religion. Includes authorship, historical reliability, translation and transmission over the centuries, and investigative techniques used by modern scholars. Also considers the varieties of literature contained in the NT, its portrayal of the status of women, and the influence of first-century religious and cultural worldviews on its development.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
REL277	2006 Fall	Mysticism East and West		Mystical traditions of Eastern and Western religions, including Hinduism, Buddhism, Judaism, Christianity, and Islam, as well as shamanism of oral traditions	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
REL282AA	2014 Fall	Service Learning Experience in Religious Studies		Service learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: A grade of C or better in REL100 or permission of Instructor.	REL282A A may be repeated for a total of six (6) REL282 credit hours; may not repeat specific agency assignment for more than three (3) credit hours.	Acad	LAB 1.0 1.0 0.0	L
REL282AB	2014 Fall	Service Learning Experience in Religious Studies		Service learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: A grade of C or better in REL100 or permission of Instructor.	REL282A B may be repeated for a total of six (6) REL282 credit	Acad	LAB 2.0 2.0 0.0	L

						hours; may not repeat specific agency assignme nt for more than three (3) credit hours.			
REL282AC	2014 Fall	Service Learning Experience in Religious Studies		Service learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: A grade of C or better in REL100 or permission of Instructor.	REL282A C may be repeated for a total of six (6) REL282 credit hours; may not repeat specific agency assignme nt for more than three (3) credit hours.	Acad	LAB 3.0 3.0 0.0	L
REL290	2012 Spring	Women and World Religions	WST290	Focus on the role of women in several organized religions and/or religious sects. Study of myth and symbols as they are used to establish, maintain, and enforce sex-roles within specific cultural contexts around the world.	Prerequisites: None.	Course Attribute(s): General Education Designatio n: Global Awarenes s - [G] General Education Designatio n: Humanitie s, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S

REL291	2018 Spring	Religion and Sexuality		Exploration of the perspectives of various religious traditions on human sexuality. Includes consideration of all aspects of sexual practice as well as its incorporation into religious discourse and practice and its impact on social norms and structures.	Prerequisites: None.	REL291 may contain adult content. All students under 18 years old are required to have a signed parental consent form on file, which is on the back of the Under the age of 18 Enrollment Form. Course Attribute(s): General Education Designation: Global Awareness- [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
REL292	2012 Summer I	Goddess Religions	WST292	Introduction to Goddess religions from pre-historic to modern times. Focuses on ancient origins, myths and practices of religions with female deities, their historical replacement by	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

				male religious deities, and their modern re-emergence in neo-Goddess movements.					
REL294	2009 Fall	Religion in Community Service		Consideration of the history and nature of the involvement of religious tradition in transformative social action. Incorporates student involvement in some dimension of community service with subsequent integrative classroom activities.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
REL295	2009 Fall	Capstone: The Story of Belief		Analysis of both the process and results of human belief, in various stages of the human experience. Incorporates materials from multiple disciplines to form an overarching narrative that integrates the variations of human belief	A grade of C or better in any four (4) REL courses.		Acad	LEC 3.0 3.0 3.0	S
REL296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Acad	LAB 1.0 5.0 0.0	Z
REL296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or		Acad	LAB 2.0 10.0 0.0	Z

					career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
REL296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Acad	LAB 3.0 15.0 0.0	Z
REL296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of		Acad	LAB 4.0 20.0 0.0	Z

					instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
REL298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
REL298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
REL298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

RES109	2016 Spring	CPR for Health Care Provider	HCC109	Current American Heart Association standards for one and two rescuer cardiopulmonary resuscitation (CPR) and obstructed airway procedures on the adult, infant, and pediatric victim. Use of automatic, external defibrillation and resuscitation equipment	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
RES118	2021 Fall	Vascular Access for Clinical Practice		Scope of practice and regulations governing vascular access. Anatomy and physiology of the vascular system. Occupational Safety and Health Administration (OSHA) guidelines. Theory and practice of vascular access as designated by Infusion Nursing Standards (INS).	Prerequisites: None. Corequisites: RES130 or permission of the Program Director.		Occ	L+L 1.0 1.5 1.5	T
RES130	2020 Fall	Respiratory Care Fundamentals I		Review of existing clinical data and recommendations. Data required to determine appropriateness of prescribed respiratory care plan. Administration of basic respiratory care therapeutics to include medical gas administration, oxygen therapy administration, and humidity/aerosol therapy administration. Use and maintenance of select respiratory equipment. Use of communication skills during interactions with members of the health care team and patients. Ethical, legal and professional work behaviors.	Prerequisites: Admission into the Respiratory Care program.		Occ	LEC 4.5 3.0 3.0 LAB 0.0 5.0 5.0	T
RES131	2016 Fall	Infection Control for Respiratory Care		Techniques and procedures used by Respiratory Therapist to clean and sterilize equipment and environments, and prevent the transmission of nosocomial and other healthcare related infections.	Prerequisites: Admission into the Respiratory Care program or admission into the Polysomnographic Technology program.		Occ	LEC 1.0 1.0 1.0	S
RES133	2020 Fall	Respiratory Care Clinical Seminar		Clinical application of concurrent respiratory care course work with emphasis on professionalism, medical record evaluation, communication, universal precaution, infection control, patient safety, patient assessment, age related care, cultural competence, routine hospital	Prerequisites: Admission into the Respiratory Care program.		Occ	LEC 2.0 2.0 2.0	S

				regulations, patient education and introduction to respiratory disease and treatment					
RES134	2020 Spring	Respiratory Care Pharmacology I		Pharmacologic principles related to the treatment of acute and chronic pulmonary diseases. Information on mucokinetics, anti-inflammatory, antiasthmatic and anti-infective agents to include mechanism of action, general drug information, side effects, and respiratory care considerations.	Prerequisites: Admission into the Respiratory Care program or permission of the Program Director.		Occ	LEC 2.0 2.0 2.0	S
RES136	2009 Fall	Applied Biophysics for Respiratory Care		Physical principles specific to ventilation. Laws of physics and their relationship to the respiratory system and the application of respiratory care equipment. Role of respiratory care during specific diagnostic procedures. Use of mathematical formulae.	Prerequisites: Admission into the Respiratory Care program.		Occ	LEC 3.0 3.0 3.0	S
RES140	2018 Fall	Respiratory Care Fundamentals II		Continuation of basic respiratory care procedures to include patient assessment and monitoring, chest physiotherapy techniques and pulmonary rehabilitation. Hyperinflation therapy, airway management and introduction to mechanical ventilation. Equipment operation, quality assurance and maintenance. Use of communications skills during interactions with health care team members and patients. Ethical, legal and professional work behaviors.	Prerequisites: Admission into the Respiratory Care program.		Occ	LEC 5.0 3.0 3.0 LAB 0.0 6.0 6.0	T
RES142	2021 Fall	Respiratory Care Clinical I		Clinical application of concurrent respiratory care course work with emphasis on professionalism, medical record evaluation and performance of oxygen therapy, aerosol therapy, chest physiotherapy techniques, hyperinflation therapy, airway management devices and techniques, and observation of mechanical ventilation.	Prerequisites: Admission into the Respiratory Care program.		Occ	LAB 4.0 27.0 0.0	C
RES144	2019 Spring	Introduction to Mechanical Ventilation		Introduction to mechanical ventilation including, technology, impact of the use of technology on patient	Prerequisites: Admission into the		Occ	LEC 1.0	S

				physiology, and how it affects the oxygenation and ventilation ability of the patient.	Respiratory Care program.			1.0 1.0	
RES220	2020 Fall	Respiratory Care Fundamentals III		Advanced respiratory care therapy and assessment techniques to include ventilator setup and management. Diagnostic testing specific to assessment of oxygenation and ventilation and specific respiratory care procedures utilized in critical care.	Prerequisites: Admission into the Respiratory Care program.		Occ	LEC 4.5 3.0 3.0 LAB 0.0 5.0 5.0	T
RES222	2018 Fall	Cardiopulmonary Resuscitation Instructor		Standards of the American Heart Association for Basic Life Support. Procedures and skills for teaching cardiopulmonary resuscitation	Health care provider CPR card.		Occ	L+L 1.0 1.0 1.0	T
RES224	2019 Spring	Pathophysiology for Respiratory Care		Causes of disease and their impact on the human body. Common physiologic effects of disease on body systems. Role of the respiratory therapist and the members of a multidisciplinary health care team in the diagnosis and treatment of disease. Cultural implications in prevention and treatment of disease.	Prerequisites: Admission into the Respiratory Care program.		Occ	LEC 2.0 2.0 2.0	S
RES226	2016 Fall	Respiratory Care Clinical II		Clinical application of all prerequisite respiratory care course work with emphasis on adult critical care and neonatal/pediatric care. Basic and critical care therapeutics, advanced patient assessment and monitoring. Assisting physician during special procedures. Increased responsibility for total patient care, work organization and time management.	Prerequisites: Admission into the Respiratory Care program.		Occ	LAB 4.0 27.0 0.0	C
RES230	2021 Fall	Respiratory Care Fundamentals IV		Advanced respiratory care therapy and assessment techniques to include advanced modes of ventilation, hemodynamic monitoring, performance and interpretation of pulmonary function testing. Assisting physicians during special procedures. Development of advanced respiratory care plans and clinical research techniques. Equipment operation, quality assurance, and maintenance. Use of effective communication skills	Prerequisites: Admission into the Respiratory Care program.		Occ	LEC 4.5 3.0 3.0 LAB 0.0 5.0 5.0	T

				with members of the health care team and patients.					
RES232	2016 Fall	Respiratory Care Clinical III		The study and scientific inquiry of issues and demands placed on business enterprise by owners, customers, government, employees and society. Included are social, ethical and public issues and analysis of the social impact of business responses.	Prerequisites: None.		Occ	LAB 4.0 27.0 3.0	C
RES235	2020 Spring	Respiratory Care Pharmacology II		Pharmacologic principles specific to the care of the respiratory patient in the acute care environment to include the following agents: cardiac, renal, blood pressure, antithrombotic, neuromuscular, anesthetic, sedative, and analgesics. Utilization of evidence-based practice in the treatment and care of patients.	Prerequisites: Admission into the Respiratory Care program or permission of the Program Director.		Occ	LEC 2.0 2.0 2.0	S
RES240	2019 Spring	Respiratory Physiology		Physiology of the respiratory, cardiovascular and renal systems as related to oxygenation and ventilation of the human body. Physiologic mechanisms of breathing. Role of capillary circulation in fluid regulation. Impact of respiratory care procedures on the organ systems.	Prerequisites: Admission into the Respiratory Care program.		Occ	LEC 3.0 3.0 3.0	S
RES270	2020 Spring	Neonatal and Pediatric Respiratory Care		Neonatal and pediatric respiratory care to include development, anatomical and physiological differences, assessment, basic respiratory care procedures, mechanical ventilation and common disorders and conditions. Specific communication skills.	Prerequisites: Admission into the Respiratory Care program or permission of the Program Director.		Occ	LEC 2.0 2.0 2.0	S
RES278	2020 Spring	Vascular Access Review		Scope of practice and regulations governing venipuncture and maintenance of vascular devices specific to the vascular access board certification credentialing examination. Anatomy and physiology of the vascular system. Administration and discontinuation of vascular devices based on best practice guidelines. The use of communication skills for different patient populations	Prerequisites: Current license in a medical profession or permission of the Program Director.		Occ	LEC 2.0 2.0 2.0	S

				and among other healthcare providers. Ethical, legal and professional work behaviors.					
RES280	2020 Spring	Respiratory Care Review		Data interpretation, equipment operation and therapeutic procedures specified for the National Board for Respiratory Care (NBRC) Registered Respiratory Therapist (RRT) examination. Quality control and therapeutic procedures. Pharmacologic agents and treatment of cardiopulmonary collapse. Pulmonary rehabilitation and home care.	Prerequisites: Admission into the Respiratory Care program or permission of the Program Director.		Occ	LEC 2.0 2.0 2.0	S
RES291	2019 Spring	Respiratory Care Advanced Life Support		Airway management for the adult, patient. Endotracheal and suctioning procedures. Usage of specific medications for cardiovascular emergencies. Interpretation of electrocardiogram (ECG) dysrhythmias. Performance of defibrillation and synchronized cardioversion in simulated situations. Procedure to be followed during cardiovascular collapse. Special resuscitation techniques for adult, patients. Current American Heart Association validation in Advanced Cardiac Life Support (ACLS).	Prerequisites: Admission into the Respiratory Care program or permission of the Program Director.		Occ	LEC 1.0 1.0 1.0	S
RES292	2019 Spring	Respiratory Care Pediatric Advanced Life Support		Airway management for the pediatric patient. Endotracheal and suctioning procedures. Usage of specific medications for cardiovascular emergencies. Interpretation of electrocardiograms (ECG) dysrhythmias. Performance of defibrillation and synchronized cardioversion in simulated situations. Procedure followed during cardiovascular collapse in the pediatric patient. Special resuscitation techniques for pediatric patients. Current American Heart Association validation in pediatric advanced life support (PALS).	Prerequisites: Admission into the Respiratory Care program or permission from the Program Director.		Occ	LEC 1.0 1.0 1.0	S

RES297	2020 Spring	Respiratory Care Seminar		Presentation of case scenarios of various patient type and disease processes. Application of general principles of respiratory care to arrive at clinical solutions.	Prerequisites: Admission into the Respiratory Care program or permission of the Program Director.		Occ	LEC 2.0 2.0 2.0	S
RES298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
RES298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
RES298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
RPM125	2024 Fall	Youth Development Programming		Key principles of positive youth development. Skills to become effective youth development professionals and successfully	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T

				develop positive youth development programs with a focus on behavior management, inclusion, and risk management.					
RPM132	2023 Fall	Landscape Management	GCO132	Identification of plants commonly used in Arizona landscaping. Includes trees, shrubs, vines, flowers, and ground covers. Techniques for planting, watering, and fertilizing recreational grounds. Pest control planning.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
RPM135	2024 Fall	Managing Community Recreation Organizations		Effectively manage community recreation organizations focusing on the principles of community development, organizational leadership, evaluation and research methodologies, and justice, equity, diversity, and inclusion in organizations.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
RPM140	2024 Fall	Wilderness First Aid		Patient assessment system, including how to provide effective first aid treatment for common injuries and illnesses in remote outdoor settings, and how to make appropriate evacuation decisions. Cardio-Pulmonary Resuscitation (CPR) and Automated External Defibrillator (AED) training is included.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
RPM145	2024 Fall	Interpretation for Recreation		Foundational competencies of interpretation for recreational activities. Definition of effective interpretation, the skills of interpretation, the purpose of interpretation, and how to provide high quality interpretive programs.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
RPM150AA	2023 Fall	Outdoor Adventure Skills Field Experience		Practical application of camping and outdoor skills including camping, equipment selection and use, cooking, fire building, camp programs, backpacking, and safety.	Prerequisites: None.	RPM150A A may be repeated for a total of four (4) credits.	Occ	LAB 1.0 2.0 2.0	T
RPM150AB	2023 Fall	Outdoor Adventure Skills		Camping and outdoor skills including types of camping, equipment selection and use, cooking and fire building, camp programs, backpacking, and safety.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

RPM155AA	2023 Fall	Canyoneering		Basic canyoneering skills. Includes hydrology, navigation, safety systems, climbing and hiking skills, wading/swimming techniques and flood/weather identification.	Prerequisites: None.	RPM155A A may be repeated for a total of four (4) credits.	Occ	L+L 1.0 2.0 2.0	T
RPM155AB	2023 Fall	Caving		Basic caving skills. Includes cave ecology, navigation, safety systems, lighting systems and equipment selection.	Prerequisites: None.	RPM155A B may be repeated for a total of four (4) credits.	Occ	L+L 1.0 2.0 2.0	T
RPM155AC	2023 Fall	Outdoor Rock Climbing		Basic outdoor rock climbing skills. Includes belaying, climbing techniques, rope systems and anchor systems.	Prerequisites: None.	RPM155A C may be repeated for a total of four (4) credits.	Occ	L+L 1.0 2.0 2.0	T
RPM155AD	2023 Fall	Rowing		Basic rowing skills for a four or eight person shell. Includes physical conditioning, rowing etiquette and safety, boat handling, proper rowing techniques, and teamwork.	Prerequisites: None.	RPM155A D may be repeated for a total of four (4) credits.	Occ	L+L 1.0 2.0 2.0	T
RPM155AE	2023 Fall	Indoor Rock Climbing		Basic indoor rock climbing skills. Includes belaying, climbing techniques, rope systems, anchor systems and safety.	Prerequisites: None.	RPM155A E may be repeated for a total of four (4) credits.	Occ	L+L 1.0 2.0 2.0	T
RPM155AF	2023 Fall	Backpacking		Covers basic skills and techniques of backpacking and the application of these to wilderness travel.	Prerequisites: None.	RPM155A F may be repeated for a total of four (4) credits.	Occ	L+L 1.0 2.0 2.0	T
RPM155AG	2023 Fall	Hiking		Development of safe and enjoyable hiking skills. Essentials and requirements for safe hiking.	Prerequisites: None.	RPM155A G may be repeated for a total of four (4) credits.	Occ	L+L 1.0 2.0 2.0	T
RPM155AJ	2023 Fall	Outdoor Survival		Introduction to and practice of essential skills needed for procuring shelter, water and fire in a wilderness environment.	Prerequisites: None.	RPM155A J may be repeated for a total	Occ	L+L 1.0 2.0 2.0	T

						of four (4) credits.			
RPM155AK	2023 Fall	Leave No Trace Trainer Certification		Emphasis on seven (7) Leave No Trace principles. Skills needed to effectively teach and demonstrate minimum impact techniques and outdoor ethics.	Prerequisites: None.	RPM155A K provides hands-on experiences, held in the outdoors with one overnight camping. Course instructor(s) are certified LNT Master Educators. Students who successfully complete the course become Leave No Trace Trainers and receive a completion certificate through the LNT Center. Basic level of fitness recommended. RPM155A K may be repeated for a total	Occ	L+L 1.0 2.0 2.0	T

						of four (4) credit hours.			
RPM240	2023 Fall	Wilderness First Responder		Introduces and provides practical training in the essentials of medical assistance in backcountry emergencies. Includes patient assessment, first aid for trauma victims, and treatment of other medical emergencies.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
RPM271AC	2023 Fall	Recreational Resources and Facilities Management Internship		Work experience in a recreational resources and facilities setting. Fifteen (15) hours of work weekly. Supervision and evaluation by internship coordinator.	Prerequisites: Permission of Department or Division.	RPM271A C may be repeated for a total of six (6) credit hours.	Occ	LAB 3.0 15.0 0.0	C
RPM282AA	2023 Fall	Volunteerism for Recreation: A Service Learning Experience		Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	RPM282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 1.0 1.0 0.0	L
RPM282AB	2023 Fall	Volunteerism for Recreation: A Service Learning Experience		Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	RPM282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedure	Occ	LAB 2.0 2.0 0.0	L

						s outlined in catalog.			
RPM282AC	2023 Fall	Volunteerism for Recreation: A Service Learning Experience		Service learning field experience within private/public agencies, educational institution, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	RPM282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 3.0 3.0 0.0	L
RPM296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Occ	LAB 1.0 5.0 0.0	Z
RPM296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or		Occ	LAB 2.0 10.0 0.0	Z

					career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
RPM296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Occ	LAB 3.0 15.0 0.0	Z
RPM296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of		Occ	LAB 4.0 20.0 0.0	Z

					instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
RPM298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
RPM298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
RPM298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z

RUS095	2002 Spring	Speak Russian I		Limited vocabulary and grammar to help develop fluency in Russian. Emphasis on speaking skills	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
RUS101	2011 Fall	Elementary Russian I		Basic grammar, pronunciation, and vocabulary of the Russian language. Practice of listening, speaking, reading, and writing skills	Prerequisites: None.	Course Attribute(s): Arizona Shared Unique Number SUN#: RUS 1101	Acad	LEC 4.0 4.0 4.0	S
RUS102	2014 Fall	Elementary Russian II		Continued study of grammar and vocabulary, with emphasis on speaking, reading, and writing skills.	Prerequisites: A grade of C or better in RUS101 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 4.0 4.0 4.0	S
RUS115	1994 Fall	Beginning Russian Conversation I		Basic sentence structure, pronunciation and vocabulary necessary to develop speaking ability in Russian	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
RUS201	2014 Fall	Intermediate Russian		A continuation of RUS102. Review of essential grammar and continued practice and development of reading, writing, and speaking skills.	Prerequisites: A grade of C or better in RUS102 or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN#: RUS 2201	Acad	LEC 4.0 4.0 4.0	S
RUS202	2014 Fall	Intermediate Russian		Continued development of Russian language skills.	Prerequisites: A grade of C or better in RUS201 or permission of Department or Division. Completion of prerequisites within	Course Attribute(s): General Education Designation: Global Awareness	Acad	LEC 4.0 4.0 4.0	S

					the last three years is required.	s - [G] Arizona Shared Unique Number SUN#: RUS 2202			
RUS296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
RUS296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career		Acad	LAB 2.0 10.0 0.0	Z

					interest or with permission of the Instructor.				
RUS296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
RUS296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z

RUS298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
RUS298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
RUS298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
SBS200	1996 Fall	Small Business Operations		In-depth analysis of and individual plan development for the "day-to-day" problems encountered in the operation of a small business. Includes the development of an individual business operations plan including finance, purchasing, production scheduling, maintenance, shipping/receiving, personnel management and insurance/risk	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S

				management requirements. Investigation of daily problems related to inventory control and business expansion					
SBS202	1996 Fall	Small Business Bookkeeping and Tax Preparation		Introduces accounting and record-keeping with emphasis on practical use of financial data for the successful management of a small business. Develops an understanding of the accounting cycle and preparation of financial statements. Includes section on tax consequences and preparation for small business owners. Designed for the non-financially oriented owner/manager of a small business	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
SBS203	1996 Fall	Financing and Cash Management For a Small Business		Planning for and meeting the financial needs of the small business including cash flow planning, identification of financial needs and sources, equity and debt financing, and preparation of loan packages. Participants complete a financial plan for their individual company, with emphasis on cost controls, sales revenue projection, expense allocation, and inventory cost control. Day-to-day operational budgeting also included	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
SBS204	1996 Fall	Small Business Marketing and Advertising		Introduction to marketing and advertising strategies and methods including business image, target market analysis, and customer buying behavior profile. Analysis and selection of advertising/business promotion methods and timing. Methods of deciding product and market segment focus included. Design of an individual marketing and advertising/promotion plan	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
SBS213	1996 Fall	Hiring and Managing Employees		Methods and techniques for managing employees in a small business. Includes supervisor's role, leadership styles, interpersonal communications, staff planning, employee work styles, techniques for handling problem employees, and	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S

				employee motivation. Focuses on real life situations to enable the business owner to gain high performance from their employee team. Includes segment on hiring, new employee orientation, training, benefits, and developing future staffing needs assessment					
SBS214	1996 Fall	Small Business Customer Relations		Developing and improving customer relations for the small business. Planning and delivering quality customer service. Includes topics on attitude of employees, customer perceptions and motivations, handling customer dissatisfaction, and developing customer, supplier, vendor, and distributor loyalty	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
SBS216	2019 Fall	Planning for a Small Business		Relates business management issues to a specific small business through development of an individual study plan. Provides on-site review of business operation by trained instructor.	Prerequisites: A grade of C or better in (SBS200 and SBS204) or SBS220 or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S
SBS217	1996 Fall	Starting/Managing a Home Business		Analysis of the successful operation of a home-based business. Includes study of economic feasibility, practicality, and adjustments for the family. Analysis of the advantages/disadvantages of operating a home based business, versus a "store-front" business. Review of current trends in home business opportunities and franchises. Descriptions of home businesses that have succeeded in local, national, and international markets	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
SBS220	1999 Fall	Internet Marketing for Small Business		Focuses on "e-Commerce"-doing business on the Internet and planning a web site. Topics include: how the Internet can help growth and success of business; examples of successful marketing on the Internet; availability of Internet services; necessary hardware and software for marketing on the Internet; determining	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S

				products/services appropriate for Internet marketing; budget constraints and on-going operations of the Internet site					
SBS221	2015 Fall	Social Media Marketing for Small Business		Focuses on use of Social Media for Small Businesses and Entrepreneurs. Topics include: Use of Social Media, types of Social Media, how Social Media can help growth and success of business; examples of successful Social Media marketing, setting up and deploying various types of Social Media. Options for hardware and software for Social Media, determining products/services appropriate for Social Media, Monetization of Social Media. Budget constraints and on-going monitoring and content management of Social Media.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
SBS230	2001 Fall	Financial and Tax Management for Small Business		An overview of accounting and record-keeping for the successful management of a small business. Develops an understanding of the accounting cycle and preparation of financial statements. Includes section on tax consequences and the choice of legal entity choice based on taxation	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
SBS290AA	2019 Summer	Developing a Practical Small Business Plan		Practical techniques for developing, writing, and implementing a business plan. Designed for the small business owner or manager.	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
SBS298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

SBS298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
SBS298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
SBU200	2016 Summer	Society and Business		The study and scientific inquiry of issues and demands placed on business enterprise by owners, customers, government, employees and society. Included are social, ethical and public issues and analysis of the social impact of business responses	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Social and Behavioral Sciences - [SB]	Occ	LEC 3.0 3.0 3.0	S
SCT100	2012 Spring	Introduction to Sustainable Built Environments		Study of the built environment and implications on human health, the natural environment, and society. Understanding of strategies that achieve sustainable design. Exploration of positive and negative	Prerequisites: None.	SCT100 will not complete the requirements to sit	Occ	LEC 3.0 3.0 3.0	S

				sustainable product attributes. Emphasis on Leadership in Energy and Environmental Design (LEED).		for the LEED Accredited Professional examinations. Additional study is necessary to successfully pass the LEED Green Associates examination.			
SEM104AA	2018 Fall	Secondary Basic Emergency Medical Technology: Patient Assessment		Techniques of emergency medical care in accordance with national and state curriculum. Study of patient assessment.	Prerequisites: Current enrollment in the Phoenix Union High School District Current CPR (Cardiopulmonary Resuscitation) certification from the American Heart Association American Red Cross or other equivalent organization at the Healthcare Provider level meeting the American Heart Association Guidelines 2002 Proof of TB testing or chest x-ray with a negative result within 6 months prior to enrollment.		Occ	L+L 0.5 0.75 0.75	T
SEM104AB	2018 Fall	Secondary Basic Emergency Medical Technology: Basic		Techniques of emergency medical care in accordance with national and state curriculum. Study of the use of mechanical aids for breathing and	Prerequisites: Current enrollment in the Phoenix Union High School District		Occ	L+L 0.5 0.75 0.75	T

		Life Support and Airway Management		circulation, administration of oxygen, and techniques of basic life support (BLS)	and SEM104AA with a grade of C or better.				
SEM104AC	2004 Fall	Secondary Basic Emergency Medical Technology: Soft Tissue and Environmental Emergencies		Techniques of emergency medical care in accordance with national and state curriculum. Study of soft tissue and environmental injuries	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AB with a grade of C or better.		Occ	LEC 0.5 0.5 0.5	S
SEM104AD	2018 Fall	Secondary Basic Emergency Medical Technology: Head, Brain, Neck, and Spine		Techniques of emergency medical care in accordance with national and state curriculum. Study of injuries to the head, brain, neck, and spine.	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AC with a grade of C or better.		Occ	L+L 0.5 0.75 0.75	T
SEM104AE	2004 Fall	Secondary Basic Emergency Medical Technology: Shock		Techniques of emergency medical care in accordance with national and state curriculum. Study of shock, hypotension, and hypoperfusion	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AD with a grade of C or better.		Occ	LEC 0.5 0.5 0.5	S
SEM104AF	2004 Fall	Secondary Basic Emergency Medical Technology: Head, Chest, and Abdomen		Techniques of emergency medical care in accordance with national and state curriculum. Study of injuries to head, chest, abdomen, genitalia, and acute abdominal disorders	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AE with a grade of C or better.		Occ	LEC 0.5 0.5 0.5	S
SEM104AG	2004 Fall	Secondary Basic Emergency Medical Technology: Medical-Legal		Techniques of emergency medical care in accordance with national and state curriculum. Includes the role and scope of the duties and practice of the Basic Emergency Medical Technician. Includes standard of care, consents, and associated statutes, rules, and regulations	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AF with a grade of C or better.		Occ	LEC 0.5 0.5 0.5	S
SEM104AH	2018 Fall	Secondary Basic Emergency Medical Technology: Pediatrics		Techniques of emergency medical care in accordance with national and state curriculum. Study of the human body from birth to 12 years of age. Includes pediatric patient assessment, treatment of medically or traumatically compromised patients,	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AG with a grade of C or better.		Occ	L+L 0.5 1.0 1.0	T

				special hazards and abusive situations, and Sudden Infant Death Syndrome (SIDS)					
SEM104AI	2018 Fall	Secondary Basic Emergency Medical Technology: Respiratory, Behavioral, Environmental		Techniques of emergency medical care in accordance with national and state curriculum. Study of acute and chronic respiratory emergencies, behavioral and environmental emergencies, and diabetic states	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AH with a grade of C or better.		Occ	L+L 0.5 1.0 1.0	T
SEM104AJ	2018 Fall	Secondary Basic Emergency Medical Technology: Gynecologic or Obstetrical Emergencies		Techniques of emergency medical care in accordance with national and state curriculum. Study of gynecologic and obstetrical emergencies	Prerequisites: Currently enrolled in the Phoenix Union High School District and SEM104AI with a grade of C or better.		Occ	L+L 0.5 1.0 1.0	T
SEM104AK	2018 Fall	Secondary Basic Emergency Medical Technology: Musculoskeletal Extremity Injuries		Techniques of emergency medical care in accordance with national and state curriculum. Study of techniques for stabilization and splinting of musculoskeletal injuries in extremities, including participation in two eight-hour clinical rotations through a local emergency department or an ambulance agency scheduled during the semester outside normal class hours	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AJ with a grade of C or better.		Occ	L+L 0.5 1.0 1.0	T
SEM104AL	2018 Fall	Secondary Basic Emergency Medical Technology: Patient Movement and Ambulance Equipment		Techniques of emergency medical care in accordance with national and state curriculum. Study of techniques for lifting, moving, or positioning a patient, and use of ambulance/rescue vehicle equipment	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AK with a grade of C or better.		Occ	L+L 0.5 1.0 1.0	T
SEM104AM	2018 Fall	Secondary Basic Emergency Medical Technology: Triage Management		Techniques of emergency medical care in accordance with national and state curriculum. Study of techniques for triage and disaster management in simulated situations	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AL with a grade of C or better.		Occ	L+L 0.5 0.75 0.75	T
SEM104AN	2018 Fall	Secondary Basic Emergency Medical		Techniques of emergency medical care in accordance with national and state curriculum. Study of techniques	Prerequisites: Current enrollment in the Phoenix Union High School District		Occ	L+L 0.25 0.5 0.5	T

