Course Descriptions
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For additional information on **PC program competencies**, visit:  
[http://www.maricopa.edu/academic/ccta/](http://www.maricopa.edu/academic/ccta/)

For additional information on **MCCCD course competencies**, visit:  
[http://www.maricopa.edu/academic/ccta/](http://www.maricopa.edu/academic/ccta/)

All courses listed in this catalog are not offered every semester. Check in the Class Schedule for current course offerings.

On the web, go to [www.phoenixcollege.edu](http://www.phoenixcollege.edu) and click on Class Schedule.
AAA – Advancing Academic Achievement

AAA/CPD115
Creating College Success
1 credit(s) 1 period(s) lecture
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.

AAA/CPD150
Strategies for College Success
3 credit(s) 3 period(s) lecture
Focus on increasing student success through college orientation and personal growth, study skills development, and educational and career planning. Prerequisites: None.

AAA/CPD150AA
College Orientation/Personal Growth
1 credit(s) 1 period(s) lecture
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.

AAA/CPD150AB
Study Skills Development
1 credit(s) 1 period(s) lecture
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.

AAA/CPD150AC
Educational and Career Planning
1 credit(s) 1 period(s) lecture
Emphasis on increasing student success through educational and career planning. Prerequisites: None.

ACC – Accounting

ACC105
Payroll, Sales and Property Taxes
3 credit(s) 3 period(s) lecture
Tax reporting for payroll, sales, and personal property. Prerequisites: None.

ACC111
Accounting Principles I
3 credit(s) 3 period(s) lecture
Fundamental theory of accounting principles and procedures. Prerequisites: None.

ACC112
Accounting Principles II
3 credit(s) 3 period(s) lecture
Continuation of the fundamental theory of accounting principles and procedures, including interpretation of general purpose financial statements. Prerequisites: ACC111 with a grade of “C” or better, or permission of department/division.

ACC115
Computerized Accounting
2 credit(s) 3 period(s) lecture + lab
Mastery of a microcomputer accounting system including the general ledger, accounts receivable, accounts payable and payroll. Prerequisites: (ACC107 or ACC111 or ACC211 or ACC230), or permission of instructor.

ACC121
Income Tax Preparation
3 credit(s) 3 period(s) lecture + lab
Preparation of and practical experience in preparing individual federal income tax returns using computer software. Prerequisites: None.

ACC211
Financial Accounting
3 credit(s) 3 period(s) lecture
Introduction to theory and practice in the preparation and interpretation of general purpose financial statements. Prerequisites: None.

ACC212
Managerial Accounting
3 credit(s) 3 period(s) lecture
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/division).

ACC215
Governmental and Not-For-Profit Accounting
3 credit(s) 3 period(s) lecture
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/Division.

ACC216
Fraud Examination
3 credit(s) 3 period(s) lecture
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.

ACC219
Intermediate Accounting I
3 credit(s) 3 period(s) lecture
Theory and practice applicable to determination of asset values, liabilities, and related problems of income determination. Prerequisites: (ACC212 or ACC240) with a grade of “C” or better, or permission of department/division.

ACC220
Intermediate Accounting II
3 credit(s) 3 period(s) lecture
Continuation of the theory and practice applicable to liabilities and owner’s equity; special problems and financial reporting. Prerequisites: ACC219 with a grade of “C” or better, or permission of department/division.

ACC221
Tax Accounting
3 credit(s) 3 period(s) lecture
Preparation of and accounting procedures for individuals; introduction to partnerships and corporate tax structures. Prerequisites: ACC111 or ACC211 or permission of department/division.

ACC260
Certified Bookkeeper (CB) Preparation Seminar I
2 credit(s) 2 period(s) lecture
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 requirements. Accounting for depreciation for financial and tax accounting purposes covered. Prerequisites: ACC111, or ACC211, or (bookkeeping experience and permission of Instructor).

ACC262
Certified Bookkeeper (CB) Preparation Seminar II
2 credit(s) 2 period(s) lecture
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. Prerequisites: ACC260.