		Technology: Intravenous Fluids		for assessing a patient with intravenous (IV) fluids	and SEM104AM with a grade of C or better.				
SEM104AO	2018 Fall	Secondary Basic Emergency Medical Technology: Evaluations		Techniques of emergency medical care in accordance with national and state curriculum. Includes final written and practical evaluations according to the National Registry of EMTs (NREMT) and Arizona Rules and Regulations	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AN with a grade of C or better.		Occ	L+L 0.5 1.0 1.0	T
SEM106	2018 Fall	Secondary Vehicular Extrication and Patient Stabilization		Participative course designed to enhance the knowledge base of the Emergency Medical Technician (EMT) and to incorporate new knowledge and skills necessary to access, extricate, and care for victims of crash incidents. Provides exposure to scene management skills, including size-up, disentanglement, victim stabilization for single- and multi-victim situations, hazardous materials incidents, integration of local emergency medical services (EMS) for patient assessment and management, and standard operating procedures for selected victim scenarios.	Prerequisites: Current enrollment in the Phoenix Union High School District and (a grade of C or better in SEM104AO or permission of instructor).		Occ	L+L 1.0 2.5 2.5	T
SEM108	2018 Fall	Secondary Trauma Patient Management		Provides exposure to victim assessment, initial treatment, resuscitative techniques, victim stabilization, victim transportation to an emergency care facility, and documentation	Prerequisites: Current enrollment in the Phoenix Union High School District and SEM104AO with a grade of C or better.		Occ	L+L 0.5 2.0 2.0	T
SFS101AA	2005 Summer I	Secondary Introduction to Fire Service Selection: Application Process		Overview of the application and selection processes used by various fire departments and fire service organizations. Identification of the job qualifications and requirements used by various fire departments and fire service organizations	Current enrollment in the Phoenix Union High School District.		Occ	LEC 0.5 0.5 0.5	S
SFS101AB	2005 Summer I	Secondary Introduction to Fire Service Selection:		Major components of written application processes, requirements, preparation of resumes, and their effect on employment prospects	Prerequisites: Current enrollment in the Phoenix Union High School District and SFS101AA with		Occ	LEC 1.0 1.0 1.0	S

		Selection Process and Resumes			a grade of C or better.				
SFS101AC	2005 Summer I	Secondary Introduction to Fire Service Selection: Interview Process		Preparation for the interview to include communications skills, mental preparation techniques, behaviors, and the importance of the interview in the pre-employment process. Role of the applicant and interviewer in the interview process	Prerequisites: Current enrollment in the Phoenix Union High School District and SFS101AB with a grade of C or better.		Occ	LEC 1.0 1.0 1.0	S
SFS101AD	2018 Fall	Secondary Introduction to Fire Service Selection: Fire Station Culture/Observation		Elements of fire service culture and their effects on personal growth and interpersonal relationships. Preparation for on-site experiences at a fire station	Prerequisites: Current enrollment in the Phoenix Union High School District and SFS101AC with a grade of C or better.		Occ	L+L 0.5 1.0 1.0	T
SFS101AE	2005 Summer I	Secondary Introduction to Fire Service Selection: Lifelong Learning		General components of the selection process, the importance of general education, and components of lifelong learning in career choices	Prerequisites: Current enrollment in the Phoenix Union High School District and SFS101AD with a grade of C or better.		Occ	LEC 0.5 0.5 0.5	S
SFS102AA	2004 Fall	Secondary Fire Department Operations: Organization and Dispatch		Introductory fire science course designed primarily for the potential fire department recruit. Includes fire department organization and dispatch.	Prerequisites: Currently enrolled in the Phoenix Union High School District.		Occ	LEC 0.25 0.25 0.25	S
SFS102AB	2004 Fall	Secondary Fire Department Operations: Fire Behavior and Classes		Introductory fire science course designed primarily for the potential fire department recruit. Includes fire behavior, phases of fire, classes of fire, and fire control methods	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AA with a grade of C or better.		Occ	LEC 0.5 0.5 0.5	S
SFS102AC	2018 Fall	Secondary Fire Department Operations: Fireground and Station Safety		Introductory fire science course designed primarily for the potential fire department recruit. Includes firefighter safety on the fireground and in the fire station	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AB with a grade of C or better.		Occ	L+L 0.25 0.5 0.5	T
SFS102AD	2018 Fall	Secondary Fire Department Operations: Self-Contained		Introductory fire science course designed primarily for the potential fire department recruit. Includes self-	Prerequisites: Currently enrolled in the Phoenix Union High School District		Occ	L+L 0.25 0.5 0.5	T

		Breathing Apparatus		contained breathing apparatus (SCBA)	and SFS102AC with a grade of C or better.				
SFS102AE	2018 Fall	Secondary Fire Department Operations: Ropes, Knots, and Hitches		Introductory fire science course designed primarily for the potential fire department recruit. Includes ropes, knots, and hitches.	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AD with a grade of C or better.		Occ	L+L 0.25 0.5 0.5	T
SFS102AF	2018 Fall	Secondary Fire Department Operations: Water Supply and Foam		Introductory fire science course designed primarily for the potential fire department recruit. Includes water supply and use of foam	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AE with a grade of C or better.		Occ	L+L 0.25 0.5 0.5	T
SFS102AG	2018 Fall	Secondary Fire Department Operations: Fire Apparatus		Introductory fire science course designed primarily for the potential fire department recruit. Includes fire apparatus	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AF with a grade of C or better.		Occ	L+L 0.25 0.5 0.5	T
SFS102AH	2018 Fall	Secondary Fire Department Operations: Hoses		Introductory fire science course designed primarily for the potential fire department recruit. Includes standard hose rolls, carries, and evolutions	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AG with a grade of C or better.		Occ	L+L 0.5 2.0 2.0	T
SFS102AI	2018 Fall	Secondary Fire Department Operations: Hand Ladders		Introductory fire science course designed primarily for the potential fire department recruit. Includes standard hand ladder evolutions	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AH with a grade of C or better.		Occ	L+L 0.25 0.5 0.5	T
SFS102AJ	2018 Fall	Secondary Fire Department Operations: Power Tools		Introductory fire science course designed primarily for the potential fire department recruit. Includes power tools.	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AI with a grade of C or better.		Occ	L+L 0.5 0.75 0.75	T
SFS102AK	2018 Fall	Secondary Fire Department		Introductory fire science course designed primarily for the potential	Prerequisites: Currently enrolled in		Occ	L+L 0.25	T

		Operations: Building Construction		fire department recruit. Includes building construction.	the Phoenix Union High School District and SFS102AJ with a grade of C or better.			0.5 0.5	
SFS102AL	2018 Fall	Secondary Fire Department Operations: Forcible Entry		Introductory fire science course designed primarily for the potential fire department recruit. Includes forcible entry	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AK with a grade of C or better.		Occ	L+L 0.5 1.0 1.0	T
SFS102AM	2018 Fall	Secondary Fire Department Operations: Search and Rescue		Introductory fire science course designed primarily for the potential fire department recruit. Includes search and rescue techniques	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AL with a grade of C or better.		Occ	L+L 0.5 1.0 1.0	T
SFS102AN	2018 Fall	Secondary Fire Department Operations: Ventilation		Introductory fire science course designed primarily for the potential fire department recruit. Includes structure ventilation	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AM with a grade of C or better.		Occ	L+L 0.5 1.0 1.0	T
SFS102AO	2018 Fall	Secondary Fire Department Operations: Salvage and Overhaul		Introductory fire science course designed primarily for the potential fire department recruit. Includes salvage and overhaul.	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AN with a grade of C or better.		Occ	L+L 0.25 1.0 1.0	T
SFS102AP	2018 Fall	Secondary Fire Department Operations: Electrical Hazards		Introductory fire science course designed primarily for the potential fire department recruit. Includes electrical hazards.	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AO with a grade of C or better.		Occ	L+L 0.25 0.5 0.5	T
SFS102AQ	2018 Fall	Secondary Fire Department Operations: Radiological Hazards		Introductory fire science course designed primarily for the potential fire department recruit. Includes radiological hazards	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AP with a grade of C or better.		Occ	L+L 0.25 0.5 0.5	T

SFS102AR	2018 Fall	Secondary Fire Department Operations: Special Emergencies		Introductory fire science course designed primarily for the potential fire department recruit. Includes special emergencies	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AQ with a grade of C or better.		Occ	L+L 0.5 1.0 1.0	T
SFS102AS	2004 Fall	Secondary Fire Department Operations: Physical and Mental Fitness		Introductory fire science course designed primarily for the potential fire department recruit. Includes physical and mental fitness	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AR with a grade of C or better.		Occ	LEC 0.5 0.5 0.5	S
SFS102AT	2004 Fall	Secondary Fire Department Operations: Prevention and Investigation		Introductory fire science course designed primarily for the potential fire department recruit. Includes prevention and investigation.	Prerequisites: Currently enrolled in the Phoenix Union High School District and a grade of C or better in SFS102AS.		Occ	LEC 0.5 0.5 0.5	S
SFS102AU	2004 Fall	Secondary Fire Department Operations: Code Violation		Introductory fire science course designed primarily for the potential fire department recruit. Includes code violation	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AT with a grade of C or better.		Occ	LEC 0.25 0.25 0.25	S
SFS102AV	2004 Fall	Secondary Fire Department Operations: Incident Organization and Communication		Introductory fire science course designed primarily for the potential fire department recruit. Includes incident organization and communication	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AU with a grade of C or better.		Occ	LEC 0.5 0.5 0.5	S
SFS102AW	2004 Fall	Secondary Fire Department Operations: Tactical Priorities		Introductory fire science course designed primarily for the potential fire department recruit. Includes tactical priorities	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AV with a grade of C or better.		Occ	LEC 1.0 1.0 1.0	S
SFS102AX	2018 Fall	Secondary Fire Department Operations: Structural Fires		Introductory fire science course designed primarily for the potential fire department recruit. Includes operations applied to structural fires	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AW with		Occ	L+L 0.5 1.0 1.0	T

					a grade of C or better.				
SFS102AY	2018 Fall	Secondary Fire Department Operations: Evaluations		Introductory fire science course designed primarily for the potential fire department recruit. Includes final written evaluation and International Fire Service Accreditation Congress Practical Skills Validation.	Prerequisites: Currently enrolled in the Phoenix Union High School District and SFS102AX with a grade of C or better.		Occ	L+L 0.25 1.0 1.0	T
SFS134AA	2005 Summer I	Secondary Fitness and Conditioning for Firefighters: Physical Requirements		Overview of firefighters' physical fitness, nutrition, and protective clothing	Current enrollment in the Phoenix Union High School District.		Occ	LEC 0.5 0.5 0.5	S
SGT100	2022 Fall	Fundamentals of Surgical Services	HCS100	Preparation for the Certified Registered Central Service Technician (CRCST) role. Central Service work flow, job responsibilities, growth and development in the field, anatomy and physiology, microbiology for Central Service regulations and standards, infection prevention and control, tools for cleaning, decontamination, cleaning and decontamination, disinfection, sterile packaging and storage, processing, sterilization, management of patient care equipment, tracking systems, quality assurance, safety, communication, sterile processing for ambulatory surgery and clinics.	Prerequisites: Admission into the Hospital Central Service Technology or Surgical Technology program or permission of the Program Director.		Occ	LEC 5.0 3.0 3.0 LAB 0.0 6.0 6.0	T
SGT101	2017 Spring	Medical Terminology for Surgical Services	HCS101	Medical Terminology for patient care in surgery related areas. Use of word parts, term spelling, pronunciation and abbreviations related to all surgical specialties.	Prerequisites: None. Corequisites: HCS/SGT100.		Occ	LEC 1.0 1.0 1.0	S
SGT102	2024 Fall	Basic Surgical Instrumentation for Surgical Services	HCS102	History, construction and assembly of surgical instrumentation, categories, instrument set assembly, soft tissue foundation sets, general surgery instrumentation sets.	Prerequisites: Admission into the Hospital Central Service Technology or Surgical Technology program or permission of the Program Director.		Occ	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T

SGT105	2021 Fall	Surgical Technology Pre- Clinical		Direct observation of principles and culture of operating room. Traffic patterns, aseptic techniques, roles, professional surgical team work, instrument handling, safety precautions with regard to exposure, surgical attire, surgical regimen and chain of command.	Prerequisites: A grade of C or better in BIO205 and PHY101.		Occ	LEC 1.0 0.5 0.5 LAB 0.0 1.5 1.5	T
SGT107	2022 Fall	Equipment and Supplies for Surgical Services	HCS107	Introduction to the surgical equipment and supplies used in surgical services areas.	Prerequisites: Admission into the Hospital Central Service Technology or Surgical Technology program or permission of the Program Director.		Occ	L+L 1.0 1.0 1.0	T
SGT135	2023 Fall	Instrument Handling I		Classification of surgical instruments for general surgery including basic laparoscopy, appendectomy, breast procedures, cholecystectomy, colon resection, gastrectomy, hemorrhoidectomy, herniorrhaphy, laparoscopic Nissen fundoplication, liver resection, splenectomy, thyroidectomy, Whipple procedure. Common and proper names for instruments in general surgery. Introduction to aseptic technique for handling instruments. Specific uses, handling, and care for surgical instruments in general surgery.	Prerequisites: None. Corequisites: HCS/SGT102 or permission of Program Director.		Occ	L+L 3.0 4.0 4.0	T
SGT152	2018 Fall	Advanced Surgical Instruments for Surgical Services	HCS152	Surgical specialty instrumentation care and assembly of instruments to include plastic, gynecologic, urologic, basic bone and joint, head and neck, neurosurgery, cardiovascular and thoracic, microscopic, endoscopes, stapling guns, and robotics procedures.	Prerequisites: A grade of C or better in HCS/SGT102.		Occ	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T
SGT155	2018 Fall	Instrument Handling II		Classification of specialized surgical instruments for surgical specialties including obstetric and gynecological procedures, genitourinary, otorhinolaryngology, orthopedic, oral and maxillofacial, plastic and reconstructive, ophthalmic,	Prerequisites: A grade of C or better in SGT135.		Occ	L+L 1.0 2.0 2.0	T

				cardiothoracic, peripheral vascular, and neurosurgery. Common and proper names for instruments in the surgical specialties. Specific uses, handling, and care for surgical instruments in the surgical specialties.					
SGT156	2020 Fall	Hospital Central Service Practicum for Surgical Technology		Short-term supervised student observation and application for 40 hours of central service theory and laboratory skills. Exposure to limited compilation of case carts, building of instrument trays, distribution of supplies, sterilization and inventory.	Prerequisites: A grade of C or better in HCS/SGT102 or permission of Program Director. Corequisites: HCS/SGT152 or permission of Instructor.		Occ	LAB 0.5 1.5 0.0	C
SGT165	2018 Fall	Surgical Procedures I		General Surgery arena procedures. Pre-operative procedures to include patient's charts and consent forms. Common diagnostic procedures prior to surgery. Operating room admission procedures and interview, charting, and checklist. Purpose of the post anesthesia care unit (PACU). Impact of specific chronic illnesses on body functions. Issues pertaining to death and dying. Special considerations for the pediatric and geriatric patient.	Prerequisites: A grade of C or better in SGT135.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 6.0 6.0	T
SGT180	2022 Fall	Pharmacology for Surgical Technology I		Role of surgical technologist in safe handling of drugs according to operating room policies and procedures. Uses and classification of drugs. Federal and state pharmacy regulations applicable to the surgical patient. Complications and safety issues during topical, local, regional, and general anesthesia. Antibiotic, diagnostic agent, and hemostatic agent administration in the surgical specialties of obstetrics, peripheral vascular, orthopedics, and oncology.	Prerequisites: A grade of C or better in SGT135.		Occ	L+L 2.0 3.0 3.0	T
SGT200	2017 Fall	Operating Room Practicum I		Roles and responsibilities of operating room personnel focusing on the surgical technician under the direction of the clinical facility preceptor demonstrating the role of the surgical	Prerequisites: A grade of C or better in SGT165.		Occ	LAB 1.0 6.0 0.0	C

				technologist and scope of practice and standard of recommendations.					
SGT205	2017 Fall	Operating Room Practicum II		Reinforcement and broadening of knowledge and skills of the surgical technologist required for pre-operative, intra-operative and post-operative care of the patient undergoing general surgery and specialties.	Prerequisites: A grade of C or better in SGT200.		Occ	LAB 2.0 12.0 0.0	C
SGT208	2018 Fall	Perioperative Case Management		Pre-operative procedures to include patient's charts and consent forms. Common diagnostic procedures prior to surgery. Operating room admission procedures and interview, charting, and checklist. Purpose of the post anesthesia care unit (PACU). Impact of specific chronic illnesses on body functions. Issues pertaining to death and dying. Special considerations for the pediatric and geriatric patient. Includes a clinical observation experience.	Prerequisites: A grade of C or better in SGT105.		Occ	LEC 1.0 0.5 0.5 LAB 0.0 1.5 1.5	T
SGT210	2018 Fall	Surgical Procedures II		General surgical procedures to include ophthalmic, plastic surgery, reconstruction with grafting, obstetric, gynecological, genitourinary, otorhinolaryngology, oral and maxilla facial surgery with lasers and scopes. Surgical techniques as applied to major body systems, anatomical structures. Related abbreviations and usage in the pre-operative, intra-operative and post-operative areas of surgical technology. Surgical care provided by the surgical technologist in the perioperative arena.	Prerequisites: A grade of C or better in SGT165.		Occ	LEC 4.0 2.0 2.0 LAB 0.0 6.0 6.0	T
SGT220	2017 Fall	Operating Room Practicum III		Intermediate level reinforcement and broadening of knowledge and skills of the surgical technologist required for pre-operative, intra-operative and post-operative care of the patient undergoing general surgery and specialties.	Prerequisites: A grade of C or better in SGT205.		Occ	LAB 3.0 15.0 0.0	C
SGT225	2013 Summer I	Operating Room Practicum IV		Advanced level reinforcement and broadening of knowledge and skills of the surgical technologist required for	Prerequisites: A grade of C or better in SGT220.		Occ	LAB 3.0	C

				pre-operative, intra-operative and post-operative care of the patient undergoing general surgery and specialties.				15.0 0.0	
SGT227	2013 Summer I	Operating Room Practicum V		Continued advanced level reinforcement and broadening of knowledge and skills of the surgical technologist required for pre-operative, intra-operative and post-operative care of the patient undergoing general surgery and specialties.	Prerequisites: A grade of C or better in SGT225.		Occ	LAB 3.0 15.0 0.0	C
SGT230	2018 Fall	Surgical Technology Materials Update	PON230	Current surgical technology materials. Surgical specialty modifications, introductions, technology. Specific uses, handling, application to surgical procedures.	Prerequisites: Currently enrolled in Surgical Technology or Surgical Technology for the Operating Room Nurse program, or Certified Surgical Technologist, or permission of Program Director.		Occ	LEC 2.0 2.0 2.0 LAB 1.0 3.0 3.0	T
SGT260	2024 Fall	Surgical Procedures III		Specialized surgical procedures of orthopedic, peripheral vascular, cardiovascular, thoracic, and neurosurgery to include open and minimally invasive, including a range of techniques, interventional radiology, robot assisted, lasers, and scopes. Surgical techniques as applied to major body systems, anatomical structures. Related abbreviations and usage in the pre-operative, intra-operative, and post-operative surgical arenas. Care provided by the surgical technologist in each phase of surgery.	Prerequisites: A grade of C or better in SGT210.		Occ	LEC 2.0 1.0 1.0 LAB 0.0 3.0 3.0	T
SGT275	2023 Spring	Certification Examinations Preparation		Preparation for the National Surgical Technology Certification Examination. Review of the content specifications, techniques for preparation and review of current literature determined by the Liaison Council on Certification for Surgical Technologists. Exploration of career possibilities.	Prerequisites: A grade of C or better in SGT210 or permission of the Program Director.		Occ	L+L 2.0 3.0 3.0	T

SGT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
SGT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
SGT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
SLC201	2010 Spring	Introduction to Linguistics		Introduction to the study of language. Study of the nature and diversity of world languages, linguistic structures and functions of language, language variation, pragmatics and the learning/acquisition of first and second languages.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design -	Acad	LEC 3.0 3.0 3.0	S

						[HU] General Education Designatio n: Social and Behavioral Sciences - [SB]			
SLC202	2019 Spring	Introduction to Literary and Cultural Theory		Introduction to the study of literary and cultural theory. Interdisciplinary approaches to analyzing literary texts for context, meaning and form. Assessment of various literary genres which may include fiction, film, visual arts and performance.	Prerequisites: A grade of C or better in ENG101 or ENG107. Corequisites: ENG102 or ENG108.	Course Attribute(s): General Education Designatio n: Humanitie s, Arts and Design - [HU] General Education Designatio n: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
SLP104	2021 Fall	Speech, Language, and Hearing Development		Provides an overview of the normal development of human communication. Emphasis on normative processes involved in speech, language, and hearing development. Examines the impact of multicultural, multi-linguistic environments on speech and language development.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SLP205	2021 Fall	Introduction to Communication Disorders		Explore a variety of communication disorders in children and adults that speech-language pathologists diagnose and treat. Provides an introduction to typical versus disordered communication, the causes, characteristics of a variety of speech, language, hearing, and swallowing disorders, and the effects	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				that they can have on those afflicted with them.					
SLP210	2021 Fall	Speech and Hearing Anatomy and Physiology		Provides a review of the anatomical systems of respiration, phonation, articulation and resonance and hearing and their relationship to pathologies of speech, language and hearing. Includes basic physiology of systems and the neuroanatomy and neurophysiology related to speech and hearing production mechanisms. Examines the physical characteristics of sound and the structure and function of the human auditory system.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SLP212	2021 Fall	Language Disorders and Rehabilitation		Examines the nature, causes and treatment of language disorders across the lifespan. Focuses on developmental and acquired language disorders in childhood through adulthood. Includes multicultural/multilingual issues and therapy observations.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SLP214	2021 Fall	Speech Sound Disorders and Phonetics		Provides an overview of English phonetics and phonetic transcription including practice with transcription of normal and disordered speech at the entry-level using the International Phonetic Alphabet (IPA). Examines the nature, causes, characteristics and treatment of a variety of speech sound disorders across the lifespan including phonological processes/disorders, articulation, dysarthria, apraxia, and other organic disorders. Includes multicultural/multilingual issues and therapy observations.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SLP215	2021 Fall	Speech, Language, Hearing Disorders and Rehabilitation		Examines the nature, causes, and treatment of a variety of speech, language, hearing disorders. Focuses on fluency, voice, hearing, and swallowing/feeding disorders. Expands on language disorders in adolescents and young adults including metacognition and cognitive	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				strategies. Includes therapy observations.					
SLP217	2021 Fall	Clinical Ethics and Documentation		Examines issues associated with professional and ethical behaviors, including the Speech Language Pathology Assistant (SLPA) scope of practice as specified by state and national governing bodies for the profession. Focuses on indirect activities related to client treatment including creation of lessons, implementation of treatment, and documentation. Includes an overview of universal safety precautions, confidentiality, compliance with laws/regulations, and service delivery options in both the educational and health care systems.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SLP218	2021 Fall	Behavior Management		Examines a variety of behavior principles, strategies and techniques used with individuals with communication disorders. Focuses on setting up a positive learning environment, increasing motivation and attention, and using Positive Behavioral Interventions and Supports (PBIS) with clients.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SLP235AA	2021 Fall	Speech-Language Pathology Practicum		Practical experience in completing clinical fieldwork as a Speech Language Pathology Assistant (SLPA). Provides opportunity to create lesson plans, implement therapy, record client performance and maintain appropriate documentation for a variety of speech-language disorders in a therapeutic environment. A minimum of 50 hours for the clinical interaction experience in this course is required.	Prerequisites: None.	SLP235A A may be repeated for a total of two (2) credit hours.	Occ	L+L 1.0 1.0 1.0	T
SLP235AB	2021 Fall	Speech-Language Pathology Practicum		Practical experience in completing clinical fieldwork as a Speech Language Pathology Assistant (SLPA). Provides opportunity to create lesson plans, implement therapy, record client performance and maintain appropriate	Prerequisites: None.		Occ	L+L 2.0 2.0 2.0	T

				documentation for a variety of speech-language disorders in a therapeutic environment. A minimum of 100 hours for the clinical interaction experience in this course is required.					
SLP240	2021 Fall	Assistive Technology and Augmentative Communication		Examines the use of Assistive Technology (AT) and Augmentative Alternative Communication (AAC) systems within various environments to support functional interaction with individuals with disabilities. Focuses on a variety of guiding principles, strategies, accommodations, modifications, computer hardware and software as well as low-tech and high-tech AT and AAC systems. Provides guidelines for need identification and implementation of AT and AAC systems within therapeutic and natural environments.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SLP242	2021 Fall	Low Incidence Disabilities		Examines disabilities with a focus on treatment techniques for low incidence disabilities. Focuses on blindness, deafness, moderate to severe intellectual disability, complex health issues, serious motor and physical impairment, multiple disabilities, genetic syndromes, moderate to severe autism, and social emotional disabilities. Includes therapy observations.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SLP296WA	2001 Summer I	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled		Occ	LAB 1.0 5.0 0.0	Z

					in at least one class which is related to students major or career interest or with permission of Instructor.				
SLP296WB	2001 Summer I	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
SLP296WC	2001 Summer I	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with		Occ	LAB 3.0 15.0 0.0	Z

					permission of Instructor.				
SLP296WD	2001 Summer I	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
SLP298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
SLP298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				combined to maximize student development.					
SLP298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
SOC101	2013 Spring	Introduction to Sociology		The systematic study of social behavior and human groups, particularly the influence of culture, socialization, social structure, stratification, social institutions, differentiation by region, race, ethnicity, sex/gender, age, class, and socio/cultural change upon people's attitudes and behaviors.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB] Arizona Shared Unique Number SUN#: SOC 1101	Acad	LEC 3.0 3.0 3.0	S
SOC105	2013 Summer I	Introduction to American Indian Studies	AIS105	Introduction to political, economic, and social structures of American Indian Nations. Provides overview of American Indian tribal cultures prior to contact, the impact of European contact, and the influence of western social systems on tribal nations.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SOC110	2018 Fall	Drugs and Society		Provides a sociological understanding of drug use and policy. Examines social-cultural factors contributing to use and abuse and effects of commonly used drugs on the individual and society. Reviews current theories and research relating to drug use. Introduces extensive coverage of various methods and	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral	Acad	LEC 3.0 3.0 3.0	S

				statistics for measuring drug use. Explores prevention, intervention, and treatment. Examines public policies concerning drug related issues.		Sciences - [SB]			
SOC112	1999 Spring	American Indian Policy	AIS112	Reviews United States government policies and their impact on American Indian sovereignty. Examines historic, legal, economic, and social issues regarding Indian policies and how they impact Indian Nations and individual Indians. Studies historical as well as contemporary policies created by the Federal Government that define the trust relationship between the United States government and Indian Nations	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SOC130	2022 Fall	Human Sexuality		Sociological study of human sexuality. Course examines the social forces that shape a culture's sexual practices, attitudes, and inequalities. Topics include the social construction of sexuality, social change, sexual identities, sexual inequalities, institutional influence and regulation of sexuality, as well as current trends and issues surrounding human sexuality.	Prerequisites: None.	SOC130 contains mature adult content and some of the topics discussed may be considered "controversial" or "taboo" in some societies and cultures. Students are expected to be able to engage with the content in a respectful and open-	Acad	LEC 3.0 3.0 3.0	S

						mind ed way.			
SOC141	2003 Spring	Sovereign Indian Nations	AIS141	Explores the sovereign status of American Indians as it relates to social relationships, traditions, and culture of American Indians. Reviews historic relations with non-Indian societies, the development of federal Indian law, tribal governments and their functions. Examines treaty rights, environmental issues, public policy, economic development, other current issues, and contemporary social problems	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Cultural Diversity - [C] General Education Designatio n: Historical Awarenes s - [H] General Education Designatio n: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
SOC143	1995 Summer I	Sociology of African American Problems		Social, economic, political and domestic problems encountered by African Americans in typical urban environments. Emphasis on the specific dynamics of adjustment, survival and empowerment of urban African Americans	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SOC157	2016 Fall	Sociology of Families and Relationships		Systemic analysis of socio-cultural and historical origins of modern families in the U.S. and their importance, major challenges and changing trends. Explores being single, dating and attraction, love, cohabitation and marriage, family planning and parenthood, conflict and crisis within the family, and divorce.	Prerequisites: None.	General Education Designatio n: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
SOC160	2017 Summer	American Indian Law	AIS160	Analyzes the legal system of the United States Government as it applies to American Indian Nations. Examines how United States legal institutions have impacted Indian	Prerequisites: None.	Course Attribute(s)): General Education Designatio	Acad	LEC 3.0 3.0 3.0	S

				sovereignty. Units of analysis include the development of Indian law, United States Supreme Court decisions, Congressional Acts, treaty rights and the development of tribal governments. Focuses on legal institutions that have abridged the property rights of Indian Nations.		n: Cultural Diversity - [C] General Education Designation: Historical Awareness - [H]			
SOC180	2016 Fall	Social Implications of Technology		Effects of development and implementation of technology on society. Historical and multi-cultural comparisons of this process, current concerns addressed, and prospects for the future analyzed.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SOC212	2024 Fall	Gender and Society		A sociological exploration of the way culture shapes and defines gender in contemporary U.S. society. Major emphasis on gender roles, gender stereotypes, power and the relationship between gender and other intersecting social identities such as race, ethnicity, class, and sexual identity.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
SOC220	2018 Spring	Sport and Society		Applies the sociological perspective to the study of sport. Emphasizes how hierarchies of race, class, and gender in the United States impact the sport experience of fans, athletes, and athletic administrators, as well as how professional, collegiate, and amateur sports have at times played a transformative role in society.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social & Behavioral Science - [SB]	Acad	LEC 3.0 3.0 3.0	S
SOC241	2017 Spring	Race and Ethnic Relations		Examines how the social construction of race shapes social interaction and social institutions. Explores the consequences of power, privilege and	Prerequisites: None.	Course Attribute(s): General Education	Acad	LEC 3.0 3.0 3.0	S

				oppression among major ethnic and racial groups in the United States.		Designation: Cultural Diversity - [C] General Education Designation: Social and Behavioral Sciences - [SB] Arizona Shared Unique Number SUN#: SOC 2215			
SOC245	2017 Fall	Social Deviance		A sociological analysis of social deviance including a review of theories, individual and social implications of deviant labeling, and relevant aspects of social control.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SOC251	2024 Fall	Social Problems		An overview of the sociological study of social problems and inequalities confronting the United States. Emphasis is placed on what is known about social problems, recent trends, causes and consequences, individual and societal responses, and how social policies might solve social problems. Issues to be examined may include: health care, education, family, economy, environment, drug and alcohol abuse, crime and violence, among others.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SOC253	2017 Spring	Social Class and Stratification		Focus on the class structure of American Society. Effects of social class position on individual life chances. The occurrence, causes and consequences of poverty in the United States.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SOC265	2009 Summer I	Sociology of Aging		Examination of the aging process from post adolescence through old age from interdisciplinary and multicultural perspectives. Emphasis	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

				on positive participation in major social institutions and the amelioration of age-related problems					
SOC266	2018 Spring	Sociology Through Film		Examines movie-going and the experience of spectatorship. Studies how motion pictures reflect, influence, and are influenced by American culture and societal institutions. Explores the role of the movie industry as a vehicle for social commentary, analysis, and criticism.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social & Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
SOC270	2023 Fall	The Sociology of Health and Illness		The scientific study of the social patterns and social factors (e.g., class, race, gender, religion, ethnicity, kinship networks, marriage, educational status, age, place, and cultural practices) that influence health. The roles of health care providers and patients, various modalities of treatment, prevention and access, and the history, current status, future trends in medicine and medical technology, and complementary health care approaches from a cross-cultural and global sociological perspective.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SOC282AA	2014 Summer	Service-Learning Experience in Sociology		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: A grade of C or better in SOC101 and permission of Instructor.	SOC282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
SOC282AB	2014 Summer	Service-Learning Experience in Sociology		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: A grade of C or better in SOC101 and	SOC282A B may be repeated	Acad	LAB 2.0	L

					permission of Instructor.	for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.		2.0 0.0	
SOC282AC	2014 Summer	Service-Learning Experience in Sociology		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: A grade of C or better in SOC101 and permission of Instructor.	SOC282A C may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
SOC296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with		Acad	LAB 1.0 5.0 0.0	Z

					permission of the Instructor.				
SOC296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 2.0 10.0 0.0	Z
SOC296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
SOC296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and	Prerequisites: Completion of at least		Acad	LAB 4.0	Z

				employers to accomplish an outcome related to the career objectives of the students.	twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.			20.0 0.0	
SOC298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
SOC298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
SOC298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an	Prerequisites: Permission of		Acad	LAB 3.0	Z

				atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			3.0 0.0	
SPA055	1991 Fall	Fundamentals of Spanish Grammar		Introduces basic concepts of Spanish pronunciation and grammar for successful study of the language. Emphasis on grammar, sentence structure, and practice of simple dialogues	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
SPA085AA	1998 Fall	Speedy Spanish I		Basic vocabulary and grammar to develop conversational skills in Spanish. Emphasis on speaking skills	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
SPA085AB	2014 Fall	Speedy Spanish II		Intermediate development of vocabulary and grammar to develop conversational skills in Spanish. Emphasis on speaking skills.	Prerequisites: A grade of C or better in SPA085AA. Completion of prerequisites within the last three years is required.		Acad	LEC 1.0 1.0 1.0	S
SPA085AC	2014 Fall	Speedy Spanish III		Advanced development of vocabulary and grammar to develop conversational skills in Spanish. Emphasis on speaking skills.	Prerequisites: A grade of C or better in SPA085AB. Completion of prerequisites within the last three years is required.		Acad	LEC 1.0 1.0 1.0	S
SPA095	2002 Spring	Speak Spanish I		Limited vocabulary and grammar to help develop fluency in Spanish. Emphasis on speaking skills	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
SPA096	2014 Fall	Speak Spanish II		Limited vocabulary and grammar to help develop fluency in Spanish. Emphasis on speaking skills.	Prerequisites: A grade of C or better in SPA095. Completion of prerequisites within the last three years is required.		Acad	LEC 1.0 1.0 1.0	S
SPA097	2014 Fall	Speak Spanish III		Limited vocabulary and grammar to help develop fluency in spoken	Prerequisites: A grade of C or better		Acad	LEC 1.0	S

				Spanish. Emphasis on speaking skills; some written work required.	in SPA096. Completion of prerequisites within the last three years is required.			1.0 1.0	
SPA101	2022 Summer	Elementary Spanish I		Basic grammar, pronunciation and vocabulary of the Spanish language. Includes the study of the Spanish-speaking cultures. Practice of listening, speaking, reading, and writing skills	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] in combination with SPA102. Arizona Shared Unique Number SUN#: SPA 1101	Acad	LEC 4.0 4.0 4.0	S
SPA101AA	2022 Summer	Elementary Spanish I		Basic grammar, pronunciation and vocabulary of the Spanish language. Includes the study of the Spanish-speaking cultures. Practice of listening, speaking, reading, and writing skills.	Prerequisites: None.	Course Attributes: General Education Designation: Global Awareness - [G]	Acad	L+L 4.0 5.0 5.0	T
SPA102	2022 Summer	Elementary Spanish II		Continued study of grammar and vocabulary of the Spanish language and study of the Spanish-speaking cultures. Emphasis on speaking, reading, and writing skills.	(A grade of C or better in SPA101 or SPA101AA), or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Global Awareness - [G] in combination with SPA102. Arizona Shared Unique Number	Acad	LEC 4.0 4.0 4.0	S

						SUN#: SPA 1102			
SPA102AA	2022 Summer	Elementary Spanish II		Continued study of grammar and vocabulary of the Spanish language and study of the Spanish-speaking cultures. Emphasis on speaking, reading, and writing skills.	(A grade of C or better in SPA101 or SPA101AA), or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attributes: General Education Designation: Global Awareness - [G]	Acad	L+L 4.0 5.0 5.0	T
SPA103	1994 Fall	Elementary Spanish for Spanish Speakers I		Review of basic Spanish grammar and pronunciation. Emphasis on reading and writing skills in Spanish. For native speakers needing review of essential language skills	Spanish-speaking or permission of Department or Division.		Acad	LEC 4.0 4.0 4.0	S
SPA104	2014 Fall	Elementary Spanish for Spanish Speakers II		Continued review of grammatical problems in speaking and writing and reading in Spanish.	Prerequisites: A grade of C or better in SPA103 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 4.0 4.0 4.0	S
SPA109	2023 Fall	Law Enforcement Spanish I		Conversational and written Spanish for law enforcement personnel. Emphasis on basic sentence structure, pronunciation and vocabulary used in common job-related situations.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SPA111	2014 Fall	Fundamentals of Spanish		Accelerated study of elementary Spanish for students with previous Spanish coursework. Includes basic Spanish grammar, pronunciation, vocabulary and the study of the Spanish-speaking cultures. Emphasis on speaking, listening, reading, and writing skills.	Prerequisites: A grade of C or better in SPA101 or SPA101AA or SPA115 or SPA115AA or two years of high school Spanish or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 4.0 4.0 4.0	S

SPA115	2007 Summer I	Beginning Spanish Conversation I		Basic pronunciation, vocabulary, sentence structures, and cultural awareness, necessary to develop speaking and listening skills in Spanish	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SPA115AA	2018 Fall	Beginning Spanish Conversation I		Conversational Spanish. Basic sentence structure, pronunciation and vocabulary necessary to develop speaking ability in Spanish. Designed for students seeking speaking and listening abilities with little emphasis on grammar	Prerequisites: None.		Acad	L+L 3.0 4.0 4.0	T
SPA116	2014 Fall	Beginning Spanish Conversation II		Continued study of basic pronunciation, vocabulary, sentence structures, and a cultural awareness necessary to develop speaking and listening skills in Spanish.	Prerequisites: A grade of C or better in SPA115 or SPA115AA or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
SPA116AA	2018 Fall	Beginning Spanish Conversation II		Continued development of speaking and listening skills for effective communication in Spanish.	Prerequisites: A grade of C or better in SPA115 or SPA115AA or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	L+L 3.0 4.0 4.0	T
SPA117	2023 Fall	Health Care Spanish I		Basic conversational Spanish for health care workers or students. Emphasis on basic sentence structure, pronunciation and vocabulary used in health care settings.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SPA117AA	2023 Fall	Health Care Spanish I: Introduction		Part one of basic medical terminology in Spanish for health care personnel or students. Emphasis on pronunciation and vocabulary needed in health care setting, including coverage of routine information gathered	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S

SPA117AB	2023 Fall	Health Care Spanish I: Intermediate		Part two of basic Spanish communication for health care personnel or students. Emphasis on pronunciation and vocabulary needed in health care settings, including medications and their use.	Prerequisites: A grade of C or better in SPA117AA or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 1.0 1.0 1.0	S
SPA118	2023 Fall	Health Care Spanish II		Basic conversational Spanish for health care personnel or students. Emphasis on basic sentence structure, pronunciation, and vocabulary used in health care settings.	Prerequisites: A grade of C or better in SPA117 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
SPA119	2006 Spring	Spanish for Educational Settings I		Basic conversational Spanish for teachers, counselors, administrators and other school personnel. Emphasis on basic sentence structure, pronunciation and vocabulary used in educational settings	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SPA120	2014 Fall	Spanish for Educational Settings II		Basic conversational Spanish for teachers, counselors, administrators and other school personnel. Continuation of SPA119, expanding into secondary and post- secondary educational settings. Emphasis on basic sentence structure, pronunciation and vocabulary.	Prerequisites: A grade of C or better in SPA119 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
SPA130	2022 Spring	Spanish for First Responders and 911 Emergencies		Beginning conversational Spanish for first responders and 911 emergency personnel. Emphasis on basic sentence structure, pronunciation, vocabulary, and cultural awareness necessary to develop Spanish speaking and listening skills in medical and non-medical emergencies.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SPA201	2014 Fall	Intermediate Spanish I		Continued study of essential Spanish grammar and Spanish-speaking cultures. Continued practice and	Prerequisites: A grade of C or better in SPA102, or	Course Attribute(s): General	Acad	LEC 4.0	S

				development of reading, writing, and speaking skills in Spanish. Emphasis on fluency and accuracy in spoken Spanish.	SPA102AA, or SPA111, or permission of Department or Division. Completion of prerequisites within the last three years is required.	Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN#: SPA 2201		4.0 4.0	
SPA202	2014 Fall	Intermediate Spanish II		Review of grammar, continued development of Spanish language skills with continued study of the Spanish-speaking cultures.	A grade of C or better in SPA201, or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Global Awareness - [G] Arizona Shared Unique Number SUN#: SPA 2202	Acad	LEC 4.0 4.0 4.0	S
SPA203	2021 Fall	Spanish for Spanish-Speaking Students I		Designed for Spanish-speaking students. Emphasis on written composition, grammar review, punctuation and spelling, literature and conversation. May be taken in lieu of SPA201.	Prerequisites: Permission of Instructor or Department Chair.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Global Awareness - [G]	Acad	LEC 4.0 4.0 4.0	S
SPA204	2021 Fall	Spanish for Spanish-Speaking Students II		Designed for Spanish-speaking students. Advanced study of Spanish grammar, composition, literature, and conversation.	Prerequisites: A grade of C or better in SPA203 or SPA201 or permission of Department or Division. Completion	SPA204 may be taken in lieu of SPA202. Course Attribute	Acad	LEC 4.0 4.0 4.0	S

					of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Global Awareness - [G]			
SPA205	2017 Summer	Spanish for Medical Interpretation I		Introduction to Spanish interpretation for medical interpreters. Covers code of ethics, national standards and medical interpreter's responsibilities as well as cultural awareness and legal issues. Interpretation for first responders included.	Prerequisites: A grade of B or better in SPA202 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
SPA206	2017 Summer	Spanish for Medical Interpretation II		Continuation of Spanish interpretation for medical interpreters. Medical vocabulary and translation relating to human anatomy and physiology emphasized.	Prerequisites: A grade of B or better in SPA205 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
SPA217	2014 Fall	Spanish for Business Communication		Continued development of Spanish language skills with emphasis on topics related to conducting business in Spanish-speaking cultures.	Prerequisites: A grade of C or better in GBS151 and (SPA201 or permission of Department or Division). Completion of prerequisites within the last three years is required.		Acad	LEC 4.0 4.0 4.0	S
SPA225	2014 Fall	Intermediate Spanish Conversation I		Continued study of vocabulary, sentence structures, and cultural awareness necessary to improve speaking and listening skills in	Prerequisites: A grade of C or better in SPA102 or SPA102AA or		Acad	LEC 3.0 3.0 3.0	S

				Spanish. Emphasis on fluency and accuracy in spoken Spanish.	SPA116 or SPA116AA or permission of Department or Division. Completion of prerequisites within the last three years is required.				
SPA226	2014 Fall	Intermediate Spanish Conversation II		Continued study of vocabulary, sentence structures, and cultural awareness necessary to improve speaking and listening skills in increasingly complex Spanish. Emphasis on fluency and moderate accuracy in spoken Spanish.	Prerequisites: A grade of C or better in SPA201 or SPA225 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
SPA235	2014 Fall	Advanced Spanish Conversation I		Continued development of skills in conversational fluency. Class conducted completely in Spanish.	Prerequisites: A grade of C or better in SPA226 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
SPA236	2014 Fall	Advanced Spanish Conversation II		Further development of skills in conversational fluency. Grammar presented only to clarify student errors.	Prerequisites: A grade of C or better in SPA235 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
SPA237	2024 Fall	Spanish Legal Terminology		Emphasis on legal terminology, including specific vocabulary and linguistic structures. Conducted entirely in Spanish.	Prerequisites: A grade of C or better in SPA202, or equivalent, or permission of Instructor.		Acad	LEC 3.0 3.0 3.0	S
SPA241	2014 Fall	Spanish and Spanish-American Film I		Analysis of Spanish and Spanish-American film as art form and as social commentary. Includes documentary, biography, and films	Prerequisites: A grade of C or better in SPA202 or permission of	Course Attribute(s): General Education	Acad	LEC 3.0 3.0 3.0	S

				based on works of literature. All films, coursework, class participation, and oral and written reports conducted in Spanish.	Department or Division. Completion of prerequisites within the last three years is required.	Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]			
SPA242	2014 Fall	Spanish and Spanish-American Film II		Analysis and critique of movies presented in the Spanish language and produced by cinematographers from Bolivia, Paraguay, Venezuela, Ecuador, Puerto Rico, Costa Rica and the Mexican independent film producers. Includes documentary, biography, and works of literature and their film versions as art form and social commentary.	Prerequisites: A grade of C or better in SPA241 or permission of Department or Division. Completion of prerequisites within the last three years is required.	All SPA242 coursework, class participation, oral and written reports are in Spanish. Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
SPA251	2014 Fall	Spanish Civilization		An introduction to Spanish civilization with a focus on the culture of Spain. History of Spain and each period's cultural manifestations, including economic, sociological, and political	Prerequisites: Four years of high school Spanish or a grade of C or better in SPA202 or		Acad	LEC 3.0 3.0 3.0	S

				factors as well as cultural artifacts such as architecture, literature, visual arts, music, and gastronomy.	permission of Department or Division. Completion of prerequisites within the last three years is required.				
SPA265	2014 Fall	Advanced Spanish I		Introduction and study of Spanish and Spanish-American literature. Selected readings from most Spanish-speaking countries. All discussions, oral reports, and written assignments are in Spanish.	Prerequisites: A grade of C or better in SPA202 or permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
SPA266	2014 Fall	Advanced Spanish II		Further study of Spanish and Spanish-American literature. Reading selections from most Spanish-speaking countries. All oral reports, discussions, and written reports in Spanish. Graduated level of difficulty from the literature studied in SPA265.	Prerequisites: A grade of C or better in SPA265 or permission of Department or Division. Completion of prerequisites within the last three years is required.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
SPA282AA	2014 Summer	Service-Learning Experience in Spanish		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	SPA282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
SPA282AC	2014 Summer	Service-Learning Experience in Spanish		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	SPA282A C may be repeated for a total of six (6)	Acad	LAB 3.0 3.0 0.0	L

						credit hours. Standard grading available according to procedures outlined in catalog.			
SPA296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
SPA296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least		Acad	LAB 2.0 10.0 0.0	Z

					one class which is related to student's major or career interest or with permission of the Instructor.				
SPA296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
SPA296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with		Acad	LAB 4.0 20.0 0.0	Z

					permission of the Instructor.				
SPA298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
SPA298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
SPA298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
SPE341	2023 Fall	Special Education: Language Development and Disorders		Language development and language acquisition of typical children and children with disabilities. Includes language characteristics of children with a variety of disabilities and the creation of enhanced learning experiences in the classroom. Covers augmentative and alternative	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of		Acad	LEC 2.0 2.0 2.0	S

				communication tools. Also compares language disorders and language differences.	Department or Division.				
SPE343	2023 Fall	Special Education: Effective Collaboration and Communication Practices		Focuses on principles of effective collaboration, consultation, and co-teaching to improve programs, services, and outcomes for students with disabilities and their families. Topics include interpersonal communication strategies and collaboration tools for working with diverse groups of people.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.		Acad	LEC 1.0 1.0 1.0	S
SPE376	2023 Fall	Special Education: Classroom Management and Behavioral Analysis		Application of research-based strategies in classroom management and behavioral analysis. Focuses on the classroom as a multidimensional environment in which principles of design, communication, management, and resources determine behavioral management success. Emphasis on positive behavior supports, group dynamics, student motivation, discipline models, and current research findings related to classroom management and behavior analysis.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division. EDU221 recommended but not required.	SPE376 requires field experience in a K-12 classroom.	Acad	LEC 3.0 3.0 3.0	S
SPE409	2023 Fall	Special Education: Law, Policy, and Practice		Overview of special education legislation and litigation as it applies in K-12 settings. Examines federal and state level statutes and regulations, including the Individuals with Disabilities Education Act (IDEA), the Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act of 1973. Covers regulations governing assessment and evaluation procedures, due process, mediation, manifestation determination, and disciplinary action. Emphasis on the development, implementation, and evaluation of individual education plans (IEPs), free appropriate public education (FAPE), and least restrictive environment (LRE). Focuses on students' and parents' legal rights and schools' responsibilities regarding special	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division. EDU222 recommended but not required.		Acad	LEC 3.0 3.0 3.0	S

				education. The Council for Exceptional Children (CEC) Code of Ethics will be examined.					
SPE422	2023 Fall	Special Education: Mild to Moderate Disabilities		Application of research-based instruction in special education, including lesson planning, instructional design, assessment accommodations, modification, strategies, and materials appropriate for teaching individuals with mild to moderate disabilities in a variety of educational settings. Covers characteristics, etiologies, legal and educational provisions.	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	SPE422 requires an approved field experience.	Acad	LEC 4.0 4.0 4.0	S
SPE424	2023 Fall	Special Education: Assessment and Eligibility of Exceptional Learners		Examines eligibility criteria for students to receive and maintain special education and related services. Overviews nondiscriminatory assessments and adaptive behavior measurements, including educational achievement tests, standardized diagnostic tests, and intelligence tests, as well as the concepts, laws, current issues, and procedures that relate to formal and informal assessment of students. Analyzes the relationship between assessment data and instruction.	Prerequisites: Formal acceptance to a Maricopa Community College undergraduate state approved teacher preparation program or permission of Department or Division.		Acad	LEC 4.0 4.0 4.0	S
SPE477	2023 Fall	Student Teaching: Special Education (Mild to Moderate Disabilities)		Supervised student teacher practicum in a K-12 special education setting. Students are expected to demonstrate appropriate assessment strategies, develop lesson plans, implement instructional strategies, and utilize behavior management systems and programs. Emphasis on the provision of individualized instruction to meet the requirements of Individuals with Disabilities Education Act (IDEA).	Prerequisites: Formal acceptance to a Maricopa Community College state approved teacher preparation program or permission of Department or Division.	SPE477 requires a minimum of eight (8) weeks, full-time classroom instruction.	Acad	LAB 6.0 6.0 0.0	Z
SPH241	2014 Fall	Spanish and Latin American Film in Translation		A survey of Spanish and Spanish-American film as art form and as social commentary. Includes documentary, biography, and films based on works of literature. Coursework, class participation, and	Prerequisites: None.	Course Attribute(s): General Education Designation: Global	Acad	LEC 3.0 3.0 3.0	S

				oral and written reports conducted in English.		Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]			
SPH245	1996 Fall	Hispanic Heritage in the Southwest		A survey of Hispanic heritage in the Southwest. Cultural and social institutions and their contribution to the development of the region and its heritage	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SPH296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
SPH296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals		Acad	LAB 2.0 10.0 0.0	Z

					(students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
SPH296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
SPH296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor.		Acad	LAB 4.0 20.0 0.0	Z

					Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
SPH298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
SPH298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
SPH298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

SPT150	2024 Fall	Introduction to Sports Management		Introduction to the field of sports management, including sports marketing and sales, facility management, event management, professional sports, public relations, intercollegiate and interscholastic athletics.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SPT265	2023 Fall	Theory of Coaching		Discusses the impact of sports on the American culture, legal liabilities of coaching, principles of a coaching philosophy, the role of teaching skill, physical conditioning and nutrition in coaching, components of team/group psychology and dynamics, motivation and aggression in sport.	Prerequisites: None. SPT281281 suggested but not required.		Occ	LEC 3.0 3.0 3.0	S
SPT265BA	2023 Fall	Baseball Theory of Coaching		Reviews the principles, philosophy, strategies and theory of coaching baseball, as a competitive sport.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SPT265BB	2023 Fall	Basketball Theory of Coaching		Reviews the principles, philosophy, strategies and theory of coaching basketball, as a competitive sport.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SPT265GO	2023 Fall	Golf Theory of Coaching		Reviews the principles, philosophy, strategies and theory of coaching golf, as a competitive sport.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SPT265SB	2023 Fall	Softball Theory of Coaching		Reviews the principles, philosophy, strategies and theory of coaching softball, as a competitive sport.	Prerequisites: None.	SPT265S B may not be repeated for credit.	Occ	LEC 3.0 3.0 3.0	S
SPT271	2023 Fall	Sports Medicine Foundations		Introduction to sports medicine knowledge, techniques, and careers. Exploration of current trends in athletic injury prevention, management and rehabilitation including wound care, taping, wrapping, bracing, splinting and protective equipment.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SPT273	2023 Fall	Athletic Training: Advanced Wrapping and Taping Techniques		Expands and enhances practical uses of basic taping and wrapping skills. Hands-on experience in the use of braces, athletic taping, and elastic wraps to care for athletic injuries	Prerequisites: A grade of C or better in SPT271 or permission of Instructor.		Occ	LEC 2.0 2.0 2.0	S

SPT275	2024 Fall	Rehabilitation and Therapeutic Interventions in Sports Medicine		Exploration of current trends in the basic and advanced methodologies used in the rehabilitation of athletic injuries. Incorporates demonstrations of injury-appropriate strength and fitness training and therapeutic exercise techniques.	Prerequisites: A grade of C or better in SPT271 or permission of Department or Division.		Occ	L+L 3.0 4.0 4.0	T
SPT281	2023 Fall	Methods of Coaching		Comprehensive overview of the art and science of coaching, including development of coaching philosophy, techniques of sport pedagogy, practical application of sports skill teaching, sport physiology, nutrition, sport/team management and self management.	Prerequisites: None. PED265 suggested but not required.		Occ	LEC 3.0 3.0 3.0	S
SPT281BA	2023 Fall	Baseball Methods of Coaching		Overview of the art and science of coaching baseball including: identifying various coaching styles, elements of effective communication, methods and techniques of coaching baseball.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SPT281GO	2023 Fall	Golf Methods of Coaching		Overview of the art and science of coaching golf including: identifying various coaching styles, elements of effective communication, methods and techniques of coaching golf.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SPT281SO	2023 Fall	Soccer Methods of Coaching		Overview of the art and science of coaching soccer including: identifying various coaching styles, elements of effective communication, methods and techniques of coaching soccer.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
SSH111	2012 Fall	Sustainable Cities		Introduction to the field of sustainability and exploration of the practices leading to the development of sustainable cities. Explores the concept of sustainable development of cities within local, regional, and global contexts.	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Global Awarenes s - [G] General Education Designatio n: Humanitie s, Arts and	Acad	LEC 3.0 3.0 3.0	S

						Design - [HU] General Education Designation: Social and Behavioral Sciences - [SB]			
SSH298AA	2014 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
SSH298AB	2014 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
SSH298AC	2014 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

STO100	2008 Summer I	Introduction to Storytelling		Introduction to the art of storytelling. Finding, crafting and telling traditional, fact-based, and personal stories in and out of class	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
STO100AA	2008 Summer I	How to Tell Traditional Stories		Introduction to the art of storytelling. Finding, crafting and telling a traditional story in and out of class	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
STO100AB	2008 Summer I	How to Tell Fact- Based Stories		Introduction to the art of storytelling. Finding, crafting and telling fact-based stories in and out of class	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
STO100AC	2008 Summer I	How to Tell Personal Stories		Introduction to the art of storytelling. Finding, crafting and telling personal stories in and out of class	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
STO101	2002 Spring	Storytelling for Literacy		Introduction to the natural process from oral to written language and the role of storytelling in both. Focus will be on the development and sharing of oral and written stories	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
STO145	2018 Fall	Digital Storybook	ART145 COM145	Enables students to find and develop a narrative representing an aspect of their personal histories. Use of digital technology to produce and archive a storybook	Prerequisites: None.		Acad	L+L 1.0 2.0 2.0	T
STO200AA	2002 Summer I	Biographical Storytelling		Exploration of the art and craft of finding, developing and telling biographical stories	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
STO202	2013 Spring	Bilingual Storytelling		Introduction to bilingual storytelling as a genre. Research, develop, and craft bilingual stories. Find appropriate contexts and venues for telling. Assist in the integration and application of bilingual storytelling to the learning environment in the classroom.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
STO205	2012 Fall	Establishing a Family Storytelling Tradition		Developing a family storytelling tradition. Finding, crafting, telling and preserving the stories of family members past and present, including the traditional stories associated with the family's cultural heritages. Sharing stories in family and community contexts.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

STO250AA	2007 Fall	Benefiting from the Storytelling Festival Experience		Observation of master storytellers in performance. Structured observation, inquiry, and reflection in the context of a major national storytelling festival.	Prerequisites: None.	STO250A A may be taken up to 3 times for different festival experiences.	Acad	LEC 1.0 1.0 1.0	S
STO273	2018 Summer	The Biblical Storytelling Tradition		Introduction to the history and practice of biblical storytelling. Overview of the oral foundation of biblical texts and teachings. Utilization of exegesis to develop and adapt stories for modern audiences. Researching, developing, and crafting Bible stories for telling. Telling biblical stories in family, community, and spiritual settings.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
STO279	2020 Fall	Creating and Telling Fact-Based Historical Stories	HIS279	Creating and telling fact-based stories and stories from history.	Prerequisites: A grade of C or better in EDU/HUM/STO292.	HIS/STO279 may be repeated for a total of six (6) credit hours.	Acad	LEC 3.0 3.0 3.0	S
STO282AA	2014 Summer	Service-Learning Experience in Storytelling		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	STO282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
STO282AB	2014 Summer	Service-Learning Experience in Storytelling		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	STO282A B may be repeated for a total of six (6)	Acad	LAB 2.0 2.0 0.0	L

						credit hours. Standard grading available according to procedures outlined in catalog.			
STO282AC	2014 Summer	Service-Learning Experience in Storytelling		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	STO282AC may be repeated for a total of six (6) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
STO283	2008 Fall	The African Storytelling Tradition		Introduction to the history and practice of storytelling in Africa. Overview of African myths, legends, folktales, parables, and fables. Great story tellers and story collectors of the past and present. Researching, developing, and crafting African stories for telling	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
STO284	2012 Fall	Storytelling and Music		Introduction to the role and importance of music in storytelling. Research, craft, and tell stories that include percussion, vocal, or instrumental elements.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
STO285	2012 Fall	Creating/Performing Solo/Collaborative Works	THP285	Developing, rehearsing, and performing solo and collaborative works for fringe festivals and other storytelling and theatre venues.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
STO286	2001 Fall	Using Storytelling in a Variety of Settings		The application of storytelling and storytelling activities in the world of health care, business, parks, museums, hospitals, and education	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

STO287	2018 Summer	Norse and Scandinavian Storytelling Tradition		Overview of Norse and Scandinavian myths, legends, folktales. Impact of Norse and Scandinavian myth on popular culture. Researching, developing, and crafting Norse and Scandinavian stories for telling, game development, structuring graphic novels and other applications.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
STO288	2019 Spring	Telling Sacred Stories from Around the World		Introduction to sacred stories as a genre. Researching, developing, and crafting traditional and personal sacred stories. Finding appropriate applications and venues for telling.	Prerequisites: None.	Course Attribute(s)): General Education Designatio n: Global Awarenes s - [G]	Acad	LEC 3.0 3.0 3.0	S
STO289AA	2023 Fall	Using Storytelling in Educational Settings		The application of storytelling and storytelling activities in educational settings.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
STO289AB	2001 Fall	Using Storytelling in Business Settings		The application of storytelling and storytelling activities in business settings	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
STO289AC	2001 Fall	Using Storytelling in Healing Settings		The application of storytelling and storytelling activities in healing settings	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
STO289AD	2001 Fall	Using Storytelling in Interpretive Settings		The application of storytelling and storytelling activities in interpretive settings including museums, gardens, parks, and zoos	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
STO289AE	2012 Fall	Using Storytelling in Toastmasters		The application of storytelling and storytelling activities in speaking and leadership groups such as Toastmasters.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
STO289AF	2012 Fall	Using Storytelling in Family Settings		The application of storytelling and storytelling activities in family settings, such as family story nights, holidays, and reunions. Emphasis on finding and sharing family stories.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
STO289AG	2012 Fall	Using Storytelling in Advocacy Settings		The application of storytelling and storytelling activities in contexts of advocacy and civic engagement. Focus on stories that reflect the goals and aims of a civic organization.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S

STO290	2016 Spring	The Irish Storytelling Tradition		Introduction to the history and practice of storytelling in Ireland. Overview of Irish myths, legends, folktales, and humorous tales. Great story tellers and story collectors of the past and present. Researching, developing, and crafting Irish stories for telling	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G]	Acad	LEC 3.0 3.0 3.0	S
STO291AA	2018 Fall	Storytelling Circle		Designed to provide opportunities for students to practice and develop critical listening and storytelling skills.	Prerequisites: A grade of C or better in EDU/HUM/STO292 or permission of Instructor.	STO291A A may be repeated for a total of three (3) credits.	Acad	L+L 1.0 1.5 1.5	T
STO292	2023 Fall	The Art of Storytelling	EDU292 HUM292	Explore the art and origin of storytelling. Provide a variety of storytelling techniques, styles and exercises to enhance the delivery of telling stories. Assist in the integration and application of storytelling to the learning environment in the classroom.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
STO293	2001 Fall	The Art of Storytelling II		Further exploration of the art of storytelling. Provide opportunities for the expansion of storytelling skills and a deeper appreciation of storytelling and its applications	Prerequisites: A grade of C or better in EDU292 or HUM292 or STO292.		Acad	LEC 3.0 3.0 3.0	S
STO294	2001 Fall	Multicultural Folktales	EDU294 ENH294	Study of multicultural folktales, exploring the impact of the oral tradition in American society and showing classroom applications	Prerequisites: None.	General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S

STO295	2021 Spring	Traditional Storytelling Around the World		Introduction to traditional storytelling practices around the world. Understanding the roles and techniques of traditional storytellers. Telling traditional stories ethically.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Global Awareness - [G]	Acad	LEC 3.0 3.0 3.0	S
STO297	2001 Summer I	Creating and Telling Personal Stories		Exploration of the art and craft of finding, developing and telling personal stories.	Prerequisites: A grade of C or better in EDU292 or HUM292 or STO292.		Acad	LEC 3.0 3.0 3.0	S
STO298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to m	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
STO298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to m	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
STO298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an	Prerequisites: Permission of		Acad	LAB 3.0	Z

				atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to m	Program Director or Instructor.			3.0 0.0	
SUN101	2005 Spring	Basic Math for Carpenters		Mathematical concepts and operations for the carpentry trade. Addition, subtraction, multiplication and division of whole, decimal, fractional and metric numbers. Linear, angular, circular, surface and volume measurements. Basic geometry	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	S
SUN104	2005 Spring	Site Preparation I		Trade terms, local zoning and building ordinances, and plot plan layout. Installation of batter boards and establishing building lines. Set up and use of a builder's level.	Prerequisites: (Registered apprentice status and a grade of C or better in SUN101) or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
SUN105	2011 Fall	Reading Plans and Elevations		Construction drawings, lines, symbols, dimensions and abbreviations. Specifications and site and plot plan development. Includes plan and elevation reading exercises.	Prerequisites: (Registered apprentice status and a grade of C or better in ABC123) or permission of the Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	S
SUN108	2005 Spring	Wall Systems, Tilt-Up		History and evolution of tilt-up construction processes. Tilt- up versus concrete block or poured in place concrete walls. Testing of concrete and preparation of the slab for tilt-up. Grading and finishing concrete slabs and forming tilt-up panels. Lifting and bracing panels.	Prerequisites: (Registered apprentice status and a grade of C or better in SUN103) or permission of the Apprenticeship Coordinator.		Occ	LEC 1.5 1.5 1.5	S
SUN109	2010 Spring	Site Preparation II		Basic field engineering including terminology, methods of land description and the use of tools and instruments. Government land survey system procedures and specific procedures for field surveying.	Prerequisites: Registered apprentice status and a grade of C or better in SUN101 and SUN104 or permission of the		Occ	LEC 2.0 2.0 2.0	S