ACC270AA-AC
Accounting Internship
1-3 credit(s) 1-3 period(s) lab
Accounting work experience in a business or industry. Eighty hours of designated work per credit per semester. Prerequisites: Permission of Department or Division. Course Notes: Maximum of 3 credits allowed.
ACC298AA-AC  
Special Projects  
1-3 credit(s) 1-3 period(s) lab  
Organized and tailored around the interests and needs of 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.

AES203  
Evolution of USAF Air and Space  
Power II  
2 credit(s) 2 period(s) lecture and lab  
Topics include: The Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism.  
Prerequisites: None.

AES294  
Air Force Physical Fitness  
1 credit(s) 3 period(s) lecture + lab  
Beginning instruction in adapted physical activities and a variety of sports and sports activities to include calisthenics, sit-ups, push-ups, running, basketball, volleyball, and other physical events.  
Prerequisites: None.  
Course Note: AES294 may be repeated for credit.

ADA – Advertising Arts  
ADA113  
Air Brush Techniques  
3 credit(s) 5 period(s) lecture + lab  
Use of the artist's air brush in illustration, photo retouching, vignetting, sideleading, emphasizing. Photo retouching for reproduction purposes and technical illustration.  
Prerequisites: None.

ADA114  
Graphics Printing Processes  
3 credit(s) 4 period(s) lecture + lab  
Printing methods, skill development in planning and layout, composition methods, proofing and correction, color process, image carrier preparation.  
Prerequisites: None.

AES – Aerospace Studies  
AES101  
Air Force Today I  
2 credit(s) 2 period(s) lecture and lab  
Introduction to U.S. Air Force and AFROTC. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership and professionalism.  
Prerequisites: None.

AES103  
Air Force Today II  
2 credit(s) 2 period(s) lecture and lab  
Introduction to U.S. Air Force and AFROTC. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officership, and professionalism.  
Prerequisites: None.

AES201  
Evolution of USAF Air and Space  
Power I  
2 credit(s) 2 period(s) lecture and lab  
Further preparation of AFROTC candidate. Topics include: Air Force heritage and leaders, communication skills, ethics, leadership, qualities Air Force, and values.  
Prerequisites: None.
AJS/HIS170
American Indian History of the Southwest
3 credit(s) 3 period(s) lecture
Covers history of Indian peoples in the southwestern United States from pre-Columbian era to the present. Includes historical events, the development and implementation of Spanish-Mexican and United States’ policies and their impact on Indian peoples in these areas, and current issues of importance to Indian peoples. Prerequisites: None.

AJS213 /REL203
American Indian Religions
3 credit(s) 3 period(s) lecture
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: ENG101 or ENG107 or equivalent.

AIS261
Native Women’s Literature: The Americas
3 credit(s) 3 period(s) lecture
Explores contemporary native women’s (indigenous to the Americas) literature. Selected literature (oral tradition, poetry, fiction, nonfiction, and drama) focuses on themes relevant to native women. Examines the trends and movements within American Indian and women’s literary history. Prerequisites: ENG101.

AJS298AA-AC
Special Projects
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of 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.

AJS – Administration of Justice Studies

AJS101 SUNG AJS 1101
Introduction to Criminal Justice
3 credit(s) 3 period(s) lecture
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.

AJS107
Patrol Procedures
3 credit(s) 3 period(s) lecture
Specialized areas of the patrol function, including responding to crowds, riots, bomb threats, intoxication, hazardous materials, fires, and domestic disputes. Partially fulfills Arizona POST requirements for proficiency skills academy attendance. Prerequisites: None.

AJS109
Substantive Criminal Law
3 credit(s) 3 period(s) lecture
Covers philosophy of legal sanctions and historical development from the common law to modern American criminal law, classifications of crimes, elements of and parties to crimes, general definitions of crime, common defenses utilized. Includes specific offenses and the essential elements of each offense. Required in AJS curriculum. Prerequisites: None.