					Apprenticeship Coordinator.				
SUN110	2005 Spring	Forming		Concrete formwork including terminology, layout, materials and tolerances. Construction forms for columns, footings, walls, beams and stairs.	Prerequisites: (Registered apprentice status and a grade of C or better in SUN101) or permission of the Apprenticeship Coordinator.		Occ	LEC 1.5 1.5 1.5	S
SUN110AA	2010 Spring	Forming (Loose) Fundamentals		Cushion cone and cam-lock forming system. Various form and scaffold bracket systems. Forming teams, snap ties, aluma gang forms. Lumber versus Laminated Veneer Lumber (LVL) strongbacks.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
SUN111	2002 Fall	Introduction to Light Equipment		Use, operation and maintenance of light equipment used in the construction trades. Types, assemblies, operator qualifications, controls, safety precautions, operating procedures, and maintenance of aerial lifts, skid steer loaders, trenchers, generators, compressors, compactors and forklifts	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
SUN112	2010 Spring	Framing Fundamentals		Wall and ceiling layout procedures. Assembly and erection of exterior walls using common materials and methods. Masonry construction wall framing techniques and use of metal studs.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
SUN201	2005 Spring	Reinforcing Concrete		Use of reinforced concrete and reinforcing steel. Reinforced concrete in specific settings. Reinforcing steel; bar supports, bar lists, fabrication options, cutting and bending, tying, splicing and placing bars	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.5 1.5 1.5	S
SUN202	2010 Spring	Horizontal and Vertical Formwork		Concrete forming and shoring systems and accessories, panel and gang wall patented wall forming systems. Column patented forms, flying form systems and culvert and roof support systems. Slipforming, paving and architectural forms. Application and construction methods for various types of forming and form	Prerequisites: (Registered apprentice status and a grade of C or better in SUN201) or permission of the Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	S

				hardware systems for walls, columns, and stairs as well as slip forms, climbing forms, and shaft forms. Overview of assembly, erection and stripping of gang forms.					
SUN207	2005 Spring	Metal Studs and Drywall		Installation of metal framing members and gypsum dry wall. Gypsum ceiling products and installation procedures	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 1.5 1.5 1.5	S
SUN208	2005 Spring	Construction Plans and Elevations		Construction drawings, plans and elevations. Lines, symbols, dimensions and abbreviations. Specifications and site and plot plan development. Includes plan and elevation reading exercises.	Prerequisites: (Registered apprentice status and a grade of C or better in SUN105) or permission of the Apprenticeship Coordinator.		Occ	LEC 1.5 1.5 1.5	S
SUN298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
SUN298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
SUN298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an	Prerequisites: Permission of		Occ	LAB 3.0	Z

				atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			3.0 0.0	
SUS100	2011 Summer I	Introduction to Sustainability		Introduction to the basic concepts of sustainability. Includes challenges of land, ocean, and resource management as well as the built environment. Also covers connections between global, local and personal sustainability challenges and responses at each level.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G]	Acad	LEC 3.0 3.0 3.0	S
SUS110	2016 Spring	Sustainable World		Introduction to the field of sustainability and exploration of the interaction between human and natural global systems. Framework for analyzing and investigating the global challenges such as land use change, competition for water and other natural resources, and renewable energy concerns and crises.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
SUS230	2014 Fall	Practical Skills for Sustainability Problem Solving		Introduction to professional skills in sustainability problem solving. Emphasis on four skill areas: teamwork basics, project management tools and professional behaviors, self-directed learning techniques, and stakeholder engagement. Also covers techniques for identification of challenges and conflict resolution within a sustainability project.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
SUS231	2014 Fall	Careers in Sustainability		Introduction to career pathways in sustainability. Exploration of career paths, development of interview skills, and resume creation covered in addition to articulation of personal interests and values related to careers in sustainability. Also includes	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S

				an introduction to networking skills and job search assistance.					
SUS232	2017 Fall	Professional Skills in Sustainability Practice		Introduction to professional skills in sustainability through interpersonal competence. Emphasis on teamwork, project management, stakeholder engagement, communication, and continuous learning.	Prerequisites: A grade of C or better in SUS110 and SSH111 and (ENG101 or ENG107).		Acad	LEC 3.0 3.0 3.0	S
SWU101AA	2023 Fall	Self-Awareness for Paraprofessional Helpers		Explores the paraprofessional helper's feelings and values, and encourages examination of one's own strengths, weaknesses and coping skills within the context of the helping relationship.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
SWU101AB	2023 Fall	Awareness of Others for Paraprofessional Helpers		Applies the paraprofessional helper's insights about themselves within the context of knowledge about client populations, diversity, ethics, and beginning stages of assessment.	Prerequisites: A grade of C or better in SWU101AA.		Acad	LEC 1.0 1.0 1.0	S
SWU101AC	2023 Fall	Intervention Assessment for Paraprofessional Helpers		Introduction for the paraprofessional helper to intervention techniques, beginning communication skills, community resources, and development of action plans.	Prerequisites: A grade of C or better in SWU101AB.		Acad	LEC 1.0 1.0 1.0	S
SWU130	2023 Fall	Addictions and Substance Use Disorders		Sociological, psychological and physiological aspects of addictive behaviors and chemical abuse. Consideration of a variety of treatment programs offered in community agencies.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SWU171	2021 Spring	Introduction to Social Work		Analysis of contemporary social welfare services and professional social work.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SWU181	2018 Fall	Economics: A Social Issues Perspective		Introduction to economic principles through the lens of contemporary social issues for social work and related fields.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
SWU182	2023 Fall	A Social Services Perspective of Government		Government and the role of policy practice in advancing social and economic justice and effective social services within the southwest.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social-Behavioral	Acad	LEC 3.0 3.0 3.0	S

						Sciences - [SB]			
SWU183	2023 Fall	Introductory Ethics: A Social Service Perspective		Introductory exploration of ethics from a historical and multicultural perspective viewed through the lens of contemporary social issues.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
SWU225	2023 Fall	Statistics for Social Research/Justice and Government		Introductory course in descriptive and inferential statistics for social research. Designed to serve as preparation for interpreting and understanding research related to Justice and Government related agencies.	Prerequisites: A grade of C or better in MAT092 or completion of higher level mathematics course.	Course Attribute(s): General Education Designation: Computer/Statistics/Quantitative Applications - [CS]	Acad	LEC 3.0 3.0 3.0	S
SWU250	2013 Fall	Mindfulness for Stress Management		Introduction to the theory, research and practice behind mindfulness and stress management as it relates to quality of life issues and professional self-care. Focus on maintaining a healthy lifestyle and managing personal/professional stress by incorporating evidence based research on nutrition, mindfulness, communication, positive psychology, exercise, environmental factors contributing to wellness and disease; immune system support, activity management and developing practices that facilitate maintaining living in balance.	Prerequisites: None.	Course Attribute(s): General Education Designation: Social-Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
SWU258	2023 Fall	Victimology and Crisis, a Social Services Perspective		A social work response to victimology, working with the criminal justice system, evidence-based techniques in crisis intervention, and the importance of a multicultural and	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

				global perspective. Includes a therapeutic approach to topics such as sexual assault, family violence, post-traumatic stress disorder, stress management, natural disasters, effective coping skills, appropriate community resources, and the responsiveness of the justice system.					
SWU275AA	2023 Fall	Case Report Writing I		Documentation skills for human service helpers. Includes privacy and legal issues.	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
SWU282AA	1993 Fall	Volunteerism for Social Work: A ServiceLearning Experience		Service-learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	SWU282A A may be repeated for a total of six (6) credit hours; may not repeat specific assignment for more than three (3) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
SWU282AB	1993 Fall	Volunteerism for Social Work: A ServiceLearning Experience		Service-learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	SWU282A B may be repeated for a total of six (6) credit hours; may not repeat specific	Acad	LAB 2.0 2.0 0.0	L

						assignment for more than three (3) credit hours. Standard grading available according to procedures outlined in catalog.			
SWU282AC	1993 Fall	Volunteerism for Social Work: A ServiceLearning Experience		Service-learning field experience within private/public agencies, and citizen volunteer groups.	Prerequisites: Permission of Instructor.	SWU282A C may be repeated for a total of six (6) credit hours; may not repeat specific assignment for more than three (3) credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 3.0 3.0 0.0	L
SWU285	2023 Fall	Social Services Seminar		Special topics in social services with an emphasis on current issues not covered in other Social Work courses.	Prerequisites: None.	SWU285 may be repeated for a total of four 4 credit hours.	Acad	LEC 1.0 1.0 1.0	S

SWU291	2023 Fall	Social Service Delivery Systems		Purposes, structures, and delivery systems of human service agencies. Includes 40 hours of volunteer experience in local human service agencies.	Prerequisites: A grade of C or better in SWU171, or permission of Department or Division or Corequisites: SWU171.		Acad	LEC 3.0 3.0 3.0	S
SWU295	2023 Fall	Effective Helping in a Diverse World		Introduction to professional helper communication skills with respect to cross-cultural practice and diversity issues, in a social work setting.	Prerequisites: None. SWU171 suggested but not required.	Course Attribute(s): General Education Designation: Cultural Diversity [C] General Education Designation: Social-Behavioral Sciences [SB]	Acad	LEC 3.0 3.0 3.0	S
SWU296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
SWU296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and	Prerequisites: Completion of at least		Acad	LAB 2.0	Z

				employers to accomplish an outcome related to the career objectives of the students.	twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.			10.0 0.0	
SWU296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
SWU296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain		Acad	LAB 4.0 20.0 0.0	Z

					a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
SWU298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
SWU298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
SWU298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z

				for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
TDR102	2006 Fall	Construction Soft Skills I: Workplace Skills		First impressions, relationship building, and team work. Diversity in the work place. Individual and group activities.	Prerequisites: Registered apprentice status or permission of Apprenticeship Coordinator.		Occ	LEC 1.0 1.0 1.0	S
TDR104	2006 Fall	Construction Soft Skills II: Listening and Speaking		Effective listening, speaking, reading and writing skills for the construction industry. Communication process: channel, receiver and feedback. Communication issues, problems, and noise. Business and form writing for the construction industry. On-the-job site factors. Individual and group activities	Prerequisites: A grade of C or better in TDR102.		Occ	LEC 1.0 1.0 1.0	S
TDR106	2006 Fall	Construction Soft Skills III: Resolving Workplace Issues		Stress recognition and management. Time management. Critical thinking and problem solving. Conflict prevention and resolution. Annoying behavior. Coping skills. Criticism. Sexual harassment. drug, alcohol, and substance abuse. Individual and group activities	Prerequisites: A grade of C or better in TDR104.		Occ	LEC 1.0 1.0 1.0	S
TDR122	2009 Spring	Basic Electrical Theory		Introduction to electrical theory, direct current (DC) circuits, series, parallel, and series-parallel circuits, DC power sources, DC motors, DC generators	Prerequisites: Permission of Instructor.		Occ	LEC 5.0 5.0 5.0	A
TDR296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be		Occ	LAB 1.0 5.0 0.0	Z

					concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
TDR296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
TDR296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or		Occ	LAB 3.0 15.0 0.0	Z

					career interest or with permission of Instructor.				
TDR296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
TDR298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
TDR298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				combined to maximize student development.					
TDR298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
TEC103	2007 Fall	Developing Your Fashion Business		Creating and understanding a financial plan, developing operating and control systems, planning growth strategies and a business plan for the Fashion Entrepreneur. Emphasis on fashion merchandise and successful fashion business development	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
TEC105	2019 Fall	Cultural Aspects of Clothing		Psychological, aesthetic, and economic factors applied to the systematic study of dress and adornment in relationship to world cultures and the global fashion industry.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Social-Behavioral Sciences [SB]	Occ	LEC 3.0 3.0 3.0	S
TEC106	2015 Summer	History of Fashion		Consideration of historic factors influencing fashion and fashion change with special emphasis on historic costume.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
TEC108	2023 Fall	Flat-Pattern Design		Beginning flat-pattern design techniques. Introductory work with pattern accuracy, markings, style	Prerequisites: A grade of C or better in TEC110 or	TEC108 may be repeated	Occ	L+L 3.0	T

				variations, seams, and garment features to create basic designs.	permission of Instructor.	for a total of six (6) credit hours.		4.0 4.0	
TEC109	2017 Fall	Introduction to Fashion Merchandising	MKT109	Explores the various levels and specialized segment of the fashion industry, the principles of fashion, the fundamentals of merchandising apparel, consumers' influence on demand and marketing activities.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
TEC110	2020 Fall	Beginning Apparel Construction		Basic apparel construction techniques. Use of commercial patterns and sewing machine in the construction of basic garments.	Prerequisites: None.		Occ	L+L 3.0 5.0 5.0	T
TEC111	2020 Fall	Intermediate Apparel Construction		Intermediate clothing construction techniques. Emphasis on fit and construction details of commercial patterns.	Prerequisites: A grade of C or better in TEC110 or permission of Instructor.	TEC111 may be repeated for a total of twelve (12) credit hours with Permission of Instructor. If student has no previous sewing experience, TEC110 should be taken prior to and not during this course.	Occ	L+L 3.0 5.0 5.0	T
TEC112AQ	2018 Fall	Pattern Alteration and Fit		Structural features of patterns and altering patterns to achieve proper fit. Includes figure irregularities, pattern style variations, fashion, and individual figure problems.	Prerequisites: A grade of C or better in TEC111 or permission of Instructor.	TEC112AQ may be repeated for a total of six (6) credit hours with Instructor permission.	Occ	L+L 2.0 3.0 3.0	T

TEC112AU	2018 Fall	Sewing Clothing Accessories		Construction of clothing accessories for personal or professional use. Includes overview of accessories, principles of design, selection of fabrics and trims, use of commercial patterns, creation of custom patterns, construction techniques, and evaluation of accessories.	Prerequisites: A grade of C or better in TEC111 or permission of Instructor.	TEC112AU may be repeated for a total of twelve (12) credit hours.	Occ	L+L 3.0 5.0 5.0	T
TEC113	2018 Fall	Textiles: Dyeing		Demonstrations and projects emphasizing skills and techniques in creating textile designs on fabric for fashion and interior design applications. Fabric dyeing techniques through hands-on practices such as tie dyeing, shibori dyeing and batik dyeing.	Prerequisites: None.	TEC113 may be repeated for a total of three (3) credits.	Occ	L+L 1.0 1.5 1.5	T
TEC114	2018 Fall	Textiles: Block Printing/Silk Screening		Block printing and silk screening techniques used to create designs on fabric for apparel and interiors.	Prerequisites: None.	TEC114 may be repeated for a total of three (3) credits.	Occ	L+L 1.0 2.0 2.0	T
TEC115	2018 Fall	Textiles: Hand Painting		Techniques used to hand paint designs on textiles for fashion and interior design. Techniques include water color and ombre, marbledizing, stenciling, stamping and various resist methods such as gutta and taping. Includes color theory and design development.	Prerequisites: None.	TEC115 may be repeated for a total of three (3) credits.	Occ	L+L 1.0 1.5 1.5	T
TEC116	2018 Fall	Textiles: Stitchery and Embellishment		Materials and techniques used for stitchery and embellishment on textiles. Includes color schemes and design development.	Prerequisites: None.	TEC116 may be repeated for a total of three (3) credits.	Occ	L+L 1.0 1.5 1.5	T
TEC120	2020 Fall	Specialty Apparel Construction		Application of specialty fabrics in clothing construction. Emphasis on improved construction quality and garment fit.	Prerequisites: A grade of C or better in TEC111, or THP206, or permission of Instructor.	TEC120 may be repeated for a total of nine (9) credit hours with permission of Instructor.	Occ	L+L 3.0 5.0 5.0	T

TEC121	2023 Fall	Creative Sewing Machine Use		Use of the sewing machine for other than construction of garments or household items. Emphasis on decorative uses of the sewing machine on items made or purchased by the user.	Prerequisites: A grade of C or higher in TEC110 or permission of Instructor.		Occ	L+L 3.0 3.0 3.0	T
TEC122	2020 Fall	Sewing with Knits		Skills and techniques used in the construction of garments made from knit fabrics.	Prerequisites: A grade of C or better in TEC111, or THP206, or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
TEC124	2020 Fall	Advanced Apparel Construction		Advanced garment construction techniques. Emphasis on lined jacket construction and working with patterned and specialty fabrics.	Prerequisites: A grade of C or better in TEC111, or THP206, or permission of Instructor.	TEC124 may be repeated for a total of twelve (12) credit hours with permission of Instructor.	Occ	L+L 3.0 5.0 5.0	T
TEC125	2021 Fall	Fashion Design		Overview of the fashion design industry. Includes terminology, fashion trends, elements and principles of design, sources of inspiration, fabric selection, sketching and costing a collection, an introduction to pattern making techniques, and global fashion centers' design and manufacturing specialties.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Occ	LEC 3.0 3.0 3.0	S
TEC126	2019 Fall	Sewing for the Home	INT126	Provides students systemic skills and knowledge to plan and construct draperies, shades, pillows, bedding and other home furnishings through instructional projects. Emphasizes techniques used in producing textile goods for the home.	Prerequisites: None.	Basic sewing skills are recommended. INT/TEC126 may be repeated for a total of nine (9) credit hours.	Occ	LEC 3.0 3.0 3.0	S

TEC128	2018 Fall	Home Upholstery		Demonstration and application of knowledge and skills involved in upholstering stools, chairs, headboards, and other home furnishings. Includes measuring and cutting upholstery fabric and sewing outdoor/indoor cushions.	Prerequisites: None.	TEC128 may be repeated for credit.	Occ	L+L 3.0 5.0 5.0	T
TEC129	2020 Fall	Sewing with a Serger		Operation of a home serger. Use in constructing, finishing, and decorating garments and home decorations. Home serger required.	Prerequisites: A grade of C or better in TEC110 or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
TEC130	2020 Fall	Alteration of Ready Made Garments		Knowledge, skills, and techniques of altering ready-made garments for personal or professional use. Experience using a sewing machine and constructing garments assumed.	Prerequisites: A grade of C or better in TEC111 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
TEC133	2022 Spring	Fashion Illustration: Croquis		Techniques for working with female and male croquis. Applications for illustrating clothing on croquis and preparing a fashion layout.	Prerequisites: None.	TEC133 may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 4.0 4.0	T
TEC134	2018 Fall	Fashion Illustration I		Proportions and techniques used in drawing fashion figures and clothing. Introduction of media and illustrative styles for portfolio design, trade sketches, and fashion advertisements.	Prerequisites: None.	TEC134 may be repeated for a total of nine (9) credits.	Occ	L+L 3.0 5.0 5.0	T
TEC135	2018 Fall	Fashion Illustration II		Intermediate-level study of proportion and techniques used in drawing fashion figures, clothing, and flats. Continued study of garments, fabric textures and patterns. Development of skills in presentation drawing and commencing fashion design portfolio illustrations.	Prerequisites: A grade of C or better in TEC134 or permission of Instructor.	TEC135 may be repeated for a total of nine (9) credits.	Occ	L+L 3.0 5.0 5.0	T
TEC136	2018 Fall	Fashion Illustration III		Advanced-level study of proportions and techniques used in drawing fashion figures, clothing, and flats. Continued study of illustrative styles for garments, fabric textures and patterns. Further development of skills in portfolio presentation.	Prerequisites: A grade of C or better in TEC135 or permission of Instructor.	TEC136 may be repeated for a total of nine (9) credits.	Occ	L+L 3.0 5.0 5.0	T

TEC138	2018 Fall	Fashion Illustration: Menswear		Study of proportions and techniques used in drawing menswear fashion figures, clothing, accessories, and flats. Focus on the male physique and specific fitting variations of clothing. Introduction of traditional menswear fabrications and poses for tailored clothing and sportswear.	Prerequisites: A grade of C or better in TEC134 or permission of Instructor.	TEC138 may be repeated for a total of nine (9) credit hours.	Occ	L+L 3.0 5.0 5.0	T
TEC139	2020 Fall	Fashion Illustration: Children's Wear		Study of proportions and techniques used in drawing children's wear fashion figures, clothing, and flats from infants through teenagers. Introduction of body and feature characteristics unique to the various ages of growth for children. Includes emphasis on common clothing styles, fabrics, effects, and details.	Prerequisites: A grade of C or better in TEC134 or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
TEC141	2018 Fall	Fashion Design: CAD		Use of computer-assisted design (CAD) in the fashion design industry. Create and illustrate fashion designs using these applications. Color and design principles applied in creating an apparel line and developing a portfolio	Prerequisites: None.	TEC141 may be repeated for a total of six (6) credits.	Occ	L+L 2.0 2.0 2.0	T
TEC143	2022 Fall	Industrial Sewing I		Introduction to industrial sewing machine usage with emphasis on techniques, applications, and stitching control. Basic methods used in constructing, finishing, and decorating apparel.	Prerequisites: A grade of C or better in TEC111 or permission of Instructor.	TEC143 may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 3.0 3.0	T
TEC144	2022 Fall	Industrial Sewing II		Use of standard industrial sewing machines with emphasis on techniques, applications, speed, and stitching control. Expanded methods in intermediate and advanced construction, finishing, and decorating apparel.	Prerequisites: A grade of C or better in TEC143 or permission of Instructor.	TEC144 may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 3.0 3.0	T
TEC146	2018 Fall	Manufacturing Sewing Methods I		Introduction to skills and techniques of sewing for apparel manufacturing ready-made-garments. Focus on applying correct clothing construction methods required to achieve the right quality level for the apparel customer using the proper commercial design and materials.	Prerequisites: A grade of C or better in TEC144 or permission of Instructor.	TEC146 may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 3.0 3.0	T

TEC147	2018 Fall	Manufacturing Sewing Methods II		Advanced skills and techniques of sewing for apparel manufacturing ready-made-garments. Advanced application of correct clothing construction methods required to achieve the right quality level for the apparel customer using the proper commercial design and materials.	Prerequisites: A grade of C or better in TEC146 or permission of Instructor.	TEC147 may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 3.0 3.0	T
TEC150	2019 Spring	Fashion Show Production		Students will learn and experience real-time production techniques and skills of a fashion show. Includes but not limited to, budget planning, project management, marketing, staffing, décor, staging, and production.	Prerequisites: None.	TEC150 may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 4.0 4.0	T
TEC151	2018 Fall	Display and Visual Merchandising	MKT151	An examination of the principles of design including line, color, balance, and texture as they relate to the display of merchandise. Participation in displays, field trips, and individual projects	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
TEC161	2018 Fall	Digital Machine Embroidery Laboratory		Use of the sewing machine and computer for development of decorative designs for garment and fabric design	Prerequisites: None.	TEC161 may be repeated for a total of six (6) credits.	Occ	LAB 1.0 2.0 2.0	T
TEC162	2018 Fall	Product Development Laboratory		Focus on current trends in fashion product development; methods and techniques to translate design ideas into a realistic production product	Prerequisites: A grade of C or better in TEC125 or permission of Instructor.	TEC162 may be repeated for a total of six (6) credits.	Occ	LAB 1.0 1.0 1.0	T
TEC200	2005 Spring	Retail Buying	MKT200	Examines management/buyer role in investment, pricing, planning, controlling sales and inventories Any BPC/CIS spreadsheet course recommended	Prerequisites: None. A grade of C or better in any BPC/CIS spreadsheet course recommended.		Occ	LEC 3.0 3.0 3.0	S
TEC221	2019 Spring	Computer- Assisted Fashion Design		The use of computer hardware and software in the fashion design industry. Create and illustrate fashion designs using computer hardware and software. Color and design principles applied in creating an apparel line and developing a portfolio.	Prerequisites: A grade of C or better in (TEC125 and TEC134) or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T

TEC222	2018 Fall	Textiles		Study of textile fibers, yarns, fabrication, color and finishes and their impact on product performance. Includes labeling laws, fiber manufacturing processes, technical textiles, fiber properties, care, end use, and global sustainability efforts.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
TEC223	2018 Fall	Tailoring		Principles of tailoring as applied in the construction of a coat or suit. Alteration of patterns and fitting techniques.	Prerequisites: A grade of C or better in TEC124 or permission of Instructor.	TEC223 may be repeated for a total of twelve (12) credit hours with permission of instructor.	Occ	L+L 3.0 6.0 6.0	T
TEC224	2018 Fall	Pattern Drafting		Draft patterns from measurements of dress forms and human figures. Development of slopers and garment patterns. Design and produce an original garment using pattern drafting techniques.	Prerequisites: A grade of C or better in TEC111 or permission of Instructor.	TEC224 may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 3.0 3.0	T
TEC225	2020 Fall	Pattern Design I		Creation of pattern designs by flat pattern methods. Produce a variety of styles. Production of an original pattern design and garment.	Prerequisites: A grade of C or better in TEC111, or THP206, or permission of Instructor.	TEC225 may be repeated for a total of twelve (12) credits.	Occ	L+L 3.0 5.0 5.0	T
TEC226	2020 Fall	Draping for Fashion Design		Manipulation of fabrics on a dress form and/or live figure to create designs and patterns. Use of woven fabrics to create basic and intermediate designs. Introduction of knitwear draping. Drape and construct an original design.	Prerequisites: A grade of C or better in TEC111, or THP206, or permission of Instructor.	TEC226 may be repeated for a total of nine (9) credits.	Occ	L+L 3.0 5.0 5.0	T
TEC227	2020 Fall	Couture Sewing		Construction techniques used in couture sewing. Includes fabric selection, fabric preparation, hand sewing, garment shaping, edge finishes, embellishments, and closures. Emphasis on fitting and couture construction techniques used to construct skirts, pants, blouses,	Prerequisites: A grade of C or better in TEC111, or THP206, or permission of Instructor.	TEC227 may be repeated for a total of twelve (12) credit hours with permission	Occ	L+L 3.0 5.0 5.0	T

				dresses, sleeves, pockets, jackets, coats, and evening wear.		n of Instructor.			
TEC228	2018 Fall	Advanced Draping for Fashion Design		Advanced draping techniques for fashion design. Includes draping jackets/coats, shorts/pants, dresses/gowns and other woven fabrics. Also includes draping swimwear/leotards and other garments in knit fabrics. Drape and construct an original design.	Prerequisites: A grade of C or better in TEC226 or permission of Instructor.	TEC228 may be repeated for a total of nine (9) credits.	Occ	L+L 3.0 5.0 5.0	T
TEC229	2018 Fall	Advanced Serging		Operation of a home serger in advanced application of construction and embellishment for garments and home decoration projects. Home serger required.	Prerequisites: A grade of C or better in TEC129 or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
TEC230	2018 Fall	Pattern Design II		Practical application in designing clothing/patterns using flat pattern method. Principles of flat pattern and use of sloper reviewed. Includes creation of woven and knit original designs.	Prerequisites: A grade of C or better in TEC225 or permission of Instructor.	TEC230 may be repeated for a total of twelve (12) credits.	Occ	L+L 3.0 5.0 5.0	T
TEC231	2018 Fall	Pattern Grading		Grading patterns to change sizes. Includes grading terminology, grading methods, figure types, grading charts, types of grade, even and uneven grades, and grading basic and intermediate designs.	Prerequisites: A grade of C or better in TEC111 or permission of Instructor.	TEC231 may be repeated for a total of six (6) credit hours.	Occ	L+L 3.0 5.0 5.0	T
TEC232	2018 Fall	Costume Construction		Costume construction techniques applied to period reproduction, vintage, fantasy and anime; stage and dance costumes. Includes alteration of commercial patterns, drafting of original patterns, and fitting techniques.	Prerequisites: A grade of C or better in TEC111 and (TEC224 or TEC225 or TEC226 or permission of Instructor).	TEC232 may be repeated for a total of twelve (12) credit hours with permission of Instructor.	Occ	L+L 3.0 5.0 5.0	T
TEC233	2018 Fall	Computer-Assisted Pattern Making		Pattern making using the computer and various software programs. Includes measuring, block patterns, pattern development, production patterns, modifications for size and fit, and markers	Prerequisites: A grade of C or better in TEC225 or permission of Instructor.	TEC233 may be repeated for a total of twelve (12) credit hours with	Occ	L+L 3.0 5.0 5.0	T

						permission of Instructor.			
TEC234	2019 Fall	Vintage Fashion Design		Research of 20th-century fashions from the 1920s through the 1990s influencing vintage garment styles. Analysis of vintage era and revival trends. Development and construction of an original vintage garment/ensemble including design, fabric selection, and commercial pattern use with flat-patternmaking and/or draping variations.	Prerequisites: A grade of C or better in (TEC225 or TEC226) or permission of Instructor.	TEC234 may be repeated for a total of twelve (12) credit hours.	Occ	L+L 3.0 5.0 5.0	T
TEC235	2018 Fall	Custom Tailored Pants		Designed for the home sewing enthusiast or dressmaker who desires a perfectly fitted pant pattern. Pattern adjustments; selecting proper size; fitting procedures for a personalized pant. Fabric draft of the basic pant to be fitted on each student	Prerequisites: A grade of C or better in TEC111 or equivalent.		Occ	L+L 2.0 3.0 3.0	T
TEC236	2018 Fall	Portfolio Development		This course is designed to assist students in the preparation and presentation of an original professional portfolio. Students will design, produce, and present artistic sketches and illustrations of fashion figures wearing designs, flats for garment designs, and fabric swatches/samples selected for designs. Including but not limited to using computer-assisted design software, presentation boards, and other required components in the field of portfolio development.	Prerequisites: A grade of C or better in TEC134 and permission of Department or Division. TEC221 is recommended.	TEC236 may be repeated for a total of three (3) credits.	Occ	LAB 1.0 3.0 0.0	C
TEC237	2021 Fall	Intermediate Computer-Assisted Fashion Design		Intermediate-level study in the use of computer hardware and software in the fashion design industry. Draw fashion figures, create textile designs, develop and illustrate an original portfolio collection.	Prerequisites: A grade of C or better in (TEC134 and TEC221) or permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
TEC238	2019 Fall	Industry Patternmaking Standards		Study of patternmaking techniques for industry. Specifications for production patterns, labeling methods, and direction cards.	Prerequisites: A grade of C or better in TEC225 or permission of Instructor.	TEC238 may be repeated for a total of three	Occ	L+L 1.0 2.0 2.0	T