AJS110
Law and Legal Review I
3 credit(s) 3 period(s) lecture
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 Board requirements for Proficiency Skills Academy attendance. Prerequisites: None.

AJS123
Ethics and the Administration of Justice
3 credit(s) 3 period(s) lecture
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. Encourages critical thinking and value decision making in criminal justice system situations. Prerequisites: None.

AJS124
Correctional Institutions
3 credit(s) 3 period(s) lecture
An examination of correctional institutions with an emphasis on personnel and security measures, care and treatment programs and institutional planning. The criminal justice system and matters of custody and treatment. Inmate subcultures, and organized crime in correctional institutions and jails. Prerequisites: None.

AJS131
Police Management Techniques I
3 credit(s) 3 period(s) lecture
Police supervisory techniques for planning, organization coordination, reporting, budgeting and handling related personnel problems. Prerequisites: None.

AJS/DPR/FSC148
Fundamentals of Emergency Management
3 credit(s) 3 period(s) lecture
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.

AJS150
Defensive Tactics
1 credit(s) 1 period(s) lecture
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. May be repeated twice for credit. Prerequisites: None.

AJS192
Serial Killers and Mass Murderers
3 credit(s) 3 period(s) lecture
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.

AJS198AB
Special Topics in the Administration of Justice
1 credit(s) 1 period(s) lecture
Explores special topics related to the administration of justice with an emphasis on current issues. Prerequisites: None. Course Note: AJS198AB may be repeated for a total of nine (9) credit hours.

The Course Equivalency Guide (CEG) shows how courses transfer from community college to ASU, NAU and U of A. Visit www.aztransfer.com
AJS200
Current Issues in Criminal Justice
3 credit(s) 3 period(s) lecture
Examines current issues, techniques, and trends in the Criminal Justice System. Prerequisites: None.

AJS201
Rules of Evidence
3 credit(s) 3 period(s) lecture
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, and recordings; corpus delicti; opinion evidence, circumstantial evidence, evidential privileges. Required in AJS curriculum. Prerequisites: None.

AJS205
Criminal Justice Report Writing
3 credit(s) 3 period(s) lecture
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.

AJS210
Constitutional Law
3 credit(s) 3 period(s) lecture
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.

AJS212
Juvenile Justice Procedures
3 credit(s) 3 period(s) lecture
Examines the history and development of juvenile justice theories, procedures, and institutions. Prerequisites: None.

AJS213
Evidence Technology/Fingerprints
3 credit(s) 3 period(s) lecture
Fundamental principles and processes of fingerprints to include identification, interpretation, and classification. In addition, students will apply fingerprinting latent fingerprint developing, preservation of evidence and the chain of custody. Prerequisites: None.

AJS214
Evidence Technology/Photography
3 credit(s) 3 period(s) lecture
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.

AJS215
Criminalistics: Physical Evidence
3 credit(s) 3 period(s) lecture
The scientific analysis and examination of physical evidence with emphasis on scientific investigation, recognition, collection, and preservation of evidence. Discussion topics include fingerprints, shoe prints, tool marks, firearms identification, paint chips and arson. Prerequisites: None.

AJS216
Criminalistics: Biological Evidence
3 credit(s) 3 period(s) lecture
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.

AJS220
Organized Crime
3 credit(s) 3 period(s) lecture
Examines the history, structure and activities of organized crime groups. Reviews theories explaining the existence of organized crime and enforcement strategies used to combat it. Prerequisites: None.

AJS223
Forensic Pathology: Death Investigation
3 credit(s) 3 period(s) lecture
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.

AJS225
Criminology
3 credit(s) 3 period(s) lecture
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 crimes and categories of offenders. Required in the AJS curriculum. Prerequisites: None.

AJS230
The Police Function
3 credit(s) 3 period(s) lecture
Theories of procedures and methods of operations of public police with emphasis on discretionary powers available to the working police officer. Career opportunities and current trends in law enforcement presented. Prerequisites: None.