						(3) credit hours.			
TEC240	2018 Fall	Apparel Production Management		Overview of apparel production management for the global marketplace examining component details of the technical package, tech-pack, which include specifications and costing in the most time-efficient manner.	Prerequisites: None.	TEC240 may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 3.0 3.0	T
TEC241	2021 Fall	Advanced Computer-Assisted Fashion Design		Advanced techniques and use of computer hardware and software in the fashion design industry. Create and illustrate fashion designs using multiple computer applications. Create advanced textile surface pattern design using color and design principles on the computer. Manipulate CAD pattern design for original patterns, grading, and markers. Create storyboards for product development and personal portfolio.	Prerequisites: A grade of C or better in TEC124 and TEC237.		Occ	L+L 3.0 5.0 5.0	T
TEC244	2018 Fall	Industrial Sewing III		Mastery study of industrial sewing machine usage for straight-stitch, zigzag, over-lock, cover stitch and blind-hem machines. Use in detailed or complex constructing, finishing, and decorating apparel and home decor.	Prerequisites: A grade of C or better in TEC144 or permission of Instructor.	TEC244 may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 3.0 3.0	T
TEC245	2020 Fall	Wardrobe Strategies		Methods of clothing selection, coordination, evaluation, and planning to meet men's and women's wardrobe needs.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
TEC247	2018 Fall	Manufacturing Sewing Methods III		Mastery knowledge, skills, and techniques of sewing for apparel manufacturing ready-made-garments. Mastery level application of correct clothing construction methods required to achieve the right quality level for the apparel customer using the proper commercial design and materials.	Prerequisites: A grade of C or better in TEC147 or permission of Instructor.	TEC247 may be repeated for a total of six (6) credit hours.	Occ	L+L 2.0 3.0 3.0	T
TEC250	2005 Spring	Apparel Quality Analysis		Quality analysis of construction components that affect the appearance, function, and cost of ready-to-wear apparel	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

TEC255	2007 Fall	Fashion Retail Merchandising		Surveys the structure and operation of fashion retail organizations. Emphasizes the global nature of fashion merchandising and techniques of merchandising for the fashion merchandising major.	Prerequisites: A grade of C or better in MKT/TEC109.		Occ	LEC 3.0 3.0 3.0	S
TEC260	2007 Fall	Fashion Sales Management		Emphasizes the fashion aspects of sales, and the application and management of a sales force for the fashion industry.	Prerequisites: A grade of C or better in MKT/TEC109.		Occ	LEC 3.0 3.0 3.0	S
TEC270	2020 Fall	Design Studio		Design and production of original garments for a line/collection. Includes design inspirations, sketches/illustrations, fabric/materials selection, pattern development, construction and fit.	Prerequisites: A grade of C or better in (TEC225 or TEC226) or permission of Instructor.	TEC270 may be repeated for a total of twelve (12) credit hours.	Occ	LAB 3.0 4.0 4.0	T
TEC271AA	2017 Fall	Fashion Design Internship		Work experience in fashion design business or industry. Work hours are coordinated for a minimum of 80 hours per semester. Supervision and evaluation by internship coordinator.	Prerequisites: Permission of Department or Division.	TEC271A A may be repeated for a total of three (3) credit hours.	Occ	LAB 1.0 5.0 0.0	C
TEC271AC	1997 Fall	Fashion Design Internship		Work experience in fashion design business or industry. Fifteen hours of work weekly. Supervision and evaluation by an internship coordinator	Prerequisites: Permission of Department or Division.		Occ	LAB 3.0 15.0 0.0	C
TEC272AA	2019 Spring	Retail Merchandising Internship		Retail Merchandising work experience in a Fashion Retail business or industry. Supervision and evaluation by an internship coordinator. Eighty hours of designated work, per credit per semester.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of Instructor.		Occ	LAB 1.0 1.0 0.0	C
TEC272AC	2019 Spring	Retail Merchandising Internship		Retail Merchandising work experience in a Fashion Retail business or industry. Supervision and evaluation by an internship coordinator. Eighty	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6		Occ	LAB 3.0 3.0 0.0	C

				hours of designated work, per credit per semester.	grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of Instructor.				
TEC274AA	2018 Spring	Fashion Merchandising Study Tour		A tour of the fashion merchandising industry outside the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance awareness of this multifaceted career	Prerequisites: Permission of Department or Division.		Occ	LAB 1.0 5.0 1.0	F
TEC274AB	2018 Spring	Fashion Merchandising Study tour		A tour of the fashion merchandising industry outside the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance awareness of this multifaceted career.	Prerequisites: Permission of Department or Division.		Occ	LAB 2.0 10.0 2.0	F
TEC274AC	2001 Fall	Fashion Merchandising Study Tour	MKT274AC	A tour of the fashion merchandising industry outside the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance awareness of this multifaceted career	Prerequisites: Permission of Department or Division.		Occ	LAB 3.0 15.0 3.0	F
TEC275AA	2019 Spring	Image Consultant Internship		Image Consultant work experience in a Fashion Retail business or industry. Supervision and evaluation by an internship coordinator. Eighty hours of designated work, per credit per semester.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of Instructor.		Occ	LAB 1.0 1.0 0.0	C
TEC275AC	2019 Spring	Image Consultant Internship		Image Consultant work experience in a Fashion Retail business or industry. Supervision and evaluation by an internship coordinator. Eighty hours of designated work, per credit per semester.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals		Occ	LAB 3.0 3.0 0.0	C

					(student's present job may qualify); or permission of Instructor.				
TEC277AA	2019 Spring	Alteration Internship		Alteration work experience in a business or industry. Supervision and evaluation by an internship coordinator. Eighty hours of designated work, per credit per semester.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of Instructor.		Occ	LAB 1.0 1.0 0.0	C
TEC277AC	2019 Spring	Alteration Internship		Alteration work experience in a business or industry. Supervision and evaluation by an internship coordinator. Eighty hours of designated work, per credit per semester.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of Instructor.		Occ	LAB 3.0 3.0 0.0	C
TEC278AA	2019 Spring	Costume Design and Production Internship		Costume Design and Production work experience in a business or industry. Supervision and evaluation by an internship coordinator. Eighty hours of designated work, per credit per semester.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of Instructor		Occ	LAB 1.0 1.0 0.0	C
TEC278AC	2019 Spring	Costume Design and Production Internship		Costume Design and Production work experience in a business or industry. Supervision and evaluation by an	Prerequisites: Completion of at least twelve (12) college		Occ	LAB 3.0	C

				internship coordinator. Eighty hours of designated work, per credit per semester.	credits, minimum 2.6 grade point average, and be able to obtain a position related to student's academic or career goals (student's present job may qualify); or permission of Instructor.			3.0 0.0	
TEC282AA	2015 Summer	Service-Learning in Fashion Merchandising and Design		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	TEC282A A may be repeated for a total of six (6) TEC282A A credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 1.0 1.0 0.0	L
TEC282AB	2015 Summer	Service-Learning Experience in Fashion Merchandising and Design		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	TEC282A B may be repeated for a total of six (6) TEC282A B credit hours. Standard grading available according to procedures outlined in catalog.	Occ	LAB 2.0 2.0 0.0	L
TEC282AC	2015 Summer	Service-Learning Experience in Fashion		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	TEC282A C may be repeated for a total	Occ	LAB 3.0 3.0 0.0	L

		Merchandising and Design				of six (6) TEC282A C credit hours. Standard grading available according to procedures outlined in catalog.			
TEC296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 1.0 5.0 0.0	Z
TEC296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor		Occ	LAB 2.0 10.0 0.0	Z

					Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
TEC296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 3.0 15.0 0.0	Z
TEC296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to		Occ	LAB 4.0 20.0 0.0	Z

					students major or career interest or with permission of Instructor.				
TEC298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
TEC298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
TEC298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
THE111	2020 Fall	Introduction to Theatre		A survey of theatre, including basic elements and principles of production, styles, and/or historical perspectives of theatre, dramatic literature, and criticism	Prerequisites: None.	General Education Designation: Humanities, Arts	Acad	LEC 3.0 3.0 3.0	S

						and Design - [HU] Arizona Shared Unique Number SUN# THE1100			
THE220	2011 Fall	Modern Drama		Analysis of dramatic literature studied within political, historical, and cultural contexts and examined from the perspective of the playwright's structure and style.	Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Literacy and Critical Inquiry - [L] Arizona Shared Unique Number SUN#: THE 2220	Acad	LEC 3.0 3.0 3.0	S
THE260	2021 Fall	Film Analysis		Understanding and enjoyment of film and its correlation to literature, art, music, and other disciplines	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
THE274AA	2002 Summer I	Theatre Study Tour		A tour that focuses on theatre production outside of the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance knowledge about theatre production	Prerequisites: Permission of Department or Division.		Acad	LAB 1.0 5.0 1.0	F
THE274AB	2002 Summer I	Theatre Study Tour		A tour that focuses on theatre production outside of the metropolitan Phoenix area. Includes a variety of	Prerequisites: Permission of		Acad	LAB 2.0	F

				experiences and activities to enhance knowledge about theatre production	Department or Division.			10.0 2.0	
THE274AC	2002 Summer I	Theatre Study Tour		A tour that focuses on theatre production outside of the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance knowledge about theatre production	Prerequisites: Permission of Department or Division.		Acad	LAB 3.0 15.0 3.0	F
THE282AA	2014 Summer	Service-Learning Experience in Theatre		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	THE282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
THE282AB	2014 Summer	Service-Learning Experience in Theatre		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	THE282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L
THE282AC	2014 Summer	Service-Learning Experience in Theatre		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	THE282A C may be repeated for a total of six (6) credit hours. Standard grading	Acad	LAB 3.0 3.0 0.0	L

						available according to procedures outlined in catalog.			
THE298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z
THE298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
THE298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
THF120AA	2018 Fall	Audition Techniques for Stage and Screen:		Practice in the techniques of auditioning for stage and screen. Identifies and illustrates techniques of the prepared monologue audition.	Prerequisites: None.		Acad	L+L 1.0 2.0 2.0	T

		Prepared Monologue							
THF120AB	2018 Fall	Audition Techniques for Stage and Screen: Cold Readings		Practice in the techniques of auditioning for stage and screen. Identifies and illustrates techniques of the cold reading audition.	Prerequisites: None.		Acad	L+L 1.0 2.0 2.0	T
THF205	2014 Fall	Introduction to Cinema	HUM205	Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
THF206	2017 Spring	Introduction to Television Arts	HUM206	History and development of electronic media and its impact on popular arts.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
THF209	2018 Fall	Acting for the Camera		Special technical aspects of acting before a camera.	Prerequisites: A grade of C or better in THP112 or permission of Instructor.		Acad	L+L 3.0 4.0 4.0	T
THF210	2014 Fall	Contemporary Cinema	HUM210	A study of contemporary films, directors and critics with emphasis on evaluating film as an art form.	Prerequisites: None.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
THF219	2018 Fall	Advanced Acting for the Camera		Focuses on special technical aspects of advanced acting before a camera.	Prerequisites: A grade of C or better in THF209 or permission of Instructor.		Acad	L+L 3.0 4.0 4.0	T
THO115	2024 Fall	Makeup for Stage and Screen		Purposes, materials, and techniques of makeup for stage and screen.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T

THO118	2023 Fall	Playwriting		Practice and study of theories and techniques of writing for the stage; creating characters, dialogue, and plot for monodramas, scenes, and plays	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
THO130	2024 Fall	Combat for Stage and Screen		Fundamental techniques and terminology of staged combat with and without weapons. Analysis and performance of safely choreographed violence that tells a story for stage and screen.	Prerequisites: None.	THO130 may be repeated for a total of twelve (12) credit hours.	Occ	L+L 3.0 4.0 4.0	T
THO130AA	2023 Fall	Specialized Stage Combat: Unarmed		Teaches fundamental techniques and terminology of unarmed staged combat as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in unarmed stage combat.	Prerequisites: None.	THO130A A will be taught by a Society of American Fight Directors certified teacher, Fight Director, or Fight Master.	Occ	L+L 1.5 2.0 2.0	T
THO130AB	2023 Fall	Specialized Stage Combat: Broadsword		Teaches fundamental techniques and terminology of staged combat utilizing the broadsword as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in the use of the broadsword in stage combat.	Prerequisites: None.	THO130A B will be taught by a Society of American Fight Directors certified teacher, Fight Director, or Fight Master.	Occ	L+L 1.5 2.0 2.0	T
THO130AC	2023 Fall	Specialized Stage Combat: Rapier and Dagger		Teaches fundamental techniques and terminology of staged combat utilizing the rapier and dagger as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and	Prerequisites: None.	THO130A C will be taught by a Society of American	Occ	L+L 1.5 2.0 2.0	T

				performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in the use of the rapier and dagger in stage combat.		Fight Directors (SAFD) certified teacher, Fight Director, or Fight Master.			
THO130AD	2023 Fall	Specialized Stage Combat: Single Sword		Teaches fundamental techniques and terminology of staged combat utilizing the single sword as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in the use of the single sword in stage combat.	Prerequisites: None.	THO130A D will be taught by a Society of American Fight Directors certified teacher, Fight Director, or Fight Master.	Occ	L+L 1.5 2.0 2.0	T
THO130AE	2023 Fall	Specialized Stage Combat: Small Sword		Teaches fundamental techniques and terminology of staged combat utilizing the small sword as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in the use of the small sword in stage combat.	Prerequisites: None.	THO130A E will be taught by a Society of American Fight Directors certified teacher, Fight Director, or Fight Master.	Occ	L+L 1.5 2.0 2.0	T
THO130AF	2023 Fall	Specialized Stage Combat: Sword and Shield/Buckler		Teaches fundamental techniques and terminology of staged combat utilizing the sword and shield/buckler as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares	Prerequisites: None.	THO130A F will be taught by a Society of American Fight Directors certified	Occ	L+L 1.5 2.0 2.0	T

				students for the SAFD skills proficiency test in the use of the sword and shield/buckler in stage combat.		teacher, Fight Director, or Fight Master.			
THO130AG	2023 Fall	Specialized Stage Combat: Quarterstaff		Teaches fundamental techniques and terminology of staged combat utilizing the quarterstaff as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in the use of the quarterstaff in stage combat.	Prerequisites: None.	THO130AG will be taught by a Society of American Fight Directors certified teacher, Fight Director, or Fight Master.	Occ	L+L 1.5 2.0 2.0	T
THO130AH	2023 Fall	Specialized Stage Combat: Knife		Teaches fundamental techniques and terminology of staged combat utilizing the knife as required for professional certification by the Society of American Fight Directors (SAFD). Includes the analysis and performance of safely choreographed violence that tells a story for stage and screen. Prepares students for the SAFD skills proficiency test in the use of the knife in stage combat.	Prerequisites: None.	THO130AH will be taught by a Society of American Fight Directors certified teacher, Fight Director, or Fight Master.	Occ	L+L 1.5 2.0 2.0	T
THO135AA	2023 Fall	Stage Combat Recertification: Unarmed		Course to provide Society of American Fight Directors (SAFD) recertification in unarmed stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	THO135AA may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
THO135AB	2023 Fall	Stage Combat Recertification: Broadsword		Course to provide Society of American Fight Directors (SAFD) recertification in using the broadsword in stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	THO135AB may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T

THO135AC	2023 Fall	Stage Combat Recertification: Rapier and Dagger		Course to provide Society of American Fight Directors (SAFD) recertification in using the rapier and dagger in stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	THO135A C may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
THO135AD	2023 Fall	Stage Combat Recertification: Single Sword		Course to provide Society of American Fight Directors (SAFD) recertification in using the single sword in stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	THO135A D may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
THO135AE	2023 Fall	Stage Combat Recertification: Small Sword		Course to provide Society of American Fight Directors (SAFD) recertification in using the small sword in stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	THO135A E may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
THO135AF	2023 Fall	Stage Combat Recertification: Sword and Shield/Buckler		Course to provide Society of American Fight Directors (SAFD) recertification in using the sword and shield/buckler in stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	THO135A F may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
THO135AG	2023 Fall	Stage Combat Recertification: Quarterstaff		Course to provide Society of American Fight Directors (SAFD) recertification in using the quarterstaff in stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	THO135A G may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
THO135AH	2023 Fall	Stage Combat Recertification: Knife		Course to provide Society of American Fight Directors (SAFD) recertification in using the knife in stage combat. Course taught by SAFD certified teacher, Fight Director, or Fight Master.	Prerequisites: Certification in specified weapon by SAFD or permission of Program Director.	THO135A H may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
THO202AA	2023 Fall	Theatre Production I Scene Shop		The objective of this course is to provide hands-on experience in the creation of a theatrical production. This course is tailored around the work done in a Theatre Scenic Shop. Structured to provide the student with an atmosphere of professional expertise and guidance. Professional-	Prerequisites: None.	THO202A A may be repeated for a total of four (4) credit hours.	Occ	LAB 1.0 2.0 0.0	C

				type facilities and equipment are made available for student use.					
THO202AB	2023 Fall	Theatre Production I Electrics		The objective of this course is to provide hands-on experience in the creation of a theatrical production. This course is tailored around the work done in a Theatre Electric Shop. Structured to provide the student with an atmosphere of professional expertise and guidance. Professional-type facilities and equipment are made available for student use.	Prerequisites: None.	THO202A B may be repeated for a total of four (4) credit hours.	Occ	LAB 1.0 2.0 0.0	C
THO202AC	2023 Fall	Theatre Production I Costume Shop		The objective of this course is to provide hands-on experience in the creation of a theatrical production. This course is tailored around the work done in a Theatre Costume Shop. Structured to provide the student with an atmosphere of professional expertise and guidance. Professional-type facilities and equipment are made available for student use.	Prerequisites: None.	THO202A C may be repeated for a total of four (4) credit hours.	Occ	LAB 1.0 2.0 0.0	C
THO202AD	2023 Fall	Theatre Production Advanced Projects		The objective of this course is to provide hands-on experience in the creation of a theatrical production. This course is tailored around the work done in a leadership role on a theatrical production. Structured to provide the student with an atmosphere of professional expertise and guidance. Professional-type facilities and equipment are made available for student use.	Prerequisites: None.	THO202A D may be repeated for a total of four (4) credit hours.	Occ	LAB 1.0 2.0 0.0	C
THO203	2023 Fall	Technical Theatre Production		Designed to give college credit to the technical production crews of college theatre productions.	Prerequisites: None.	THO203 may be repeated for up to a maximum of nine (9) credits.	Occ	LAB 3.0 6.0 6.0	T
THO208	2023 Fall	Costume Play Solo Performance Practicum		Introduction to Costume Play (Cosplay) skills for the creation of a solo based performance through practical experience. Focus on the origins of Cosplay and use of tools for	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T

				prop and costume development, design and application of make-up, safety practices, character development and performance, and growing a social presence for promotion.					
THO209	2023 Fall	Costume Play Group Performance Practicum		Introduction to Costume Play (Cosplay) skills for the creation of a group based performance through practical experience. Focus on the development and collaborative performance of Cosplay characters within a canon/shared world. Use of tools for prop and costume development, design and application of make-up, safety practices, and growing a social presence for promotion.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
THO215	2024 Fall	Advanced Makeup Techniques for Stage and Screen		Advanced character analysis and makeup design for stage and screen. Technical application of makeup for stage and screen.	Prerequisites: A grade of C or better in THO115.		Occ	L+L 3.0 4.0 4.0	T
THO216	2023 Fall	Wig and Hair Production for Theatre and Film		Introduction to wig technology, including the use of tools and techniques for making, ventilating, measuring, and styling period wigs.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
THO218	2023 Fall	Beginning Stage Lighting		Basic theories and methods of stage lighting for all production types. Emphasis on technical/theoretical facts, artistic/design concept development, and teamwork structure of theatre. Examines stage lighting optics, instrument selection and application, color theory, circuiting and control systems, and basic design.	Prerequisites: A grade of C or better in THP213 or permission of Instructor.		Occ	L+L 3.0 4.0 4.0	T
THO219	2023 Fall	Introduction to Puppetry		Use of different types of puppets in a variety of performance settings. Practical experience with diverse audiences.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
THO225	2023 Fall	Visual Script Analysis		Theory and practice in analysis of dramatic literature for the technician and designer. Emphasis on techniques of script analysis for visual information.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S

THO226	2023 Fall	Theatrical Design: Costuming		Basic techniques involved in researching and designing costumes for the stage.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
THO235	2023 Fall	Principles of Stage Combat Safety/Fight Captain		Evaluate stage combat performances for safety in order to identify issues that might require intervention, communication, and revision. Course to prepare students for work as a fight captain in a stage or film environment. Provides opportunity to practice weapon maintenance and instruction; safe choreography; analysis of how choreography design elements affect safety; written and recorded choreography notation; and the implementation and communication of choreography and intervention strategies. Includes practical experience as a teaching assistant for other stage combat courses or as an assistant fight captain on dramatic productions.	Prerequisites: A grade of C or better in at least four (4) stage combat courses (THO130AA, THO130AB, THO130AC, THO130AD, THO130AE, THO130AF, THO130AG, or THO130AH) or permission of Program Director.		Occ	L+L 4.0 5.0 5.0	T
THO246	2023 Fall	Digital Fabrication	AVC246	Introduction to concepts and application of computer visualization, modeling, and rapid prototyping for interdisciplinary arts. Students will design sculptures applying 3D computer modeling techniques, rapid prototyping, and other available digital output devices to produce solid models.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
THO250	2023 Fall	Stage Properties		Introduction to stage properties including design, construction and maintenance features. Provides skills in property design and construction using an assortment of standard materials.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
THO251	2023 Fall	Safety Practices in Theatre and Film Production		Safety practices in theatre and film production. Includes Focus on national safety organizations and production practices of theatre stages and soundstages, theatrical rigging, electrical, scenic construction, paint and chemical handling, automation,	Prerequisites: None		Occ	L+L 1.0 2.0 2.0	T

				special effects, welding, and personal safety practices.					
THO260	2023 Fall	Theatrical Design: Rendering		Provides experience and explores multiple illustration techniques used to communicate ideas in entertainment production. Provides basic skills including pictorial drawing and sketching.	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
THO261	2023 Fall	Previsualization Modeling		Provides experience and explores basic pre-visualization methods used to communicate ideas in entertainment preproduction. Provides basic models skills.	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
THO262	2023 Fall	Entertainment Industry Design Drafting		The fundamentals of drafting for the Entertainment Industry. Includes drafting equipment, geometry, lettering, symbols, drawings (orthographic, isometric, oblique, sectional) and standard drawings used in the entertainment industry including floor plans, sections, elevations, working drawings, and perspective.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
THO263	2023 Fall	Entertainment Industry Drafting I: 2D CAD		Introduction to Computer Aided Drafting (CAD) for the Entertainment industry, including stage, screen and television venues, using CAD software. Includes basic set-ups, formats, two-dimensional drawing and editing commands, dimensions, text, and plotting typical to entertainment industries.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
THO265	2024 Fall	Introduction to Stage Management		The focus of this course is the role of the stage manager. Topics include all aspects of preparation and implementation of rehearsals and performances for the stage manager position.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
THO266	2023 Fall	Production Careers in Technical Theatre		Provides the continuing design, stage management and technical student with opportunities to explore the versatility of the job opportunities within the Tech Theatre industry. Emphasis on presenting the work and talent both in person and on paper.	Prerequisites: None.		Occ	L+L 1.0 2.0 2.0	T

				Development of a professional resume and vita.					
THO267	2023 Fall	Painting Techniques for Film, TV and Theatre		Theory and skills in scenic artistry. Techniques of painting two-dimensional and three-dimensional scenery, tools, and the use of color.	Prerequisites: A grade of C or better in THP213.		Occ	L+L 3.0 4.0 4.0	T
THO268	2023 Fall	Opportunities in Production		Provides the continuing design student, dramaturge, stage management, technical director, and directing students with opportunities to expand the versatility of professional skills. Emphasis on relating their work to the total production process. Linking design ideas to production concept. Maintain dramaturge, stage manager, director documentation. Practical application of student work for portfolio development.	Prerequisites: Permission of Department or Division.		Occ	L+L 3.0 6.0 6.0	T
THO269	2023 Fall	Technical Theatre Portfolio Development		The analysis and preparation of all elements of a Technical Theatre/Design Portfolio including the use of digital portfolios and application to specific disciplines. Practice with portfolio presentation and maintaining and updating portfolio materials.	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
THO270	2023 Fall	Musical Theatre Workshop	MUP270	Workshop in the study and performance of Musical Theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance.	Prerequisites: None.	MUP/THO 270 may be repeated for credit.	Occ	L+L 2.0 5.0 5.0	T
THO270AA	2023 Fall	Musical Theatre Workshop	MUP270A A	Workshop in the study and performance of musical theatre repertoire. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance.	Prerequisites: None.	MUP/THO 270AA may be repeated for a total of two (2) credits.	Occ	LAB 1.0 3.0 3.0	T
THO296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome	Prerequisites: Completion of at least twelve (12) college		Occ	LAB 1.0	Z

				related to the career objectives of the students.	credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.			5.0 0.0	
THO296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Occ	LAB 2.0 10.0 0.0	Z
THO296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to		Occ	LAB 3.0 15.0 0.0	Z

					students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.				
THO296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.	Completion of at least twelve (12) college credits minimum 2.6	Occ	LAB 4.0 20.0 0.0	Z
THP102	2019 Spring	Theatre Service Practicum		Use and develop theatrical skills for service to the community through practical experience.	Prerequisites: Permission of Department or Division.		Acad	LAB 1.0 2.0 2.0	T
THP112	2020 Fall	Acting I		Fundamental techniques and terminology of acting through physical and vocal expression, improvisation, and monologue and scene work. Emphasis on characterization.	Prerequisites: None.		Acad	L+L 3.0 4.0 4.0	T
THP131	2018 Fall	Stage Movement		Movement skills for the actor to develop a flexible, expressive	Prerequisites: None.		Acad	L+L 3.0	T

				physical instrument. Includes pantomime, physical isolation, and awareness exercises				4.0 4.0	
THP151	2018 Fall	Theatre for Youth		Principles and techniques of selecting plays, adapting stories, playwriting, directing, designing, producing, and acting in theatre for youth. The course will provide the opportunity to analyze and experience the production process from creating a script to performing a theatre production for a youth audience.	Prerequisites: None.	THP151 may be repeated for a total of six (6) credit hours.	Acad	L+L 3.0 4.0 4.0	T
THP201AA	2018 Fall	Theatre Production I		Designed to give college credit to the cast and technical production crews of college theatre productions.	Prerequisites: None.	THP201A A may be repeated for a total of four (4) credit hours.	Acad	LAB 1.0 2.0 2.0	T
THP201AB	2018 Fall	Theatre Production II		Designed to give college credit to the cast and technical production crews of college theatre productions.	Prerequisites: None.	THP201A B may be repeated for a total of four (4) credit hours.	Acad	LAB 2.0 4.0 4.0	T
THP202	2018 Fall	Theatre Production Projects		The objective of this course is to provide hands-on experience in the creation of a theatrical production. This course is tailored around the work done on a production. Structured to provide the student with an atmosphere of professional expertise and guidance. Professional-type facilities and equipment are made available for student use.	Prerequisites: None.	THP202 may be repeated for a total of four (4) credit hours. Repeats 4.0 4.0	Acad	LAB 1.0 2.0 0.0	C
THP206	2020 Fall	Introduction to Costume Construction for Theatre		Introduction to basic principles used in costuming for theatre including the use of tools and techniques for costume construction, understanding of fabrics and materials, and a selected survey of historical fashion.	Prerequisites: None.		Acad	LEC 4.0 4.0 4.0 LAB 0.0 2.0 2.0	T
THP211	1995 Fall	Creative Drama		Theory and practice of creative drama, including improvisation,	Prerequisites: None.		Acad	LEC 3.0	S

				storytelling, puppetry, and script and program development in drama, and their application to elementary and secondary school levels				3.0 3.0	
THP211AA	1995 Fall	Creative Drama: Improvisation		Theory and practice of creative drama, including improvisation. Covers improvisation theatre-based activities. Emphasis on application in elementary and secondary school levels	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
THP211AB	1995 Fall	Creative Drama: Storytelling/ Puppets		Theory and practice of creative drama in storytelling and puppetry. Covers use of puppets to enhance storytelling skills. Emphasis on application in elementary and secondary school levels	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
THP211AC	1995 Fall	Creative Drama: Script Development		Theory and practice of creative drama in script development. Covers creation and adaptation of dramatic materials from a variety of sources. Emphasis on application in elementary and secondary school levels	Prerequisites: None.		Acad	LEC 1.0 1.0 1.0	S
THP212	2018 Fall	Acting II		Fundamental techniques of acting through script analysis, rehearsal, and performance	Prerequisites: A grade of C or better in THP112 or permission of Department or Division.		Acad	L+L 3.0 4.0 4.0	T
THP213	2020 Fall	Introduction to Technical Theatre		Procedures of technical theatre production and demonstration. Topics include design and construction of scenery, lighting, and properties.	Prerequisites: None.		Acad	LEC 4.0 4.0 4.0 LAB 0.0 2.0 2.0	T
THP214	2018 Fall	Directing Techniques		Contemporary theory and practice in directing, the evolution of present-day directing procedures, and a sampling of scripts for directing practice. Principles of script analysis, blocking, casting, rehearsing, and performing.	Prerequisites: A grade of C or better in THP112 or THE220, or permission of Instructor.		Acad	L+L 3.0 4.0 4.0	T
THP217	2021 Fall	Introduction to Design Scenography		The role of the theatre designer in creating scenic, lighting, costume, sound, and multimedia effects for	Prerequisites: None.	Course Attribute(s)): General	Acad	L+L 3.0	T

				stage productions. Elements of the design process and communication of dramatic themes and visions to the audience.		Education Designation: Humanities, Arts and Design - [HU]		4.0 4.0	
THP241	2010 Fall	Oral Interpretation of Literature	COM241	The study, analysis, and preparation for performance of prose, poetry, and dramatic literature. Preparation of material for public audiences.	Prerequisites: A grade of C or better in ENG101 or ENG107.	Course Attribute(s): General Education Designation: Humanities, Arts and Design - [HU] General Education Designation: Literacy and Critical Inquiry - [L]	Acad	LEC 3.0 3.0 3.0	S
THP271	1995 Fall	Voice and Diction	COM271	Exercises and techniques to free the voice and improve projection, resonance, and articulation. Covers international phonetic alphabet and standard stage speech	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
THP273	2020 Fall	Musical Theatre Production	MUP273	Principles and techniques for musical theatre production performance. Includes audition techniques, stage directions, character role development, rehearsal techniques, vocal acting styles and vocal technique, stage movement, crew roles, and performance.	Prerequisites: By audition.		Acad	LAB 1.0 5.0 5.0	T
THP281	2018 Fall	Production and Acting I		Provides the continuing acting student with opportunities to expand the versatility of characterization skills. Emphasis on relating the actor's work to the total production process.	Prerequisites: Permission of Department or Division.		Acad	L+L 3.0 4.0 4.0	T

				Performance of monologues, scenes, and one-act plays.					
THP282	2018 Fall	Production and Acting II		Provides the continuing acting student with opportunities to expand the versatility of characterization skills. Emphasis on relating the actor's work to the total production process. Performance of monologues, scenes, and one-act plays	Prerequisites: A grade of C or better in THP281 or permission of Department or Division.		Acad	L+L 3.0 4.0 4.0	T
THP285	2012 Fall	Creating/Performing Solo/Collaborative Works	STO285	Developing, rehearsing, and performing solo and collaborative works for fringe festivals and other storytelling and theatre venues.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
THP291AA	2024 Fall	Summer Conservatory: Stage Movement		Techniques of body centering, coordination, relaxation, energization, and physical expression for the actor.	Prerequisites: By audition and interview only, or permission of Instructor, or Program Director.	RDG100 satisfies RDG091 requirement. RDG100 may be repeated for a total of twelve (12) credit hours.	Acad	L+L 1.0 2.0 2.0	T
THP291AB	2024 Fall	Summer Conservatory: Voice and Diction		Basic principles and techniques of voice production and stage speech for the actor.	Prerequisites: By audition and interview only, or permission of Instructor, or Program Director.	THP291A A may be repeated for a total of three (3) credit hours.	Acad	L+L 1.0 2.0 2.0	T
THP291AC	1988 Fall	Summer Conservatory: Script Analysis (ACT)		Theory and practice in analysis of dramatic literature for the actor. Emphasis on techniques of character analysis for interpretation.	By audition and interview only.	THP291A C may be repeated for a total of three (3) credit hours.	Acad	LEC 1.0 1.0 1.0	S
THP291AD	2024 Fall	Summer Conservatory: Improvisation		Techniques of improvisation to develop the actor's creativity. Emphasis on inner resources, sensory memory, and emotional memory.	Prerequisites: By audition and interview only, or permission of Instructor, or Program Director.	THP291A B may be repeated for a total of three (3) credit hours.	Acad	L+L 1.0 2.0 2.0	T