AJS240
The Correction Function
3 credit(s) 3 period(s) lecture
Examines the history and development of correctional theories and institutions. Prerequisites: None.

AJS241
Police Photography
3 credit(s) 3 period(s) lecture
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.

AJS242
Crime Scene Processing
3 credit(s) 3 period(s) lecture
Procedures and technology required to process crime scenes including how to protect a crime scene, collect information, search for, collect, and preserve physical and biological evidence, and conduct field tests. Practical experience in evidence collection and crime scene sketching and processing. Prerequisites: AJS213 and (AJS214 or AJS241) or permission of instructor.

AJS/EMT/FSC/SWU258
Victimology and Crisis Management
3 credit(s) 3 period(s) lecture
Victimology, the criminal justice system, techniques of crisis intervention, and the importance of a multicultural and global perspective. Includes sexual assault, family violence, post-traumatic stress disorder, the role of substance abuse, effective coping skills, appropriate community resources and the responsiveness of the justice system. Prerequisites: None.

AJS260
Procedural Criminal Law
3 credit(s) 3 period(s) lecture
Concerned with the understanding of procedural criminal law. Examines the rationale underlying major court holdings, the procedural requirements that stem from these holdings, and their effect on the daily operations of the criminal justice system. Prerequisites: None.
AJS270  
Community Relations  
3 credit(s) 3 period(s) lecture  
Examination, recognition and understanding of community problems; community action programs; methods of coping with human behavior, victimology, conflict, and communication; ethnic and minority cultures and environments; the community and relationships with the criminal justice system. Prerequisites: None.

AJS275  
Criminal Investigation I  
3 credit(s) 3 period(s) lecture  
Introduction to the theory of criminal investigation. Examines crime scene procedures, case preparation, interviewing, and basic investigative techniques. Prerequisites: None.

AJS276  
Criminal Investigation II  
3 credit(s) 3 period(s) lecture  
Focuses on investigating specific offenses, methods for identifying, collecting and preserving evidence. Establishing elements of crimes and connecting suspects to the crimes. Prerequisites: AJS275.

AJS289AJ  
Street Gangs I  
1 credit(s) 1 period(s) lecture  
Introduction to street gang identification, history, culture, and current trends, specifically in the western United States. Prerequisites: Certified officer or permission of instructor.

AJS290 Courses  
Course topics presented are selected from a variety of subjects designed to meet the needs and interests of persons desiring in-service education and training. AJS290 courses may be repeated for credit provided it is not a repeat of the same topic. Courses may not transfer to other colleges and universities.

AJS290AU  
Child Abuse Investigation  
1 credit(s) 1 period(s) lecture  
Definition and investigation of the causes and effects of child abuse. Prerequisites: None.

AJS290BN  
Courtroom Testimony Seminar  
1 credit(s) 1 period(s) lecture  
Courtroom demeanor and protocol. Role and primary functions of witness and legal counsels. Prerequisites: None.

AJS290BU  
Family Violence  
1 credit(s) 1 period(s) lecture  
Family violence issues as they relate to the criminal justice response. Prerequisites: None.

AJS290BV  
 Victim Assistance  
1 credit(s) 1 period(s) lecture  
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.

ARH – Art Humanities  

ARH100  
Introduction to Art  
3 credit(s) 3 period(s) lecture  
Understanding and enjoyment of art through study of painting, sculpture, architecture, design, photography, and decorative arts. Emphasis on contemporary topics and cultural diversity in the arts. Prerequisites: None.

ARH101  
Prehistoric Through Gothic Art  
3 credit(s) 3 period(s) lecture  
History of art from prehistoric through medieval period. Prerequisites: None.

ARH102  
Renaissance Through Contemporary Art  
3 credit(s) 3 period(s) lecture  
History of art from around the world from the Renaissance through contemporary period. Prerequisites: None.

ARH109  
History of American Art  
3 credit(s) 3 period(s) lecture  
Development and variety of American art. Presentation of architecture, sculpture, painting, and decorative objects. Prerequisites: None.

ARH112  
History of Modern Art  
3 credit(s) 3 period(s) lecture  
Development and significant aspects of modern art, including comparisons of relationships in expressionism, abstractions, fantasy, and art since mid-century. Prerequisites: None.

ARH115  
History of Photography  
3 credit(s) 3 period(s) lecture  
Survey of history of photography from beginning to present. Emphasizes medium’s impact upon society and other visual arts. Technical developments, aesthetic concerns, and individual photographers studied. Prerequisites: None.

ARH118  
Introduction to Chinese Art  
3 credit(s) 3 period(s) lecture + lab  
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.

ARH145  
History of American Indian Art  
3 credit(s) 3 period(s) lecture  
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.

ARH201  
Art of Asia  
3 credit(s) 3 period(s) lecture  
Introduction to the origins and historic development of art in Asia, with emphasis on China, Japan, and India. Prerequisites: None.

ARH203  
Art of Ancient Egypt  
3 credit(s) 3 period(s) lecture  
The art and culture of ancient Egypt from prehistoric through the Greco-Roman period. Prerequisites: None.

ARH204  
Roman Art and Architecture  
3 credit(s) 3 period(s) lecture  
Detailed examination of the art and architecture of ancient Rome from the monarchical period to the late empire, with emphasis on the visual culture and artifacts of the civilization. Prerequisites: None.

ARH216  
Pre-Columbian Art History  
3 credit(s) 3 period(s) lecture  
The 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.

ARH217  
Mexican Art History  
3 credit(s) 3 period(s) lecture  
Art of Mexico and related cultures, from the prehistoric to the contemporary period. Prerequisites: None.
ART – (Studio)

ART100
Introduction to Computer Graphic Art
1 credit(s) 2 period(s) lecture + lab
Conceptualization, visualization, and production of art using the computer.
Prerequisites: None.

ART106
Gallery Operations
3 credit(s) 6 period(s) lecture + lab
Operation of an art gallery. Includes organization, publicity, evaluation of artwork, selection and installation of exhibits.
Prerequisites: Permission of Instructor.
Course Notes: ART106 may be repeated for a total of six (6) credit hours.

ART111
Drawing I
3 credit(s) 6 period(s) lecture + lab
Fundamental principles of drawing. Emphasis on composition and facility in objective and expressive representation, using variety of drawing media.
Prerequisites: None.

ART112
Two-Dimensional Design
3 credit(s) 6 period(s) lecture + lab
Study of fundamental elements and principles of two-dimensional design.
Prerequisites: None.

ART113
Color
3 credit(s) 6 period(s) lecture + lab
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.

ART115
Three-Dimensional Design
3 credit(s) 6 period(s) lecture + lab
Fundamental principles of three-dimensional design.
Prerequisites: None.

ART116
Life Drawing I
3 credit(s) 6 period(s) lecture + lab
Use of form, structure and anatomy of draped and undraped human figure to develop basic principles of sound craftsmanship.
Prerequisites: None.

ART117
Life Drawing II
3 credit(s) 6 period(s) lecture + lab
Further study of form, structure, and anatomy of the draped and undraped human figure with emphasis on composition.
Prerequisites: ART116.

ART119
Penciling for Comic and Sequential Art
3 credit(s) 3 period(s) lecture + lab
Development of observational skills as they apply to sequential art. Emphasis on techniques that showcase how characters interact with their environment and manipulate props and cartooning anatomy. Includes techniques on composing page layouts, adapting scripts and reference gathering.
Prerequisites: None.

ART120
Inking for Comic and Sequential Art
3 credit(s) 3 period(s) lecture + lab
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.

ART122
Drawing and Composition II
3 credit(s) 6 period(s) lecture + lab
Emphasis on composition and exploration of drawing media.
Prerequisites: ART111.

ART150
Digital Storytelling
3 credit(s) 6 period(s) lecture + lab
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.

ART151
Sculpture I
3 credit(s) 6 period(s) lecture + lab
Exploration of sculptural form and expression in clay, plaster, stone, wood and metal.
Prerequisites or Corequisites: ART115 or permission of instructor.