THP291AE	2024 Fall	Summer Conservatory: Scene Study		Basic methodology and process of rehearsing and creating a character through prepared scenes for faculty critique and analysis.	Prerequisites: By audition and interview only, or permission of Instructor, or Program Director.	THP291A D may be repeated for a total of three (3) credit hours.	Acad	L+L 1.0 2.0 3.0	T
THP291AG	2018 Fall	Summer Conservatory: Production (ACT)		Practicum in rehearsal and stage performance through public productions.	Prerequisites: By audition and interview only.	THP291A G may be repeated for a total of twelve (12) credit hours.	Acad	L+L 4.0 5.0 5.0	T
THP292AA	2018 Fall	Summer Conservatory: Theatre Technology		Theory and practice of technical phases of play production. Includes applications in scenery, properties, and lighting.	Prerequisites: By interview only.	THP292A A may be repeated for a total of nine (9) credit hours.	Acad	L+L 3.0 4.0 4.0	T
THP292AB	2018 Fall	Summer Conservatory: Projects		Independent supervised studies in technical theatre applications. Emphasis on topic selection addressing individual student interests and abilities.	Prerequisites: By interview only.	THP292A B may be repeated for a total of nine (9) credit hours.	Acad	L+L 3.0 4.0 4.0	T
THP292AC	1988 Fall	Summer Conservatory: Script Analysis (TECH)		Theory and practice in analysis of dramatic literature as preparation for technical production applications.	Prerequisites: By interview only.	THP292A C may be repeated for a total of three (3) credit hours.	Acad	LEC 1.0 1.0 1.0	S
THP292AD	2018 Fall	Summer Conservatory: Career Development (TECH)		Techniques of preparation and presentation of professional materials for the theatre technician and designer.	Prerequisites: By interview only.	THP292A D may be repeated for a total of three (3) credit hours.	Acad	L+L 1.0 2.0 2.0	T
THP292AE	2018 Fall	Summer Conservatory: Production (TECH)		Practicum in various aspects of technical theatre production for public performance.	Prerequisites: By interview only.	THP292A E may be repeated for a total	Acad	L+L 4.0 5.0 5.0	T

						of twelve (12) credit hours.			
THP296WA	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z
THP296WB	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 1.0 5.0 0.0	Z

THP296WC	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 3.0 15.0 0.0	Z
THP296WD	2023 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to students academic or career goals (students present job may qualify) or permission of instructor. Corequisites: Must be concurrent in at least one class which is related to student's major or career interest or with permission of the Instructor.		Acad	LAB 4.0 20.0 0.0	Z
THP298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z

				and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
THP298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
THP298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
TLT100	2020 Summer	Telecommunications Math		Application of the scientific calculator to solve mathematical problems in telecommunications electronics. Scientific notation, engineering notation, metric conversion, algebraic equations, linear equations, graph interpretation, exponents, logarithmic expressions and, binary/hexadecimal concepts related to subnetting.	Prerequisites: A grade of C or better in college-level math course, or appropriate District placement, or permission of Department/Division Chair.		Occ	LEC 2.0 2.0 2.0	S
TLT142	2023 Summer	Drop Connections		Technical concepts for drop connections. Includes passive and active devices as well as use of filters. Also covers electronics hook up and troubleshooting procedures.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S

TLT143	2023 Summer	Digital Video Systems		Customer cable digital video signal reception establishment procedures. Covers system feature information, signal fault identification, and system and end-use equipment troubleshooting procedures. Also includes customer education information.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
TLT144	2023 Summer	Drop Planning and Maintenance		Procedures for the planning and installation of Broadband Networks to a customer address. Emphasis on drop connection location, configuration, and hardware component selection. Covers internal cable routing considerations and grounding, splitting, and directional tap/coupler component information. Also includes basic Broadband Network operation information and electronic hook-up procedures.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
TLT149	2023 Summer	Digital Phone Network Installation		Telephone network installation procedures. Emphasis on multi dwelling unit, multiple broadband applications, and residential telephone networks. Covers component connection as well as basic electronics principles.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
TLT162	2023 Summer	High Speed Internet/Networkin g		High speed internet installation and networking. Includes features and services of high-speed internet as well as procedures for installation. Also covers home network installation and configuration.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
TLT163	2023 Summer	High Speed Internet Technical Training		Procedures for presenting high speed internet products and services. Includes service tiers as well as network facilities and responsibilities. Also covers navigation of operating systems and troubleshooting common problems and procedures.	Prerequisites: None.		Occ	L+L 2.0 4.0 4.0	T
TLT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z

				and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
TLT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
TLT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
TOO101	2024 Fall	Elementary Tohono O'odham I		Basic grammar, pronunciation, and vocabulary of the Tohono O'odham language. Practice of listening, speaking, reading, and writing skills. Includes the study of the Tohono O'odham culture, with participation in an off-campus Tohono O'odham cultural event.	Prerequisites: None.	TOO101 may be repeated for a total of twelve (12) credit hours.	Acad	LEC 4.0 4.0 4.0	S
TQM101	2006 Fall	Quality Customer Service	CSM101	Examines the nature of quality customer service and the attitudes, knowledge, and skill needed to work effectively in a quality customer service environment. Foundation	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				skills for quality customer services are taught, applied, and practiced					
TQM220	2018 Spring	Leadership and Empowerment Strategies		Methods for facilitating teams and empowering employees which effectively enable all employees to act upon a shared vision.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
TQM230	2018 Spring	Teamwork Dynamics		Theory and practice of how team members and team leaders use listening, negotiating and interpersonal skills for the enhancement of team process. Included are concepts of team development and team problem-solving techniques.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
TQM235	2018 Spring	Motivation, Evaluation, and Recognition Systems		Presents methods for benchmarking, assessing team performance, linking recognition to team performance, and valuing victories and mistakes with all personnel.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
TQM240	2007 Fall	Project Management in Quality Organizations		Presents methods for quality organizations in how to plan and schedule a project in use of Critical Path Method (CPM) and Program Evaluation and Review Technique (PERT) techniques and software to monitor and control projects	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
TRS100	2004 Fall	Survey of Translation and Interpretation		Professional, sociolinguistic, and cognitive aspects of translation and interpretation. Includes social justice goals and language policy for interpretation and translation, role of translators and interpreters, consecutive interpretation, role of norms in legal translation, conservation of meaning, register, and style, meaning of translation, health care interpretation and translation, business and technical translation	Prerequisites: None.		Acad	LEC 4.0 4.0 4.0	S
TRS102	2014 Fall	Translation of English to Spanish		Analysis of the Spanish language with an emphasis on cross-language similarities and differences. Includes the structure of Spanish, cultural and stylistic components, semantics, dialectal differences and lexical obstacles. Widening of lexicon across	Prerequisites: A grade of C or better in (SPA202 or SPA204) and permission of Department or Division. Completion		Acad	LEC 3.0 3.0 3.0	S

				specific lexical fields and wider shared underpinnings of Greco-Latin etymologies. Brief introduction to historical development of the Spanish language with specific focus on cognates and false cognates.	of prerequisites within the last three years is required.				
TRS103	2014 Fall	Translation of Spanish to English		Analysis of the English language with an emphasis on cross-language similarities and differences. Course includes the structure of English, cultural and stylistic components, semantics, Standard English conventions, and metaphorical and idiomatic English. Introduction to translation of basic documents from Spanish to English.	Prerequisites: A grade of C or better in (ENG102 or ENG108) and (SPA202 or SPA204) and permission of Department or Division. Completion of prerequisites within the last three years is required.		Acad	LEC 3.0 3.0 3.0	S
UAS100	2020 Fall	sUAS Batteries and Electronics		Small Unmanned Aircraft Systems (sUAS) basic electronics and circuits, communications, information display systems, transmitter and receiver fundamentals, flight controller installation and tuning, lithium polymer battery basics, radio telemetry, basic electrical troubleshooting and repair techniques.	Prerequisites: Appropriate placement test score in Reading, Writing and Math, or [eligibility in ENG101, (RDG100 or RDG100LL), MAT120, MAT121 and MAT122].		Occ	LEC 5.0 5.0 5.0	S
UAS101	2019 Summer	Introduction to Unmanned Aircraft Systems Operation		Introduction to Unmanned Aircraft Systems (UAS) history, flight, avionics, sensors, communication systems, and an introduction to data analysis and applications, such as first responders, Geographic Information Systems, and Precision Agriculture.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
UAS107	2019 Summer	Unmanned Aircraft Systems Operator Certification		Develop knowledge and skills needed to manage and operate small Unmanned Aircraft Systems (sUAS). Includes Federal Aviation Regulations, radio communications, weather, airspace and airport authorization criteria, loading and performance, aeronautical decision making, sUAS flight operations, and maintenance. Operational skills	Prerequisites: None.	AET138 students must complete the appropriate flight lessons to satisfactorily complete	Occ	LEC 3.0 3.0 3.0	S

				acquired through both classroom and hands-on flight activities.		the course.			
UAS205	2021 Spring	sUAS Instruments and Autopilot Programming and Uses		Small unmanned aircraft systems (sUAS) proper operation of ground control stations with remote aircraft, troubleshooting radio link issues, changing parameters, setting up waypoints, flying on autopilot only.	Prerequisites: A grade of C or better in UAS101 and UAS107. Corequisites: UAS206,		Occ	LEC 3.0 3.0 3.0	S
UAS206	2021 Spring	sUAS Instrument and Autopilot Flight Lab		Students will use their advanced skills to manipulate a ground control station in the practical operation of Small Unmanned Aircraft Systems (sUAS) in a controlled, but realistic environment.	Prerequisites: A grade of C or better in UAS101 and UAS107. Corequisites: UAS205.		Occ	LAB 2.0 2.0 2.0	T
UAS207	2020 Fall	sUAS Dynamics and Design		Design, configuration, and concepts of Small Unmanned Aircraft Systems (sUAS). Platform types including multi-rotors, single rotor, and fixed wing aircraft.	Prerequisites: A grade of C or better in UAS205 and UAS206. Corequisites: UAS208.		Occ	LEC 5.0 5.0 5.0	S
UAS208	2020 Fall	sUAS Dynamics and Design Lab		Students will assemble, program, preflight, and fly a Small Unmanned Aircraft System (sUAS) manufacturing equipment.	Prerequisites: A grade of C or better in UAS205 and UAS206. Corequisites: UAS207.		Occ	LAB 2.0 2.0 2.0	T
UAS211	2020 Fall	sUAS Ground Control Stations, Telemetry, and Communications		Small Unmanned Aircraft Systems (sUAS) proper set-up, operation, and basic troubleshooting of many different Ground Control Stations used in the industry. Set-up, use, and configuration of different radio telemetry units. Proper use and procedures of communications with Air Traffic Control. Proper use of applications for use in Air Traffic Management.	Prerequisites: A grade of C or better in UAS207 and UAS208.		Occ	L+L 3.0 4.0 4.0	T
UAS212	2020 Fall	sUAS Maintenance Lab		Proper inspection, troubleshooting, and repair techniques for Small Unmanned Aircraft Systems (sUAS).	Prerequisites: A grade of C or better in UAS207 and UAS208.		Occ	LAB 2.0 2.0 2.0	T
UAS215	2020 Fall	sUAS Commercial Flight Training		Proper pre-flight and operation techniques used in a Small Unmanned Aircraft (sUAS) Commercial Environment. Gathering digital information from an inspection	Prerequisites: A grade of C or better in UAS207 and UAS208.		Occ	L+L 3.0 6.0 6.0	T

				or surveillance flight, then demonstrate post-production skills and techniques for a useable customer product.					
UCS101	2022 Summer	Introduction to Billing		An introduction to basic billing procedures in the public utility industry. Includes computer familiarization, coordinates system, billing cycle, payment plans, and components of the bill.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
UCS108	2022 Summer	Account Services for Public Utilities		Overview of procedures for accessing and maintaining customer accounts. Includes the billing cycle, rates and payment options as well as various types of service orders	Prerequisites: Permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
UCS110	2023 Fall	Meter and Trouble Orders		Fundamentals of meters and their functions. Instruction on handling trouble calls and determining and processing corrective action.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
UCS115	2014 Spring	Introduction to Water Customer Services		Introduction to water customer account services. Includes the irrigation process, accounts, and schedules. Also covers delivery systems, controls, and use of a mapping system in addition to water rights and typical irrigation problems.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
UCS116	2014 Spring	Water Services Accounts I		Water services procedures and restrictions for opening, combining, and updating accounts as well as responding to billing and payment inquiries and opening accounts. Also covers Supplemental Supply Program (SSP) water and various user accounts in addition to company role and responsibilities.	Prerequisites: A grade of C or better in UCS115.		Occ	LEC 2.0 2.0 2.0	S
UCS117	2014 Spring	Water Services Accounts II		Water services rules and restrictions for handling property sales, special requests, and order revisions in addition to typical irrigation problems. Also covers procedures for handling private system controls, flood calls, and water theft issues as well as facility notices.	Prerequisites: A grade of C or better in UCS116.		Occ	LEC 2.0 2.0 2.0	S
UCS118	2018 Fall	Water Customer Services Procedures I		Practical application of water customer account services. Includes procedures for creating, accessing,	Prerequisites: A grade of C or better in UCS115.		Occ	L+L 2.0	T

				and updating accounts as well as completing and documenting water orders. Also covers use of the mapping system and procedures for handling typical irrigation calls.				4.0 4.0	
UCS119	2018 Fall	Water Customer Services Procedures II		Procedures for completing billing and payment account procedures. Covers refunds, overdraft accounts, and procedures for handling water theft. Also covers special requests, flood calls, and townsite issues in addition to Supplemental Supply Program (SSP) requests.	Prerequisites: A grade of C or better in UCS118.		Occ	L+L 2.0 4.0 4.0	T
UCS120	2022 Summer	Payments, Credits and Rates		Examination of procedures to perform payment, deposit and credit operations. Includes various connect orders and rate calculations.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
UCS130	1996 Spring	Service Orders I		Fundamentals of processing service orders. Emphasis on customer service, making determinations of services required and placing appropriate orders	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
UCS135	1996 Spring	Service Orders II		Further examination of the processing of service orders. Emphasis on customer account data, account status, third party billings and placing appropriate orders	Prerequisites: A grade of C or better in UCS130.		Occ	LEC 2.0 2.0 2.0	S
UCS140	2018 Fall	Service Order Procedures		Practical application of service order processing. Includes meter and trouble orders, requests for service, billings and rates, as well as account turn-offs and reconnects.	Prerequisites: A grade of C or better in UCS135.		Occ	L+L 2.0 4.0 4.0	T
UCS180	2022 Summer	Introduction to Water Delivery Customer Service		Introduction to water customer delivery operations. Includes an overview of the irrigation process, the irrigation system, delivery responsibilities and schedules. Also covers delivery systems, controls, and use of a mapping system in addition to water rights and typical irrigation problems.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
UCS182	2022 Summer	Water Delivery Management		Water delivery procedures for managing the flow of irrigation water through the irrigation system to both residential and agricultural customers. Also covers field customer service for	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S

				agricultural and residential water customers as well as role and responsibilities for irrigation water delivery.					
UCS184	2022 Summer	Water Delivery Operations		Water delivery service areas, delivery devices, and responsibilities for managing irrigation water. Covers procedures for handling system controls and issues as it relates to water delivery in addition to procedures for dry-up and clearance.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
UCS186	2022 Summer	Water Delivery Measurements		Practical application of irrigation water delivery measurement. Includes procedures to safely and correctly open water delivery devices, determine accuracy of and correct water flow. Also covers safety and security procedures.	Prerequisites: None.		Occ	L+L 2.0 3.0 3.0	T
UCS188	2022 Summer	Water Delivery Operations Lab		Practical application of water delivery procedures for managing the flow of water through the irrigation system to both residential and agricultural customers.	Prerequisites: None.		Occ	L+L 1.0 3.0 3.0	T
UTP110	2016 Spring	Hand and Power Tools for Linemen		Use, maintenance, and safety procedures for common hand and power tools used in the electric power industry.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
UTP111	2016 Spring	Line Work Equipment and Safety		Overview of the line work industry including its history, technological developments, and current practices. Covers an introduction to industry equipment and tools with a focus on safety practices and procedures. Inspection and maintenance of equipment and tools used in pole climbing and cover-up procedures. Emphasis on safety operations.	Prerequisites: None.		Occ	LEC 4.0 4.0 4.0	S
UTP112	2016 Spring	Line Construction		Introduction to line construction equipment and procedures. Includes personal protective equipment, climbing equipment, and basic line materials. Also covers procedures for handling wood poles, de-energized lines, and one-man pole-top rescues, in addition to equipment and	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				procedures for grounding and creating a safe zone.					
UTP113	2016 Spring	Rigging Fundamentals		Fundamentals of rigging for linemen. Includes safe use of rigging components including ropes, knots, handlines, and block and tackle. Covers rigging calculations and approaches to basic rigging tasks, in addition to hazards.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
UTP114	2016 Spring	Line Construction Procedures		Line construction procedures including pole change out, horizontal line construction, and taking lines out of service. Covers distribution line symbols, compatible units, and second point of contact, in addition to calculating pulling tension and procedures for stringing overhead service and approaching hot circuits.	Prerequisites: A grade of C or better in UTP112.		Occ	LEC 3.0 3.0 3.0	S
UTP115	2016 Spring	Underground Line Construction		Introduction to underground line construction. Includes a comparison of duct and vault underground systems. Also covers Blue Stake laws and markings, procedures for pulling and maintaining underground cable, and safety considerations for trenching and excavating.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
UTP150	2016 Spring	Introduction to Transformer Theory		Introduction to transformers and transformer theory. Covers the basic structure, components and applications of single-phase and three phase transformers. Includes interpretation of transformer nameplates, in addition to characteristics and functions of distribution transformers.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
UTP151	2016 Spring	Transformer Theory Design and Function		Comparison of function of various types of transformers. Includes design of single-phase and three-phase transformers, as well as safety procedures and precautions for energizing transformers. Also covers wiring transformers in parallel and three-phase connection diagrams.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
UTP152	2016 Spring	Transformer Diagramming and Calculations		Diagramming and calculations in transformer theory. Includes use of the Pythagorean Theorem and sine	Prerequisites: None.		Occ	LEC 3.0	S

				and cosine waves and functions to complete calculations. Also covers secondary and primary voltage, voltage ratio and loss calculations, in addition to blueprint reading.				3.0 3.0	
UTP155	2016 Spring	Introduction to Hot Stick		Introduction to hot stick terminology, tools, and procedures. Includes procedures for cleaning, storage, and handling in addition to inspection and testing. Also covers tie-wires, preform ties, hold tags, and live line tailboard development.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
UTP156	2016 Spring	Hot Stick Theory and Calculations		Rigging theory and calculations for hot stick application, including Working Load Limit (WLL). Also covers slings, personal protective grounding, and protective cover, in addition to energized conductors and lines.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
UTP157	2016 Spring	Hot Stick Work Site and Equipment		Hot stick work site, materials, and equipment procedures. Covers fault location, meter load, tower erection, and phasing sequences in addition to procedures for managing safety in confined spaces. Also includes cable preparation and pulling procedures as well as equipment and site operations and safety.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
UTP210	2016 Spring	Personal Protective Grounding		Considerations and procedures for personal protective grounding with a review of basic electrical circuits. Covers function, sizing, and installation of protective grounding sets on trucks, underground distribution systems, and construction projects. Also covers resistance testing, equipotential zones, lightning protection, and live line tools.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
UTP211	2016 Spring	Overhead Distribution Line Design		Introduction to overhead distribution line construction design. Includes overhead construction standards, distribution pole standards, and primary construction units as well as controls and installation standards for various types of capacitors. Also covers clearances, calculations,	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				drawings, and design criteria for overhead distribution line design.					
UTP212	2016 Spring	Underground Distribution Line Design		Introduction to underground distribution line construction design. Includes construction assembly units, capacitor banks, switching, and fusing as well as applications for conduit and feeder riser compatible units. Also covers clearances, calculations, drawings, and design criteria for underground distribution line design.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
UTP215	2016 Spring	Emerging Technologies		Overview of emerging technologies in electrical energy production. Includes applications, limitations, and advantages of various types of alternative energy. Also covers characteristics of and advantages to the use of fiber optics. Design and function of Extra High Voltage (EHV) lines also examined.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
UTP216	2016 Spring	Transformer Operations and Troubleshooting		Advanced transformer operation and troubleshooting procedures. Includes characteristics of three-phase systems, distribution capacitors, and fusing. Covers transformer calculation including voltage regulation, fault current, and load. Procedures for isolating and testing transformers and system change-out also covered.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
UTP217	2016 Spring	Electrical Substations		A comparison of operation and design of various types of substations. Includes construction planning, design, diagrams, and blueprints, in addition to hazards and safety issues. Also covers substation stresses, superstructures, and equipment function and maintenance.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
UTP250	2016 Spring	Maps and Schematics for Linemen		Components, coordinates, and symbols for maps and schematics used by linemen. Also includes procedures for access and navigation of mobile Geographic Information Systems (GIS).	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
UTP251	2016 Spring	Metering Theory for Linemen		Concepts of energy measurement and metering theory for linemen. Includes the power triangle and	Prerequisites: None.		Occ	LEC 2.0	S

				various metering types, ratings, and strategies for troubleshooting metering problems.				2.0 2.0	
UTP255	2016 Spring	Power Distribution Operations		Transmission and Generation Operations (TGO), Distribution Operations Center (DOC), and Power Distribution Operations (PDO) organization and responsibilities.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
UTP258	2018 Fall	Applied Line Topics		Applied line topics for linemen. Includes rigging calculations and derating factors as well as diagramming of three-phase vectors and wiring. Also covers procedures, documentation, and restrictions for receiving, modifying, and releasing clearances.	Prerequisites: None.		Occ	L+L 3.0 4.0 4.0	T
VET101	2020 Fall	Introduction to Veterinary Technology		Introduces the role of the veterinary paraprofessional to the veterinary science industry. Addresses professional development, including ethics, professionalism, and legal implications of veterinary practice. Students will be introduced to animal husbandry and nutrition, animal behavior, species and breed identification, the human-animal bond, biosecurity, equine medicine, livestock medicine, companion animal medicine, and lab animal medicine.	Prerequisites: None. Corequisites: VET101LL.	Completion of High school biology is recommended prior to enrolling in VET101.	Occ	LEC 3.0 3.0 3.0	S
VET101LL	2020 Fall	Animal Care Skills I Laboratory		Principles of daily animal husbandry, socialization, enrichment, and clinical care of animals housed in campus facilities. Introductory veterinary technology students work on building teamwork, communication and veterinary technical skills encountered in the daily operations of a multi-species veterinary facility.	Prerequisites: None. Corequisites: VET101.		Occ	LAB 2.0 2.0 0.0	P
VET103	2022 Fall	Veterinary Assisting I		Provides students with the hands-on skills needed to perform the duties of a veterinary assistant. Introduction of the basic veterinary assistant skills needed to assist veterinary professionals in the quality care of animals. Includes basic introduction to anatomy and physiology of domestic	Prerequisites: None.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T

				animals, front office skills, communication and client relations, animal restraint, nursing, vaccinations and other basic assisting skills.					
VET104	2022 Fall	Veterinary Assisting II		This is a lecture/laboratory course where students will learn hands on skills needed to perform the duties of a veterinary assistant. The course will build foundation skills for veterinary clinical care for the veterinary assistant. This course includes foundations in pharmacy and pharmacology, surgical preparation and assisting, the veterinary assistant's role in collection of laboratory samples, and diagnostic imaging.	Prerequisites: A grade of C or better in VET101 and VET103. High school biology strongly recommended.		Occ	LEC 3.0 2.0 2.0 LAB 0.0 3.0 3.0	T
VET109	2022 Fall	Veterinary Assisting Internship		Provides students with clinical experience in a small animal general veterinary practice. Provides the opportunity for practical application and development of knowledge, skills, and abilities acquired in program coursework at a veterinary assistant level. Students have exposure to practice philosophies, methodologies, and real-life situations requiring critical thinking and decision-making abilities. Includes instruction and evaluation by veterinarians or veterinary technicians guided by the National Association of Veterinary Technicians in America Veterinary Assistant Student Essential and Recommended Skills list.	Prerequisites: A grade of C or better in VET101 and VET103. Corequisites: VET104.		Occ	LAB 1.0 1.0 0.0	C
VET112	2018 Fall	Animal Nursing I		Training in and supervised performance of skills necessary in the husbandry and clinical care and treatment of animals. Occupational hazards and safety in livestock, companion animal, and laboratory animal facilities. Introduction to medical terminology. Restraint and handling, feeding, and housing of a variety of animal species. Physical examination of various species of	Prerequisites: A grade of C or better in VET101 and admission to the Veterinary Technology/Animal Health program or permission of Instructor.		Occ	LEC 2.0 2.0 2.0 LAB 0.0 3.0 3.0	T

				<p>animals. Principles of sanitation, disinfection, sterilization, and aseptic technique. Principles and techniques of medication administration, fluid therapy, and vaccination.</p> <p>Familiarization with operation of various types of animal care equipment. Introduction to laboratory techniques. Professional ethics and the human-animal bond.</p>					
VET132	2017 Fall	Veterinary Office Management and Client Communication		<p>Principles and practice of veterinary office management for veterinary technology students. Client relations, receptionist skills, telephone techniques, interpersonal skills, and personnel management. Generation and maintenance of correspondence, medical records, legal forms, and hospital logs. Basic bookkeeping, accounting, and financial management principles. Marketing and public relations. Professional ethics and professionalism. Use of computers for data entry, patient record management and inventory control.</p>	<p>Prerequisites: A grade of C or better in VET101 or permission of Instructor.</p>		Occ	<p>LEC 3.0 3.0 3.0</p>	S
VET140	2020 Fall	Animal Care Skills II		<p>Practical application of animal care skills and principles of animal care and management using techniques and knowledge learned in the veterinary technology classes. Students expand their animal care knowledge, skills and abilities to include skills needed to be successful in clinical internships.</p>	<p>Prerequisites: None. Corequisites: VET150 or VET151 and admission to the Veterinary Technology program.</p>	VET140 may be repeated for a total of four (4) credit hours.	Occ	<p>LAB 2.0 2.0 0.0</p>	P
VET150	2019 Spring	Veterinary Anatomy and Physiology I		<p>Comparative evaluation of the anatomy and physiological functions of various body systems of livestock, companion animals, and laboratory animals.</p>	<p>Prerequisites: A grade of C or better in (BIO181, CHM130, CHM130LL, CRE101, ENG102, MAT120, and VET101) and admission to the Veterinary Technology/Animal Health Program.</p>		Occ	<p>LEC 3.0 3.0 3.0</p>	S

VET150LL	2018 Fall	Veterinary Anatomy and Physiology Laboratory I		Laboratory experience in support of VET150. Includes dissection of preserved animal specimens.	Prerequisites: None. Corequisites: VET150.		Occ	LAB 1.0 3.0 3.0	T
VET151	2019 Spring	Veterinary Anatomy and Physiology II		Focuses on unique anatomic structures and physiological processes which are clinically important in veterinary medicine. Anatomical and physiological bases of clinic procedures, animal disease processes, and veterinary treatments.	Prerequisites: A grade of C or better in VET150 or permission of Instructor.		Occ	LEC 3.0 3.0 3.0 LAB 0.0 3.0 3.0	T
VET200	2023 Fall	Veterinary Clinical Pathology Methods		Fundamental studies of laboratory techniques and procedures involved in evaluating veterinary clinical samples. Includes hematology, urinalysis, hemostasis, blood biochemistry and enzymology, serology, cytology, and parasitology. The veterinary technician's role in sample collection, sample storage and handling, and performance of analytic procedures. Use of laboratory equipment, laboratory safety and management, and quality control.	Prerequisites: A grade of C or better in BIO205 or permission of Instructor. Corequisites: VET223		Occ	LEC 2.0 2.0 2.0 LAB 0.0 3.0 3.0	T
VET201	2020 Fall	Animal Care Skills III		Practical application of animal care skills and principles of animal care and management using techniques and knowledge learned in the veterinary technology classes. Students expand their animal care knowledge, skills and abilities to include skills needed to be successful in clinical internships.	Prerequisites: None. Corequisites: VET210 and VET240 and admission to the Veterinary Technology program.	VET201 may be repeated for a total of four (4) credit hours.	Occ	LAB 2.0 2.0 0.0	P
VET210	2023 Fall	Animal Nursing II		Instruction in and hands-on application of techniques of veterinary nursing care, patient assessment, equipment operation, diagnostic sample collection, and medical treatment. Physical examination, clinical nutrition, and reproductive management of the dog and cat. Operation of E.C.G. and anesthetic machine. Fluid therapy, wound therapy, and bandaging. Surgical instruments and packs. Common	Prerequisites: A grade of C or better in (VET112 and VET151) or permission of Instructor.		Occ	LEC 3.0 3.0 3.0 LAB 0.0 3.0 3.0	T

				diagnostic and therapeutic procedures on animals.					
VET220	2021 Spring	Veterinary Pharmacology for the Veterinary Technician		Actions and uses of pharmacological agents used in veterinary medicine; drug classifications, modes of action, indications and contraindications, routes of administration, and mechanisms of elimination. Dispensing and pharmacy management, and laws regulating controlled substances. Solving medical math problems and calculating drug doses.	Prerequisites: A grade of C or better in VET101 and VET151. Corequisites: VET223.		Occ	LEC 3.0 3.0 3.0	S
VET223	2021 Spring	Animal Diseases		Study of common infectious, parasitic, metabolic, immunologic, and degenerative diseases of domestic animals. Infectious disease transmission, mechanisms of disease, the host-parasite relationship, and host responses to disease agents. Clinical signs and management of common diseases. Life cycles of common parasites. Principles of disease prevention, environmental management, vaccination, and zoonosis. Diagnostic techniques including gross and microscopic identification of common animal pathogens.	Prerequisites: A grade of C or better in VET151. BIO205 recommended.		Occ	LEC 3.0 3.0 3.0	S
VET230	2018 Fall	Veterinary Radiology and Imaging for the Veterinary Technician		Veterinary and radiographic terminology, radiation and electrical protection, technical principles, radiographic equipment operation - manual and digital, and radiographic duties of the Veterinary Technician. Introduction to ultrasound, MRI, CAT scans, and other non-traditional imaging uses and techniques. Lab allows for practical application of theories and radiographic positioning as taught in lecture.	Prerequisites: A grade of C or better in (VET150 and VET150LL) or permission of Instructor.		Occ	LEC 3.0 3.0 3.0 LAB 0.0 3.0 3.0	T
VET235	2018 Fall	Veterinary Technician Proficiency		Review of pertinent subject matter in preparation for the Arizona State Veterinary Technician Examination and the Veterinary Technician National Examination. Guided review	Prerequisites: A grade of C or better in VET210, VET220, and VET223.		Occ	L+L 2.0 2.0 2.0	T

				and discussion of exam application process. Review of student's Veterinary Technology Student Essential and Recommended Skills to ensure completion for graduation as required by the American Veterinary Medical Association. May included field trips or guest lecturers.	Corequisites: VET240.				
VET240	2020 Spring	Veterinary Anesthesia, Surgery, and Emergency Nursing		Veterinary surgical nursing skills associated with aseptic technique and proper protocol in the surgery suite. Pre and post-op monitoring, record keeping, and client education skills. Procedures and techniques with intravenous and inhalation anesthetics, surgical asepsis, skin preparation, instrument sterilization techniques and monitoring veterinary patients for vital signs.	Prerequisites: A grade of C or better in VET210 and VET220.		Occ	LEC 3.0 3.0 3.0 LAB 0.0 4.0 4.0	T
VET250AA	2019 Fall	Veterinary Technician Internship		Provides Veterinary Technology program students with off-campus clinical experience in a small animal general veterinary practice. Opportunity for practical application and development of knowledge, skills, and abilities acquired in program coursework. Exposure to practice philosophies, methodologies, and real-life situations requiring critical thinking and decision-making abilities. Includes instruction and evaluation by veterinarians or veterinary technicians guided by the American Veterinary Medical Association's Veterinary Technology Student Essential and Recommended Skills list.	Prerequisites: A grade of C or better in VET112, VET132, and VET151.		Occ	LAB 0.5 0.5 0.0	C
VET250AB	2019 Fall	Veterinary Technician Internship		Provides Veterinary Technology program students with off-campus clinical experience in a large animal general veterinary practice. Opportunity for practical application and development of knowledge, skills, and abilities acquired in program coursework. Exposure to practice philosophies, methodologies, and real-life situations requiring critical	Prerequisites: A grade of C or better in VET250AA.		Occ	LAB 0.5 0.5 0.0	C

				thinking and decision-making abilities. Includes instruction and evaluation by veterinarians or veterinary technicians guided by the American Veterinary Medical Association's Veterinary Technology Student Essential and Recommended Skills list.					
VET250AC	2019 Fall	Veterinary Technician Internship		Provides Veterinary Technology program students with off-campus clinical experience in an emergency veterinary clinic and in a veterinary specialty practice. The internship hours will be split equally between the emergency clinic and the specialty practice. Specialty practices my include surgery, ophthalmology, internal medicine, dentistry, dermatology, radiology, exotics, zoo, research, and others. Opportunity for practical application and development of knowledge, skills, and abilities acquired in program coursework. Exposure to practice philosophies, methodologies, and real-life situations requiring critical thinking and decision-making abilities. Includes instruction and evaluation by veterinarians or veterinary technicians guided by the American Veterinary Medical Association's Veterinary Technology Student Essential and Recommended Skills list.	Prerequisites: A grade of C or better in VET250AB or permission of Instructor.		Occ	LAB 0.5 0.5 0.0	C
VET250AD	2019 Fall	Veterinary Technician Internship		Continuing practical application and mastery of knowledge, skills, and abilities in the selected clinical setting. Exposure to practice philosophies, methodologies, and real-life situations requiring critical thinking and decision-making abilities. Includes instruction and evaluation by veterinarians or veterinary technicians guided by the American Veterinary Medical Association's Veterinary Technology Student Essential and Recommended Skills list.	Prerequisites: A grade of C or better in VET250AC or permission of Instructor.	VET250A D allows the last-semester Veterinary Technology Program student to elect to repeat the off-campus clinical experienc	Occ	LAB 0.5 0.5 0.0	C

						e of either VET250A A, VET250A B, or VET250A C, depending upon their career interest.			
WAC101	2020 Fall	Writing Across the Curriculum		Expressive, expository, and academic writing experiences to develop students' rhetoric and composition foundation. Experience planning and drafting multi-paragraph essays through a writing process with emphasis on essay and paragraph structure and the elements of sentence structure. Participation in writing workshop, group work, reading to support writing tasks, and writing from sources. A minimum of three multi-paragraph essays and a final reflection paper.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
WED105	1991 Fall	Minimizing Workplace Stress		Introduction of the application of Practical Relaxation Techniques for reducing workplace stress. Defines the characteristics, process and signs of worplace stress. Includes discussions of the physiology of stress and how these responses impact daily living. Use of the biofeedback instruments to monitor the relaxation techniques such as self-hypnosis, visualization, guided imagery, and meditation	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
WED106	2023 Fall	Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED)		Basic overview of Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillator (AED). Covers choking procedures and the importance, guidelines, and techniques for performing CPR and utilizing an AED.	Prerequisites: None.		Occ	LEC 0.5 0.5 0.5	S
WED107	2023 Fall	Community First Aid		Basic first aid course for the layperson. Training with the	Prerequisites: None.		Occ	L+L 0.5	T

				assessments and skills that be performed with minimal equipment in common home or workplace emergencies until emergency medical personnel arrive.				0.5 0.5	
WED120	2018 Fall	Massage Therapy: Anatomy Refresher - Upper Body		This course is designed for individuals in the field of massage therapy and provides a review of upper body musculature affecting the neck, shoulder, spine, elbow and wrist joints. Origins and insertions and resistive stretches included.	Prerequisites: None.	WED120 may be repeated for a total of six (6) credit hours.	Occ	L+L 1.0 1.0 1.0	T
WED125	2018 Fall	Reiki: Healing and Symbols		Introduction to Reiki as a Japanese technique for stress reduction and relaxation that also promotes healing. Instruction in the Usui method of Reiki and its symbols and applications to personal health and everyday life.	Prerequisites: None.	WED125 may be repeated for a total of ten (10) credits.	Occ	L+L 2.0 2.0 2.0	T
WED126	2020 Fall	Cupping Therapy		Introduction to cupping therapy for individuals in the field of massage therapy. In addition but not limited to the history, techniques and application in various therapeutic settings.	Prerequisites: None.	WED126 may be repeated for credit.	Occ	L+L 1.0 1.0 1.0	T
WED145	2023 Fall	Reflexology		History and application of specific pressure points on the hands and feet that have correlation to different body organs and systems. Practice of micromovement techniques with the goal of creating a response throughout the body.	Prerequisites: None.	WED145 may be repeated for a total of six (6) credit hours.	Occ	L+L 1.0 1.0 1.0	T
WED151	2004 Fall	Introduction to Alternative Medicine		Definition of health; exploration of mind-body-spirit connection in health; various therapeutic modalities; identification of strengths and limitations of alternative therapies. Also includes development of ability to critically review written material in the alternative therapy area	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
WED152	2023 Fall	Comparative Healing Techniques		Comparative approaches to healing, including allopathy, homeopathy, chiropractic, osteopathy, Chinese medicine, Ayurveda, Shamanism, and therapeutic touch. Contrast explanations for causation of disease,	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S

				diagnostic procedures, and healing methodology.					
WED154	2023 Fall	First Aid/Cardiopulmonary Resuscitation		Cardiopulmonary Resuscitation (CPR) and first aid for the adult, child and infant patients includes Automated External Defibrillator (AED), rescue breathing, obstructed airway, and other first aid procedures. Designed to train citizen responders in skills and procedures required during emergency situation.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
WED155	2023 Fall	Introduction to Chinese Medicine		Basic theories, principles, and methods that constitute the backbone of Chinese Medicine. Explores concepts of Yin, Yang, the Five Elements (Wood, Fire, Earth, Metal, and Water), and the Five Vital substances (Qi, Blood, Body Fluids, Jing, and Shen). Overview of the physiology of the major internal organs (Five Zang and Six Fu) with a focus on their various interrelationships.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
WED162	2023 Fall	Meditation and Wellness		Physiology of meditation and its effects on physical and mental health; scholastic abilities and interpersonal relationships; differentiation between meditation and other relaxation techniques.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
WED165	2001 Fall	Overview of Massage Therapy		History of massage; overview of bodywork systems; benefits and indications of massage; legal requirements for practice in Arizona	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
WED166	2023 Fall	Overview of FELDENKRAIS (R) Awareness Through Movement (R)		Movement activity lessons which are verbally directed, exploratory in nature, designed to clarify the full range of possibility for human movement and action. Self-paced lessons in a noncompetitive environment.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
WED170	1997 Fall	Principles of Homeopathy		Origins of homeopathy; key concepts; perceptions of disease; schools of homeopathy; scientific studies; preparation of remedies; case taking	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
WED172	2000 Fall	Overview of Herbal Remedies		History and evolution of herbs for healing applications. Preparation,	Prerequisites: None.		Occ	LEC 1.0	S

				usage, and effects of certain herbs used for healing purposes. Basic literature review skills in the area of herbal medicine				1.0 1.0	
WED174	2023 Fall	Myofascial Release		Introduction to myofascial release techniques and application. Myofascial Release (MFR) is a therapeutic modality that allows restricted fascia to release from a tightened state. MFR improves nerve conductivity and circulation of blood and lymph, which allows the healing powers of the body to flow to restricted tissues. The result is relief from chronic pain and the potential for healing injured tissue.	Prerequisites: None.	WED174 may be repeated for credit. Counts as 13.3 continuing education units (CEUs).	Occ	L+L 1.0 1.0 1.0	T
WED176	1997 Fall	Flower Essences		Healing properties of Bach flower remedies; Bach's development of remedies and his philosophy of healing; use and preparation of a variety of flower essences	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
WED181	2018 Fall	Essential Oil Properties and Formulations		Focuses on the benefits of individual plant oils, profiling past to present day uses and documented properties; experiential evaluation of the oils; how to formulate topical blends; oil substitution using less expensive oils; hands-on learning.	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
WED182	2006 Fall	Health Conditions and Popular Herbs		In-depth look at some of today's most popular herbs and their relationship to specific health conditions. Emphasis on research skills in relation to popular herbs. Includes the effects, uses, and application strategies of herbs.	Prerequisites: None. WED172 suggested but not required.		Occ	LEC 2.0 2.0 2.0	S
WED183	2018 Fall	Introduction to Ayurvedic Principles		Introduction to Ayurveda: "the science of life"; a complete system of balancing the body, mind and spirit, originating from ancient India. Introduction to foundational Ayurvedic principles, health philosophy and self assessment of basic constitution. Application of basic health and self care practices such as food selection and preparation, exercise and movement, renewal and restoration	Prerequisites: None.	WED183 may be repeated for a total of six (6) credits.	Occ	L+L 2.0 2.0 2.0	T

				activities, environmental influences to promote health and well-being.					
WED185	2012 Fall	Overview of Movement Therapy Systems		Definition of health, exploration of mind-body-spirit connection in health, various therapeutic modalities, identification of strengths and limitation of movement based therapies. Also includes development of ability to critically review written material in the physical or movement therapy area.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
WED195	2023 Fall	Special Topic in Wellness Education		Introduction to current topics and contemporary issues related to developing and maintaining a healthy lifestyle.	Prerequisites: None.	WED195 may be repeated for credit.	Occ	LEC 0.5 0.5 0.5	S
WED195AA	2023 Fall	Special Topics in Wellness Education A		Introduction to current topics and contemporary issues related to developing and maintaining a healthy lifestyle.	Prerequisites: None.	WED195A A may be repeated for credit.	Occ	L+L 0.5 1.0 1.0	T
WED195AB	2023 Fall	Special Topics in Wellness Education A		Introduction to current topics and contemporary issues related to developing and maintaining a healthy lifestyle. Focuses on a variety of techniques and strategies to promote wellness.	Prerequisites: None.	WED195A B may be repeated for credit.	Occ	L+L 1.0 1.0 1.0	T
WED195AC	2023 Fall	Special Topics in Wellness Education A		Introduction to current topics and contemporary issues related to developing and maintaining a healthy lifestyle. Focuses on a variety of techniques and strategies to promote wellness.	Prerequisites: None.	WED195A C may be repeated for credit.	Occ	L+L 2.0 2.0 2.0	T
WED195AD	2023 Fall	Special Topics in Wellness Education A		Introduction to current topics and contemporary issues related to developing and maintaining a healthy lifestyle. Focuses on a variety of techniques and strategies to promote wellness.	Prerequisites: None.	WED195A D may be repeated for credit.	Occ	LEC 3.0 3.0 3.0	S
WED195BB	2023 Fall	Special Topics in Wellness Education B		Introduction to current topics and contemporary issues related to developing and maintaining a healthy lifestyle.	Prerequisites: None.	WED195B B may be repeated for credit.	Occ	L+L 1.0 1.0 1.0	T
WED195BC	2023 Fall	Special Topics in Wellness Education B		Introduction to current topics and contemporary issues related to developing and maintaining a healthy lifestyle.	Prerequisites: None.	WED195B C may be repeated for credit.	Occ	L+L 2.0 2.0 2.0	T

WED204	2009 Fall	Establishing a Massage Practice		Explore career options in therapeutic massage, including state licensing requirements, and determine how to lay the groundwork for a successful massage practice	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
WED210	2018 Fall	Sports Massage		Purpose, benefits, and contraindications of sports massage; principles of sports physiology; massage techniques, applications, and procedures; treatment of injuries.	Prerequisites: A grade of C or better in WED165 and WED230 or permission of Program Director.		Occ	L+L 2.0 3.0 3.0	T
WED215	2018 Fall	Self-Care for Health Care Providers		Emphasis on mind-body methods for personal wellness through integration of physical, emotional, social, and spiritual dimensions of being. Development of a personal practice to achieve and sustain a balanced program to support personal health and well being	Prerequisites: None.		Occ	L+L 2.0 5.0 5.0	T
WED218	1997 Fall	Aromatherapy		Physiology of aromatherapy; methods of use; preparation of oils; uses in sports, beauty care, massage, child care, health care, at work, and in the home	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
WED220	2023 Fall	Gentle Touch for Individuals Living with Cancer		Introduction to the gentle-touch approach to massage for individuals who are living with or have survived cancer. Overview of cancer and principal cancer treatments. Clinical considerations, including practice guidelines and hands-on adjustments related to cancer and treatment side effects. Administrative considerations for client intake, treatment plans and session documentation. In addition, comprehensive practical application of massage.	Prerequisites: None.	Previous training in Swedish strokes and massage draping required. WED220 may be repeated for a total of eight (8) credit hours.	Occ	L+L 2.0 2.0 2.0	T
WED225	2016 Fall	Reiki: Master Level and Teacher Training		Advanced Usui method of Reiki, including but not limited to the preparation for placement of symbols, hand movements and attunements. Exploration of the four pillars of Reiki and 4th Reiki symbol and strategies	Prerequisites: A grade of C or better in WED125 or permission of Department or Division.	WED225 may be repeated for a total of eight (8) credits. WED225	Occ	LEC 2.0 2.0 2.0	S

				for instruction, relationships and classroom management.		requires an approved field experience.			
WED230	2018 Fall	Therapeutic Massage Practices I		Principles of professionalism, ethics, and legalities. Includes use of terminology related to massage therapy. Applications, indications, and contraindications of the nine strokes of Swedish massage. Study of the human osseous and muscular structure. Emphasis on normal movement patterns, origins, insertions, and functions of the muscular system	Acceptance into the Therapeutic Massage program or permission of Program Director.		Occ	L+L 6.0 9.0 9.0	T
WED231	2018 Fall	Therapeutic Massage Practices II		Refined application of the nine strokes of Swedish massage and contraindications to avoid. Application of advanced principles and techniques of trigger point therapy, muscle energy technique, stretching, hydrotherapy protocols, hot and cold applications, reflexology, and corporate massage. Study of the human osseous and muscular structure. Emphasis on normal movement patterns and the origin, insertion, and function of the muscular system	Prerequisites: A grade of C or better in WED230.		Occ	L+L 6.0 9.0 9.0	T
WED232	2018 Fall	Therapeutic Massage Practices III		Refinement and integration of technical skills, psychosocial competencies, and role identity. Exploration of techniques to assess and facilitate range of motion and function; purpose, benefits, indications, and contraindications of therapeutic massage for specific neuro-musculoskeletal disorders/injury and special populations. Application of massage techniques with therapists pre- and post-client evaluations of the client. Adaptation of massage techniques for special populations.	Prerequisites: A grade of C or better in WED231. Corequisites: WED250 or permission of Program Director.		Occ	L+L 6.0 10.0 10.0	T

WED250	2009 Spring	Clinical Practicum		Application of fundamental massage techniques.	Prerequisites: A grade of C or better in WED231. Corequisites: WED232 and permission of Program Director.		Occ	LAB 3.0 6.0 0.0	C
WED250AA	2014 Spring	Clinical Practicum: Part I		Application of fundamental massage techniques.	Prerequisites: A grade of C or better in WED231. Corequisites: WED232 and permission of Program Director.		Occ	LAB 1.5 3.0 0.0	C
WED250AB	2014 Spring	Clinical Practicum: Part II		Continued application of fundamental massage techniques.	Prerequisites: A grade of C or better in WED250AA.		Occ	LAB 1.5 3.0 0.0	C
WED257	2018 Fall	Kinetic Meditation		Focuses on posture, body movement, and energy centered meditations. In depth discussion of Chinese Chi Kung exercises and Chi Meditation. Reviews influence of Taoist and Buddhist philosophies on Chi Kung practice and stress management. Explores Kinetic Meditations, and scientific research into health benefits of Chi Kung practice.	Prerequisites: A grade of C or better in WED151, WED162, PED101DD and (PED101VR or PED101YJ) or permission of Department or Division.		Occ	L+L 2.0 2.0 2.0	T
WED258	2018 Fall	Auditory Meditation		Focuses on the East Indian Yogic (Siddha) and Ayurvedic (Transcendental) meditation traditions and use of mantras, sounds and music in meditation. Discussion of the Vedanta System of Philosophy and the Bhagavad Gita. Explores the history and popularity of auditory meditations, and scientific research into the health benefits of Transcendental Meditation (TM) and other auditory meditations.	Prerequisites: A grade of C or better in WED257 or Corequisites: WED257 or permission of Department or Division.		Occ	L+L 2.0 2.0 2.0	T
WED259	2018 Fall	Visual Meditation		Focuses on the use of physical objects and mental images as the focal point for meditation. Focuses on the standing and sitting meditation of the Egyptian and West African traditions and the pantheon of images	Prerequisites: A grade of C or better in WED257 and WED258 or Corequisites: WED257 and		Occ	L+L 2.0 2.0 2.0	T

				used to represent life's day-to-day processes. Includes discussion of Egyptian and Yoruba philosophy and the use of natural and artistic items, special words or symbols, religious allegories, and graphic images as focal points for meditation.	WED258 or permission of Department or Division.				
WED275	2016 Fall	Practicum: Teaching Healing, Meditation and Stress Management		Application, teaching, and training of fundamental healing meditation and stress management techniques.	Prerequisites: A grade of C or better in WED259 and permission of Instructor.		Occ	LAB 3.0 15.0 0.0	C
WED282AA	2012 Fall	Service-Learning Experience in Wellness Education		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	WED282A A may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 1.0 1.0 0.0	L
WED282AB	2012 Fall	Service-Learning Experience in Wellness Education		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	WED282A B may be repeated for a total of six (6) credit hours. Standard grading available according to procedure s outlined in catalog.	Occ	LAB 2.0 2.0 0.0	L
WED282AC	2012 Fall	Service-Learning Experience in Wellness Education		Unpaid Service-Learning (SL) experience, completed with approved community partner.	Prerequisites: Permission of Instructor.	WED282A C may be repeated for a total	Occ	LAB 3.0 3.0 0.0	L

						of six (6) credit hours. Standard grading available according to procedures outlined in catalog.			
WED297AA	2018 Fall	Special Topics: Therapeutic Massage		Explores a special topic related to therapeutic massage. Topics vary and include concepts relevant to those pursuing careers in therapeutic massage	Prerequisites: None.		Occ	L+L 1.0 1.0 1.0	T
WED297AB	2018 Fall	Special Topics: Therapeutic Massage		Explores a special topic related to therapeutic massage. Topics vary and include concepts relevant to those pursuing careers in therapeutic massage	Prerequisites: None.		Occ	L+L 2.0 2.0 2.0	T
WED297AC	2018 Fall	Special Topics: Therapeutic Massage		Explores a special topic related to therapeutic massage. Topics vary and include concepts relevant to those pursuing careers in therapeutic massage	Prerequisites: None.		Occ	L+L 3.0 3.0 3.0	T
WED298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
WED298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				aspects of independent study and individualized learning to be combined to maximize student development.					
WED298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
WFR110	2007 Summer I	Re-Entry Skills: Personal Skill Development		Personal skill development necessary for transition from incarceration to community. Includes development of a personal value system and decision-making strategies as well as conflict management. Also covers time and money management, goal setting, and the basics for everyday life	Prerequisites: Permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
WFR112	2007 Summer I	Re-Entry Skills: Family Reunification		Reunification procedures for the incarcerated person's effective transition. Includes building and maintaining self- esteem and effective communication for healthy families or support systems. Also covers family and networking culture, discipline, and expectations for release	Prerequisites: Permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
WFR114	2007 Summer I	Re-entry Skills: Social Skill Development		Social skill development for the incarcerated person preparing to re-enter society. Includes identifying and establishing boundaries as well as modeling these behaviors. Also covers identification of core emotions and development of positive character traits	Prerequisites: Permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S
WFR116	2007 Summer I	Re-Entry Skills: Substance Abuse Education		Substance abuse education for incarcerated persons. Includes warning signs and the "chain of events" to addiction. Also covers decision making skills as well as	Prerequisites: Permission of Department or Division.		Occ	LEC 1.0 1.0 1.0	S

				strategies and resources available for prevention					
WFR118	2007 Summer I	Re-Entry Skills: Job Readiness		Preparing the incarcerated person for release into the working world. Includes education, skills assessment, and work experience. Also covers job search skills such as resume writing, applications, and interviewing	Prerequisites: Permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
WFR120	2007 Summer I	Re-Entry Skills: Job Retention		Job retention procedures and techniques for incarcerated persons in transition. Includes workplace protocol, job performance, and employer-employee interaction. Also covers stress management and communication skills as well as interpersonal relationships in the workplace	Prerequisites: Permission of Department or Division.		Occ	LEC 2.0 2.0 2.0	S
WKO298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
WKO298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
WKO298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z

				and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.					
WLD100	2005 Spring	Basic Welding		Shop procedures, safety and personal protection. Grinders, drill presses, and saws. Resistance and oxyacetylene welders. Arc welders: alternating current (AC) and direct current (DC) modes, electrodes, positioning and securing	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	LEC 2.0 2.0 2.0	S
WLD101	2020 Fall	Introduction to Welding		Introduction to safe operation of shop equipment and common joining and thermal cutting processes used in the welding industry. It is designed to provide a brief exposure to the SMAW, GMAW, FCAW, GTAW, OFW, OFC, PAC processes while developing incremental hands-on skills through sequenced lab experiences.	Prerequisites: None.		Occ	L+L 3.0 6.0 6.0	T
WLD102	2018 Fall	Basic Welding Metal Sculpture		Practical training for welders in artistic welding and metal sculpter with emphasis on oxy-ace welding, arc welding, and metal inert gas (MIG) welding.	Prerequisites: None.	WLD102 may be repeated for a total of one hundred fifty (150) credit hours.	Occ	L+L 3.0 6.0 6.0	T
WLD103	2018 Fall	Basic Blacksmithing and Metal Shaping		Selection and safe use of blacksmithing and metal shaping tools and equipment. Material selection and conditioning, practical forging techniques, metal shaping experience, and finishing processes.	Prerequisites: None.	WLD103 may be repeated for a total of one hundred fifty (150) credit hours.	Occ	L+L 3.0 8.0 8.0	T
WLD106	2018 Fall	Arc Welding		Electric welding with emphasis on metallic arc welding in out-of-position practice and procedures	Prerequisites: None.		Occ	L+L 5.0	T

								8.0 8.0	
WLD106AA	2020 Fall	Introduction to SMAW		Introduction to arc welding with emphasis in Shielded Metal Arc Welding (SMAW). Designed to provide the knowledge and skills needed to cut and prepare weld joints utilizing current technology. Develops hands-on skills through sequenced lab experiences.	Prerequisites: None.		Occ	L+L 5.0 8.0 8.0	T
WLD106AB	2020 Fall	SMAW 6010 Plate		Continued training in shielded metal arc welding (SMAW) with emphasis on using E6010 (fast-freeze) electrodes in all joint positions. Focus is on fillet welds for structural steel and open root groove weld joints.	Prerequisites: A grade of C or better in WLD106AA or permission of Instructor.		Occ	L+L 5.0 8.0 8.0	T
WLD106AC	2020 Fall	SMAW 7018 Plate		Continued training in shielded metal arc welding (SMAW) with emphasis on using E7018 (low hydrogen) electrodes in all joint positions. Focus is on fillet welds and groove weld joints with backing to prepare students for welding code certification testing.	Prerequisites: A grade of C or better in WLD106AA or permission of Instructor.		Occ	L+L 5.0 8.0 8.0	T
WLD106AD	2020 Fall	SMAW Introduction to Pipe		Advanced training in shielded metal arc welding (SMAW) with emphasis on pipe welding using E6010 and E7018 electrodes in various pipe joint positions (1G, 2G, 5G, 6G). Focus is on the open root groove pipe weld joints to prepare students for industry code certification.	Prerequisites: A grade of C or better in WLD106AA or permission of Instructor.		Occ	L+L 5.0 8.0 8.0	T
WLD131	1994 Spring	Ferrous Metals		Use of ferrous metals, specification of ferrous metals, use of identification and study of welding industry standards	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
WLD150	2019 Spring	Welding Blueprint Reading		Analysis and interpretation of technical drawings common to the metal fabrication and construction trades. Welding blueprint symbols.	Prerequisites: None.		Occ	LEC 3.0 3.0 3.0	S
WLD201	2020 Fall	Advanced Welding Concepts		Further study of electric arc and oxyacetylene welding with emphasis on GTAW (heliarc) and GMAW (mig) processes to weld both ferrous and nonferrous metal.	Prerequisites: A grade of C or better in WLD101.		Occ	L+L 3.0 6.0 6.0	T

WLD202	2021 Fall	Construction Welding III		Metal arc welding processes, blueprint and weld symbol reading, joint layout preparation and welding procedures, gas-tungsten arc welding with related instruction in practice on ferrous and nonferrous metals	Prerequisites: Permission of Instructor.		Occ	L+L 3.0 5.0 5.0	T
WLD203	2018 Fall	Welding Certification Preparation		Emphasis on the weld certification process including the Welding Procedure Qualification Record (WPQR), Welder Performance Qualification Test Record (WPQTR), and the Weld Procedure Specification (WPS) in Shielded Metal Arc Welding (SMAW), Gas Tungsten Arc Welding (GTAW), or Gas Metal Arc Welding (GMAW) welding processes.	Prerequisites: Registered apprentice status or permission of the Apprenticeship Coordinator.		Occ	L+L 6.0 6.0 6.0	T
WLD206	2018 Fall	Advanced Welding - Heliarc and Wire Feed		Instruction in theory and practice on tungsten inert gas and wire feed welding. Welding procedures on ferrous and nonferrous metals. Set up and operation of all types of machines used in tig and mig welding	Prerequisites: A grade of C or better in WLD106 or permission of Department or Division.		Occ	L+L 5.0 8.0 8.0	T
WLD206AA	2020 Fall	Introduction to GMAW/FCAW and GTAW		Instruction in theory and practice of gas metal arc welding (GMAW, commonly referred to as MIG), flux cored arc welding (FCAW), and gas tungsten arc welding (GTAW, commonly referred to as TIG). Basic welding procedures on ferrous and nonferrous metals. Setup and operation of welding process equipment. Covers selection of proper filler materials and shielding gas options.	Prerequisites: A grade of C or better required in WLD106AA or permission of Instructor or Corequisites: WLD106AA.		Occ	L+L 5.0 8.0 8.0	T
WLD206AB	2020 Fall	Advanced GMAW and FCAW		Instruction and practice of gas metal arc welding (GMAW) and flux cored arc welding (FCAW) in the horizontal, vertical, and overhead positions. Prepare for industry code performance qualification plate tests with both welding processes.	Prerequisites: A grade of C or better in WLD206AA or permission of Instructor.		Occ	L+L 5.0 8.0 8.0	T
WLD206AC	2020 Fall	Advanced GTAW Non-Ferrous		Instruction and practice of gas tungsten arc welding (GTAW) aluminum sheet in the flat, horizontal, and vertical positions. Prepare for industry code performance	Prerequisites: A grade of C or better in WLD206AA or permission of Instructor.		Occ	L+L 5.0 8.0 8.0	T

				qualification tests in any welding position.					
WLD206AD	2020 Fall	Advanced GTAW Ferrous		Instruction and practice of gas tungsten arc welding (GTAW) carbon and stainless-steel in any position. Prepare for industry code performance qualification tests in any welding position.	Prerequisites: A grade of C or better in WLD206AA or permission of Instructor.		Occ	L+L 5.0 8.0 8.0	T
WLD208	2018 Fall	Advanced Arc Welding - Certification		Advanced metallic arc welding emphasizing out-of-position welding in preparation for certification. Includes various test methods. Provides training on machine flame cutting and gouging and arc air cutting and gouging	Prerequisites: A grade of C or better in WLD106 or permission of Instructor.		Occ	L+L 5.0 8.0 8.0	T
WLD208AA	2020 Fall	SMAW Code Welding		Advanced training in shielded metal arc welding (SMAW) to achieve successful welder performance qualification testing in any position. Focus is on single v-groove weld joints per industry codes and specification requirements.	Prerequisites: A grade of C or better in WLD106AA or permission of Instructor.		Occ	L+L 5.0 8.0 8.0	T
WLD208AB	2020 Fall	GMAW Code Welding		Advanced training in gas metal arc welding (GMAW) with emphasis on achieving successful welder performance qualification testing in any position. Focus is on groove weld joints per industry codes.	Prerequisites: A grade of C or better in WLD206AA or permission of Instructor.		Occ	L+L 5.0 8.0 8.0	T
WLD208AC	2020 Fall	FCAW Code Welding		Advanced training in flux cored arc welding (FCAW) with emphasis on achieving successful welder performance qualification testing in any position. Focus is on groove weld joints per industry codes.	Prerequisites: A grade of C or better in WLD206AA or permission of Instructor.		Occ	L+L 5.0 8.0 8.0	T
WLD208AD	2020 Fall	SMAW Code Welding Pipe		Advanced training in pipe welding using either shielded metal arc welding (SMAW), gas metal arc welding (GMAW), or flux cored arc welding (FCAW) with emphasis on achieving successful welder performance qualification testing in any position. Focus is on groove weld joints per industry codes.	Prerequisites: A grade of C or better in WLD106AD or WLD208AA, or permission of Instructor.		Occ	L+L 5.0 8.0 8.0	T
WLD214	2018 Fall	American Welding Society		Principles and techniques of electric arc welding and American Welding Society (AWS) certification	Prerequisites: A grade of C or better in (WLD101 and		Occ	L+L 2.0	T

		Certification Preparation		requirements, certification pretest and preparation. Technical theory and skill training in all position welding processes.	registered apprenticeship status) or permission of the Apprenticeship Coordinator.			2.0 2.0	
WLD215	2023 Spring	Welding Fabrication		Introduction to layout, basic welding, and fabrication. Introduction to the basic skills of measuring, equipment setup and cutting, shaping, grinding, welding, filing, and heating and bending of metal parts.	Prerequisites: WLD101, or WLD106++, or WLD206++, or Apprentice status, or permission of the Apprenticeship Coordinator.		Occ	L+L 3.0 6.0 6.0	T
WLD215AA	2021 Fall	Weld Fabrication I for Millwrighting		Layout, fabrication and basic skills of measuring, cutting, shaping, grinding, drilling and tapping, welding, filing, shimming, heating and bending of metal parts. Safe and proper use of all necessary hand and power tools.	Prerequisites: Permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
WLD215AB	2018 Fall	Weld Fabrication II for Millwrighting		Welding layout and fabrication. Advanced skills in measuring, cutting, shaping, grinding, drilling and tapping, welding, filing, shimming, heating and bending of metal parts. Safe and proper use of all necessary hand and power tools.	Prerequisites: A grade of C or better in (WLD215AA and registered apprenticeship status) or permission of the Apprenticeship Coordinator.		Occ	L+L 2.0 2.0 2.0	T
WLD225	2017 Spring	Welding Inspection and Quality Control		Welding inspection and quality control standards and practices in the construction and fabrication industries. Welding inspector certification requirements and functions performed in industry.	Prerequisites: A grade of C or better in WLD106++ or permission of Instructor.		Occ	LEC 3.0 3.0 3.0	S
WLD296WA	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor		Occ	LAB 1.0 5.0 0.0	Z

					Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.				
WLD296WB	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 2.0 10.0 0.0	Z
WLD296WC	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to		Occ	LAB 3.0 15.0 0.0	Z

					students major or career interest or with permission of Instructor.				
WLD296WD	2002 Fall	Cooperative Education		Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students.	Prerequisites: Completion of at least twelve (12) college credits minimum 2.6 grade point average and be able to obtain a position related to students academic or career goals (students present job may qualify or permission of instructor Corequisites: Must be concurrently enrolled in at least one class which is related to students major or career interest or with permission of Instructor.		Occ	LAB 4.0 20.0 0.0	Z
WLD298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
WLD298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z

				individualized learning to be combined to maximize student development.					
WLD298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 3.0 3.0 0.0	Z
WRT100	2020 Fall	Introduction to Water Resources		Fundamental principles of water resources. Basic concepts and strategies in the study of water, the current focus on water pollution and water purification. Topics include ground water, surface water, water quality, water purification, and water pollution. Presentation of ongoing studies related to work of earth scientists.	Prerequisites: Admission to the Water Resources Technology program and placement into MAT120, MAT121, MAT122, MAT150, MAT151, MAT152, or higher-level mathematics course for which College Algebra is a prerequisite or permission of the Program Director.		Occ	LEC 3.0 3.0 3.0	S
WRT102	2017 Spring	Water Resources Computations and Data Analysis		Fundamentals of water resources technology formulas for real-world problems. Discussion of best practices in water resources given the results of the calculations.	Prerequisites: Math assessment score on District placement exam placing students into MAT090 or MAT091 or MAT092 or higher level mathematics course.		Occ	LEC 3.0 3.0 3.0	S
WRT108	2020 Fall	Fundamentals of Environmental Science Technology		This course provides fundamental concepts and problem-solving methods that address environmental conditions, pollution monitoring and prevention, and approaches for protecting air, land and water using technology.	Prerequisites: Admission into the Water Resources Technology program. Corequisites: WRT100 or		Occ	LEC 3.0 3.0 3.0	S

					permission of Program Director.				
WRT110	2020 Fall	Principles of Water Treatment Plant Operations		Principles in the safe and effective operation and maintenance of drinking water treatment plants, reservoir management and intake structuring. The source of water, basic water laboratory test procedures and calculations also covered.	A grade of C or better required in all Prerequisites. Prerequisites: Admission to the Water Resources Technology program. Prerequisites or Corequisites: WRT100 or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
WRT115	2020 Fall	Water Technology Calculations		Application of water technology formulas for operation and maintenance of water/wastewater plants and distribution and collections systems. Includes operator examination preparation and discussion of best practices in water technologies given the results of the calculations.	A grade of C or better required in all Prerequisites. Prerequisites: Admission to the Water Resources Technology program. Prerequisites or Corequisites: WRT100 or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
WRT117	2020 Fall	Geographic Information Systems (GIS)		Purpose and applications of desktop Geographic Information Systems (GIS) technology applied to water resources and planning. ArcView software program applications and data management. Includes data query and spatial data functions. Analysis of spatial relationships and presentation of spatial information.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in BPC110, or CIS105, or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
WRT121	2020 Fall	Operation of Wastewater Treatment Plants		Safe and effective operation and maintenance of wastewater treatment plants. Overview of treatment processes and laboratory testing used in wastewater treatment plants. Principles and processes involved in waste treatment ponds, disinfection and chlorination process.	A grade of C or better required in all Prerequisites. Prerequisites: Admission to the Water Resources Technology program. Prerequisites or Corequisites: WRT100 or		Occ	LEC 3.0 3.0 3.0	S

					permission of Program Director.				
WRT125	2020 Fall	Surveying for Water Resources		Fundamental surveying principles utilized in water field studies. Level and transit, horizontal measurement by tape or stadia. Benchmark and profile leveling traverse surveys and computations and establishment of line and grade.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT100 or permission of Program Director).		Occ	LEC 2.0 2.0 2.0	S
WRT130	2020 Fall	Groundwater Hydrology		Fundamentals of groundwater resources. Includes basic flow equations, well hydraulics, groundwater fluctuations, artificial recharge and basic-data collection techniques. Emphasis on the use of data in analysis of local and regional flow systems.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT100 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
WRT130LL	2018 Fall	Groundwater Field Techniques		Field exercises to acquire groundwater data and service data-gathering equipment. Safety procedures stressed.	Prerequisites: A grade of C or better in WRT130 or Corequisites: WRT130 or permission of Department or Division.		Occ	LAB 1.0 3.0 3.0	T
WRT131	2020 Fall	Wastewater Collection Systems Operation and Maintenance		Overview of wastewater collection systems with an emphasis on inspection and cleaning of sewer systems. Safety considerations, maintenance and underground repair procedures also covered.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT100 and WRT115, or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
WRT134	2020 Fall	Water Distribution System Operation and Maintenance		Safe and effective operation and maintenance of water distribution systems. Water contaminants, disinfection and chlorination in addition to development of a plant safety plan.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT100 and WRT115, or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S

WRT140	2020 Fall	Water Quality for Treatment Industry		Introduction to water quality including common parameters in the treatment industry, regulations, and types and methods of monitoring. Laboratory safety, sampling and reporting, wet analytical methods, sample analyses, and process chemistry.	Prerequisites: Admission to the Water Resources Technology program. Prerequisites: A grade of C or better in WRT100 or Corequisites: WRT100 or permission of the Program Director.		Occ	LEC 5.0 3.0 3.0 LAB 0.0 6.0 6.0	T
WRT140LL	2018 Fall	Water Quality for Treatment Industry Laboratory		Laboratory safety, sampling and reporting; wet analytical methods; sample analyses; process chemistry.	Prerequisites: A grade of C or better in WRT140 or Corequisites: WRT140 or permission of Department or Division.		Occ	LAB 1.0 3.0 3.0	T
WRT150	2020 Fall	Introduction to Surface Water Data Collection		Fundamentals of surface water data collection while stressing safe practices. Map reading and navigation, field inspections, accessing, collecting, recording and retrieving surface water data.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT100 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
WRT150LL	2018 Fall	Introduction to Surface Water Data Collection Field Techniques		Hands-on experience in surface water data collection while stressing safe practices. Map reading and navigation, field inspections, accessing, collecting, and recording surface water data.	Prerequisites: A grade of C or better in WRT150 or Corequisites: WRT150 or permission of Department or Division.		Occ	L+L 2.0 3.0 3.0	T
WRT152	2020 Fall	Water Resources Field Investigations I: Groundwater and Surface Water		Hands-on experience and field exercises to acquire surface water and groundwater data and service data-gathering equipment. Hands-on experience in surface water data collection while stressing safe practices. Map reading and navigation, field inspections, accessing, collecting, and recording surface water and groundwater data. Safety procedures stressed.	A grade of C or better required in all Prerequisites. Prerequisites: Admission to the Water Resources Technology program. Prerequisites or Corequisites: WRT130 and WRT150, or		Occ	L+L 3.0 6.0 6.0	T

					permission of Program Director.				
WRT153	2020 Fall	Environmental Law and Regulations		Introduction to various environmental laws and fundamentals of environmental laws relating to federal, state, and local levels. Overview and application of the permitting processes related to drinking and wastewater designed to provide a better sense of real-world issues from a regulator and regulated standpoint.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT108 or permission of Program Director).		Occ	LEC 3.0 3.0 3.0	S
WRT180	2020 Fall	Environmental Sampling and Analysis		Introduction to the theory and methodology of sampling and analysis of environmentally significant parameters in water, wastewater, hazardous waste, soil, sediment, and air.	Prerequisites: Admission into the Water Resources Technology program and (a grade of C or better in WRT100 and WRT108, or permission of Program Director).		Occ	LEC 5.0 3.0 3.0 LAB 0.0 6.0 6.0	T
WRT190AA	2017 Spring	Water Resources Technologies Seminar		Interaction with other students and professionals in the water resources technologies industry. Stress placed on sharing knowledge and demonstrating understanding through discussion of current issues in the industry, operational tasks, and emerging issues.	Prerequisites: None.		Occ	LEC 1.0 1.0 1.0	S
WRT200	2020 Fall	Industrial Pretreatment		Principles of industrial pretreatment programs. Overview of industrial facilities inspections and pollution prevention strategies. Sampling techniques of industrial wastewaters. Field exercises to acquire industrial wastewater quality data and industrial discharge flow measurements. Quality Assurance/Quality Control (QA/QC), and data processing techniques included. Safety procedures stressed.	A grade of C or better required in all Prerequisites. Prerequisites: Admission to the Water Resources Technology program. Prerequisites or Corequisites: WRT100 or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
WRT204	2020 Fall	Water/Wastewater Mechanical Systems, Power, and Instrumentation		Maintenance of facilities and equipment in both water and wastewater systems. Principles of basic electricity, electrical circuits, motors, transformers, and process control instrumentation.	Prerequisites: Admission to the Water Resources Technology program and permission of the Program Director.		Occ	LEC 3.0 3.0 3.0	S

WRT205	2014 Spring	Power and Instrumentation		Principles of basic electricity, electrical circuits, motors, transformers, and process control instrumentation.	Prerequisites: A grade of C or better in WRT110 or WRT121 or WRT131 or WRT134.		Occ	LEC 3.0 3.0 3.0	S
WRT207	2021 Spring	Groundwater Production and Management		Basic hydrology and hydrogeology; construction of water wells from site selection and specifications through drilling, design, development, testing, and equipping; rehabilitation of existing wells, Arizona Groundwater Management Law of 1980; water quality; common operational problems of well fields; types and purposes of monitoring wells.	Prerequisites: A grade of C or better in WRT100 or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
WRT221	2020 Fall	Water and Wastewater Treatment Plants Administration		Administration safety and maintenance of a water and wastewater treatment plants. Handling and disposal of process wastes and instrumentation use. Emphasis on reporting data in reports, graphs, and record keeping.	A grade of C or better required in all Prerequisites. Prerequisites: Admission to the Water Resources Technology program. Prerequisites or Corequisites: WRT110 or WRT121 or permission of Program Director.		Occ	LEC 3.0 3.0 3.0	S
WRT240	2014 Spring	Water Quality		Fundamental chemical and physical factors involved in evaluating water quality. Water quality deterioration from land fills, underground storage tanks, and hazardous waste. Sampling techniques of groundwater, soil, and surface water. Quality assurance, quality control, and data processing techniques included.	Prerequisites: A grade of C or better in WRT140, or permission of Department or Division.		Occ	LEC 3.0 3.0 3.0	S
WRT240LL	2018 Fall	Water Quality Field Techniques		Field exercises to acquire water quality data and service data gathering equipment. Safety procedures stressed.	Prerequisites: A grade of C or better in WRT240 or Corequisites: WRT240 or permission of Department or Division.		Occ	LAB 1.0 3.0 3.0	T
WRT252	2020 Fall	Water Resources Field		Field reconnaissance of water resources. Lab experiences in	Prerequisites: Admission into the		Occ	L+L 3.0	T

		Investigations II: Surveying and Surface Water		surveying techniques and procedures. Field exercises to acquire surface water data and develop hydrologic models. Safety procedures stressed.	Water Resources Technology program and (a grade of C or better in WRT152 or permission of Program Director).			6.0 6.0	
WRT270AA	2017 Spring	Water Resources Internship		Water resources work experience in business, industry, or government. Eighty (80) hours of designated work per credit.	Prerequisites: Permission of Department or Division.		Occ	LAB 1.0 6.0 0.0	C
WRT270AB	2017 Spring	Water Resources Internship		Water resources work experience in business, industry, or government. Eighty (80) hours of designated work per credit [total of one hundred sixty (160) hours].	Prerequisites: Permission of Department or Division.		Occ	LAB 2.0 12.0 0.0	C
WRT270AC	2017 Spring	Water Resources Internship		Water resources work experience in business, industry, or government. Eighty (80) hours of designated work per credit [total of two hundred forty (240) hours].	Prerequisites: Permission of Department or Division.		Occ	LAB 3.0 18.0 0.0	C
WRT298AA	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	Z
WRT298AB	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 2.0 2.0 0.0	Z
WRT298AC	2005 Fall	Special Projects		Organized and tailored around the interests and needs of the individual	Prerequisites: Permission of		Occ	LAB 3.0	Z

				student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Program Director or Instructor.			3.0 0.0	
WST100	2011 Fall	Introduction to Women's and Gender Studies		Introduction to critical issues in women's studies.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
WST105	2024 Fall	Women of Color in the Americas		Interdisciplinary, multi-perspective, and comparative study of the experiences of Women of Color in the Americas and their impact on the arts, literature, social structures and political movements. Examines how the intersection of race, class, gender, and sexuality has shaped their lived experiences and legacy.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
WST120	2007 Fall	Gender, Class and Race		A feminist discussion of gender, class and race as basic and central social categories that determine how we see ourselves and others and how they circumscribe our opportunities and privileges in American society.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C]	Acad	LEC 3.0 3.0 3.0	S
WST128	2023 Fall	Law and Violence Against Women		Covers cases and materials on systems of oppression particularly as related to women in our society.	Prerequisites: None.		Acad	LEC 3.0	S

				Areas covered include battering, sexual harassment, sexual assault, prostitution, and pornography as exemplified in present-day society. Designed to give students the ability to identify problems of violence against women and participate in current societal discourse on various ways to resolve them.				3.0 3.0	
WST160	2015 Summer	Women and the Early American Experience		Introduction to American women's history, from the colonial period to suffrage in 1920, based on a feminist perspective.	Prerequisites: None.	Course Attribute(s)): General Education Designation: Historical Awareness s - [H]	Acad	LEC 3.0 3.0 3.0	S
WST161	2003 Spring	American Women Since 1920		Continuation of the history of women in America from 1920 to the present, based on a feminist perspective. Includes discussion of the roles and status of immigrant and ethnic minority women	Prerequisites: None.	Course Attribute(s)): General Education Designation: Cultural Diversity - [C] General Education Designation: Historical Awareness s - [H] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
WST200	2009 Spring	Essential Feminist Writing		Literary tracing of feminism from 18th century to present. Explores major issues related to women in the 20th century	Prerequisites: A grade of C or better in ENG101 or permission of Instructor.	General Education Designation: General Education	Acad	LEC 3.0 3.0 3.0	S

						Designation: Historical Awareness - [H]			
WST206	2008 Fall	La Mujer		Analysis and discussion of critical issues for Latinas in America today	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
WST207	2008 Fall	Black Women	AFR207	Analysis and discussion of critical issues for Black women in America today	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
WST209	2018 Spring	Women and Films	HUM209	Analysis of images of women in films from both historical and contemporary perspectives	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
WST244	2010 Spring	Women in Muslim Societies		Overview of Muslim women's religious and secular roles and rights. Relationship of the Qur'an and Hadiths' teachings on women to the interpretations of those teachings within the variegated cultural contexts of Islam	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
WST261	2024 Fall	Indigenous Women's Literature of the Americas	AIS/ENH261	Explores contemporary voices of Indigenous women authors and artists in the Americas as expressed in poetry, fiction, nonfiction, drama, and oral traditions. Focuses on themes relevant to Indigenous women and examines the trends and movements within Indigenous peoples and women's literary history. Examines	Prerequisites: A grade of C or better in ENG101 or ENG107.		Acad	LEC 3.0 3.0 3.0	S

				themes relevant to Indigenous women such as racial and gender oppression, reservation life, acculturation, and their sociopolitical activism in the Americas.					
WST282AA	2003 Summer I	Volunteerism for Women's Studies: A Service Learning Experience		Service learning field experience within private/public agencies and citizen volunteer groups. Students will develop writing skills, analysis, and synthesis in an on-site volunteer experience.	Prerequisites: A grade of C or better in WST100 and permission of Instructor.	WST282A A may be repeated for a total of six (6) WST282 credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 1.0 1.0 0.0	L
WST282AB	2003 Summer I	Volunteerism for Women's Studies: A Service Learning Experience		Service learning field experience within private/public agencies and citizen volunteer groups. Students will develop writing skills, analysis, and synthesis in an on-site volunteer experience.	Prerequisites: A grade of C or better in WST100 and permission of Instructor.	WST282A B may be repeated for a total of six (6) WST282 credit hours. Standard grading available according to procedures outlined in catalog.	Acad	LAB 2.0 2.0 0.0	L
WST282AC	2003 Summer I	Volunteerism for Women's Studies: A Service Learning Experience		Service learning field experience within private/public agencies and citizen volunteer groups. Students will develop writing skills, analysis, and synthesis in an on-site volunteer experience.	Prerequisites: A grade of C or better in WST100 and permission of Instructor.	WST282A C may be repeated for a total of six (6) WST282 credit hours. Standard	Acad	LAB 3.0 3.0 0.0	L

						grading available according to procedures outlined in catalog.			
WST284	1995 Fall	19th Century Women Writers	ENH284	Investigates major themes in literature by women writing in the 19th century including the nature of women's lives in the family, in work situations, and in society. Poetry, prose, essays and drama are examined with an emphasis on common themes	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
WST285	1995 Fall	Contemporary Women Writers	ENH285	Explores twentieth century literature (short stories, essays, plays, and poetry) written by women and about women. Focus on themes relevant to women's lives regardless of age, creed, or ethnic background	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
WST286	2023 Fall	Women and Health: Body/Mind/Spirit/Connection		Economic, sociopolitical, and demographic factors affecting women's health. Methods for optimizing physical, emotional, and spiritual health. Specific health	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S

				concerns of women throughout the lifespan. Activism for health promotion					
WST290	2012 Spring	Women and World Religions	REL290	Focus on the role of women in several organized religions and/or religious sects. Study of myth and symbols as they are used to establish, maintain, and enforce sex-roles within specific cultural contexts around the world.	Prerequisites: None.	Course Attribute(s): General Education Designation: Global Awareness - [G] General Education Designation: Humanities, Arts and Design - [HU]	Acad	LEC 3.0 3.0 3.0	S
WST292	2012 Summer I	Goddess Religions	REL292	Introduction to Goddess religions from pre-historic to modern times. Focuses on ancient origins, myths and practices of religions with female deities, their historical replacement by male religious deities, and their modern re-emergence in neo-Goddess movements.	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
WST295	2024 Fall	Women's Studies Seminar		Special topics in women, gender, and sexuality studies with an emphasis on current issues not covered in other Women's Studies (WST) courses.	Prerequisites: None.	WST295 may be repeated for a total of six (6) credit hours.	Acad	LEC 1.0 1.0 1.0	S
WST298AA	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 1.0 1.0 0.0	Z

WST298AB	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 2.0 2.0 0.0	Z
WST298AC	2023 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Acad	LAB 3.0 3.0 0.0	Z
WTO106AA	2023 Fall	Introduction to SMAW		Introduction to arc welding with emphasis in Shielded Metal Arc Welding (SMAW). Designed to provide the knowledge and skills needed to cut and prepare weld joints utilizing current technology. Develops hands-on skills through sequenced lab experiences.	Prerequisites: None.		CLK	180	
WTO106AB	2023 Fall	SMAW 6010 Plate		Continued training in shielded metal arc welding with emphasis on using E6010 (fast-freeze) electrodes in all joint positions. Focus is on fillet welds for structural steel and open root groove weld joints.	Prerequisites: A grade of C or better in WTO106AA or permission of Instructor.		CLK	180	
WTO106AC	2023 Fall	SMAW 7018 Plate		Continued training in shielded metal arc welding with emphasis on using E7018 (low hydrogen) electrodes in all joint positions. Focus is on fillet welds and groove weld joints with backing to prepare students for welding code certification testing.	Prerequisites: A grade of C or better in WTO106AA or permission of Instructor.		CLK	180	

WTO106AD	2023 Fall	SMAW Introduction to Pipe		Advanced training in shielded metal arc welding with emphasis on pipe welding using E6010 and E7018 electrodes in various pipe joint positions (1G, 2G, 5G, 6G). Focus is on the open root groove pipe weld joints to prepare students for industry code certification.	Prerequisites: A grade of C or better in WTO106AA or permission of Instructor.		CLK	180	
WTO206AA	2022 Fall	Introduction to GMAW/FCAW and GTAW		Instruction in theory and practice of gas metal arc welding (GMAW) and gas tungsten arc welding (GTAW), commonly referred to as MIG and TIG. Basic welding procedures on ferrous and nonferrous metals. Setup and operation of welding process equipment. Covers selection of proper filler materials and shielding gas options.	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: WTO106AA or permission of Instructor.		CLK	141	
WTO206AB	2022 Fall	Advanced GMAW and FCAW		Instruction and practice of gas metal arc welding (GMAW) and flux cored arc welding (FCAW) in the horizontal, vertical, and overhead positions. Prepare for industry code performance qualification plate tests with both welding processes.	Prerequisites: A grade of C or better in WTO206AA or permission of Instructor.		CLK	165	
WTO206AC	2023 Fall	Advanced GTAW Non-Ferrous		Instruction and practice of gas tungsten arc welding (GTAW) aluminum sheet in the flat, horizontal, and vertical positions. Prepare for industry code performance qualification tests in any welding position.	Prerequisites: A grade of C or better in WTO206AA or permission of Instructor.		CLK	180	
WTO206AD	2023 Fall	Advanced GTAW Ferrous		Instruction and practice of gas tungsten arc welding (GTAW) carbon and stainless-steel in any position. Prepare for industry code performance qualification tests in any welding position.	Prerequisites: A grade of C or better in WTO206AA or permission of Instructor.		CLK	180	
WTO206DA	2023 Fall	Introduction to GMAW/FCAW and GTAW		Instruction in theory and practice of gas metal arc welding (GMAW) and gas tungsten arc welding (GTAW), commonly referred to as MIG and TIG. Basic welding procedures on ferrous and nonferrous metals. Setup and operation of welding process equipment. Covers selection of proper	A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: WTO106AA or permission of Instructor.		CLK	180	

				filler materials and shielding gas options.					
WTO206DB	2023 Fall	Advanced GMAW and FCAW		Instruction and practice of gas metal arc welding (GMAW) and flux cored arc welding (FCAW) in the horizontal, vertical, and overhead positions. Prepare for industry code performance qualification plate tests with both welding processes.	Prerequisites: A grade of C or better in WTO206AA or permission of Instructor.		CLK	180	
WTO208AA	2023 Fall	SMAW Code Welding		Advanced training in shielded metal arc welding (SMAW) to achieve successful welder performance qualification testing in any position. Focus is on single v-groove weld joints per industry codes and specification requirements.	Prerequisites: A grade of C or better in WTO106AA or permission of Instructor.		CLK	180	
WTO208AB	2022 Fall	GMAW Code Welding		Advanced training in gas metal arc welding (GMAW) with emphasis on achieving successful welder performance qualification testing in any position. Focus is on groove weld joints per industry codes.	Prerequisites: A grade of C or better in WTO206AA or permission of Instructor.		CLK	165	
WTO208AD	2023 Fall	SMAW Code Welding Pipe		Advanced training in pipe welding using either shielded metal arc welding (SMAW), gas metal arc welding (GMAW), or flux cored arc welding (FCAW) with emphasis on achieving successful welder performance qualification testing in any position. Focus is on groove weld joints per industry codes.	Prerequisites: A grade of C or better in WTO106AD or WTO208AA or permission of Instructor.		CLK	180	
WTO208AE	2023 Fall	GTAW Code Welding		Advanced training in welding using gas tungsten arc welding (GTAW) with emphasis on achieving successful welder performance qualification testing in any position. Focus is on groove weld joints per industry codes.	Prerequisites: None.		CLK	180	
WTO208DB	2023 Fall	GMAW Code Welding		Advanced training in gas metal arc welding (GMAW) with emphasis on achieving successful welder performance qualification testing in any position. Focus is on groove weld joints per industry codes.	Prerequisites: A grade of C or better in WTO206AA or permission of Instructor.		CLK	180	

YAQ100	2009 Summer I	Yaqui Indian History and Culture		Surveys Yaqui Indian history and culture from pre-contact to the present. Explores themes of resistance, dispersion, survival, tradition, family, community, belief systems, and identity. Places Yaqui history within the context of Arizona, American Indian, Mexican, and Mexican-American History. Examines historical writing and analysis, life histories, poetry, language, and emphasis on Yaqui experiences in 20th century Arizona.	Prerequisites: None.	Course Attribute(s): General Education Designation: Cultural Diversity - [C] General Education Designation: Social and Behavioral Sciences - [SB]	Acad	LEC 3.0 3.0 3.0	S
YAQ110	2000 Spring	Yaqui Language and Culture		Introduction to the Yaqui language and overview of the traditional culture as a background for language use. Instruction in the grammar and writing system to assist student in speaking, reading, and writing Yaqui	Prerequisites: None.		Acad	LEC 3.0 3.0 3.0	S
YOG101	2024 Fall	Beginning Yoga		Yoga practice at the beginning level, including poses (asanas), breathing, meditation and relaxation techniques.	Prerequisites: None.	YOG101 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
YOG101PA	2024 Fall	Beginning Yoga		Yoga practice at the beginning level, including poses (asanas), breathing, meditation and relaxation techniques.	Prerequisites: None.	YOG101PA may be repeated for credit. Does not meet requirements for CCL Yoga Instruction Program.	Occ	L+L 0.5 1.5 1.5	T
YOG102	2024 Fall	Intermediate Yoga		Yoga practice at the intermediate level, including poses (asanas), breathing, meditation and relaxation techniques.	Prerequisites: None. Prior experience recommended.	YOG102 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
YOG102PA	2024 Fall	Intermediate Yoga		Yoga practice at the intermediate level, including poses (asanas), breathing, meditation and relaxation techniques.	Prerequisites: None. Prior experience recommended.	YOG102PA may be repeated for credit. Does not	Occ	L+L 0.5 1.5 1.5	T

						meet requirements for CCL Yoga Instruction Program.			
YOG130	2024 Fall	Yoga and the Body		In-depth study of how the human body functions during yoga both theoretically and practically. Attention given to correct body alignment and mechanics while performing yoga, exploring essential areas of the body individually and analyzing the body as a whole.	Prerequisites: None. YOG101, or YOG102, or YOG201 recommended.		Occ	L+L 2.0 3.0 3.0	T
YOG150	2023 Fall	Tradition and Practice of Yoga I		Introduction to the art and science of yoga, including terminology, concepts, issues, trends and health benefits. Explores the history and philosophy of yoga and the teaching of yoga as a career.	Prerequisites: None.		Occ	LEC 2.0 2.0 2.0	S
YOG170	2023 Fall	Teaching Yoga: Level I		Methods of teaching yoga. Studies assessment techniques, establishing course goals, and organizing the classroom. Reviews yoga instruction techniques and how these differ from other movement-based activities; application of anatomical knowledge and practice teaching experiences.	Prerequisites: None. Corequisites: YOG101, or YOG102, or YOG201, or permission of Instructor.		Occ	L+L 2.0 2.0 2.0	T
YOG171	2023 Fall	Teaching Yoga: Level II		Emphasizes practice teaching experiences. Reviews instructional methods and techniques for assessing student skill levels, organizing the classroom and writing lesson plans. Application of anatomical knowledge to build movement skills, improvement of observational skills and development of an individual teaching style.	Prerequisites: A grade of C or better in YOG170 or permission of instructor. Corequisites: YOG101, or YOG102, or YOG201, or permission of Instructor.		Occ	L+L 2.0 2.0 2.0	T
YOG172	2023 Fall	Teaching Yoga: Level III		Instructional methods for teaching more advanced asanas. Principles of alignment of back bending, inversion, forward bending and arm balancing asanas and techniques for identifying and correcting misalignments. Emphasis on instructional techniques	Prerequisites: A grade of C or better in YOG171 or permission of Instructor. Corequisites: YOG101, or		Occ	L+L 2.0 2.0 2.0	T

				that safely build yoga movement skills while encouraging progression in the practice of challenging asanas.	YOG102, or YOG201, or permission of Instructor.				
YOG174	2024 Fall	Teaching Yoga: Level I		Emphasizes practice teaching experiences. Reviews instructional methods and techniques for assessing student skill levels, organizing the classroom and writing lesson plans. Application of anatomical knowledge to build movement skills, improvement of observational skills and development of an individual teaching style.	Prerequisites: None.		Occ	L+L 4.0 6.0 6.0	T
YOG175	2024 Fall	Teaching Yoga: Level II		Instructional methods for teaching more advanced asanas. Principles of alignment of back bending, inversion, forward bending and arm balancing asanas and techniques for identifying and correcting misalignments. Emphasis on instructional techniques that safely build yoga movement skills while encouraging progression in the practice of challenging asanas.	Prerequisites: A grade of C or better in YOG174 or permission of Instructor.		Occ	L+L 4.0 6.0 6.0	T
YOG201	2024 Fall	Advanced Yoga		Yoga practice at the advanced level, including poses (asanas), breathing, meditation and relaxation techniques.	Prerequisites: A grade of C or better in PED102YO, or PED103YO, or YOG102, or YOG102PA, or permission of Instructor.	YOG201 may be repeated for credit.	Occ	L+L 1.0 3.0 3.0	T
YOG201PA	2024 Fall	Advanced Yoga		Yoga practice at the advanced level, including poses (asanas), breathing, meditation and relaxation techniques.	Prerequisites: A grade of C or better in PED102YO, or PED103YO, or YOG102, or YOG102PA, or permission of Instructor.	YOG201P A may be repeated for credit. Does not meet requirements for CCL Yoga Instruction Program.	Occ	L+L 0.5 1.5 1.5	T
YOG250	2023 Fall	Tradition and Practice of Yoga II		Examination of the art and science of yoga. Explores the history and philosophy of yoga. In-depth review of	Prerequisites: A grade of C or better in YOG150.		Occ	LEC 2.0	S

				significant literature associated with the yoga tradition. Examines cultural aspects of yoga, relevance of yoga to modern day life and health benefits of yoga.				2.0 2.0	
YOG274	2024 Fall	Teaching Yoga: Practicum Level I		Guided, practical experience in teaching yoga students. Requires implementation of lesson plans, application of individual teaching techniques and analysis of teaching sessions.	Prerequisites: A grade of C or better in YOG174 or permission of Instructor.		Occ	L+L 4.0 6.0 6.0	T
YOG275	2024 Fall	Teaching Yoga: Practicum Level II		Guided, practical experience in teaching intermediate level yoga students. Requires implementation of lesson plans, application of individual teaching techniques and analysis of teaching sessions.	Prerequisites: A grade of C or better in YOG274 or permission of Instructor.		Occ	L+L 4.0 6.0 6.0	T
YOG298AA	2024 Fall	Special Projects		Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.	Prerequisites: Permission of Program Director or Instructor.		Occ	LAB 1.0 1.0 0.0	C