ART152
Sculpture II
3 credit(s) 6 period(s) lecture + lab
Continuation of ART151 with emphasis on control of sculptural media.
Prerequisites: ART151.

ART155
Glass Fusing and Slumping I
3 credit(s) 6 period(s) lecture + lab
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.
Course Notes: ART155 may be repeated for a total of twelve (12) credits.

ART156
Glass Fusing and Slumping II
3 credit(s) 6 period(s) lecture + lab
Further study in the area of glass fusing and slumping. Advanced techniques including Pate-de-Verre, Pattern Bars, watchbands, bracelets, and patterned dishes.
Prerequisites: ART155. Course Notes: ART156 may be repeated for a total of twelve (12) credits.

ART161
Ceramics I
3 credit(s) 6 period(s) lecture + lab
Introduction to ceramic materials and techniques of hand construction, decorating, glazing and throwing on potters’ wheel.
Prerequisites: None.

ART162
Ceramics II
3 credit(s) 6 period(s) lecture + lab
Major emphasis on wheel throwing, glaze making and decorating techniques.
Prerequisites: ART161.

ART165
Watercolor Painting I
3 credit(s) 6 period(s) lecture + lab
Painting in water soluble media. Emphasis on individual techniques and design.
Prerequisites: ART165.

ART167
Painting I
3 credit(s) 6 period(s) lecture + lab
Exploration of technical and expressive possibilities of various painting media in easel painting.
Prerequisites: ART167 or permission of instructor.

ART168
Painting II
3 credit(s) 6 period(s) lecture + lab
Continued refinement of painting skills and investigation of new possibilities in painting.
Prerequisites: ART167 or permission of instructor.

ART169
Two-Dimensional Computer Design
3 credit(s) 6 period(s) lecture + lab
Generation of electronic two-dimensional images and traditional methods of visual problem solving. Understanding of computer techniques and art presentation methods.
Prerequisites or Corequisites: ART100 or permission of instructor.

Course Descriptions
ART170
Three-Dimensional Computer Design 3 credit(s) 6 period(s) lecture + lab
Artistic manipulation of computer images. Emphasis on color and three-dimensional design in production of these images. Existing software used to generate three-dimensional art. Prerequisites: ART100, ADA/ART169, or permission of instructor.

ART171
Jewelry I 3 credit(s) 6 period(s) lecture + lab
Fundamentals of jewelry making. Covers hand formed methods, including cutting, shaping, forging, soldering, and lost wax technique. Prerequisites: ART171.

ART172
Jewelry II 3 credit(s) 6 period(s) lecture + lab
Further refinement of personal expression using techniques and design concepts of ART171. Prerequisites: ART171.

ART173
Computer Art 3 credit(s) 6 period(s) lecture + lab
Introduction to the multiple elements of paint software programs using the microcomputer. Basic foundation in the use of color and composition in the production of computer images. Use of electronic input and output devices. Prerequisites: ART100, or permission of instructor.

ART/ADA175
Electronic Publishing Design I 3 credit(s) 6 period(s) lecture + lab
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. Prerequisites or Corequisites: ART100 or permission of instructor.

ART/ADA177
Computer-Photographic Imaging 3 credit(s) 6 period(s) lecture + lab
Introduction to the multiple elements of microcomputer-photographic imaging. Basic foundation in the use of the photographic manipulation of images using software programs. Special attention to aesthetic foundations underlying photographic composition. Prerequisites or Corequisites: ART100 or permission of instructor.

ART179
Electronic Presentation Design 3 credit(s) 6 period(s) lecture + lab
Introduction to the multiple elements of commercial-graphic presentation materials using the microcomputer and other advanced computer graphics. Basic foundation in the use of computer presentation software programs using presentation techniques. Special attention to aesthetic foundations underlying all presentation materials. Prerequisites or Corequisites: ART100 or permission of instructor.

ART180
Designer's Tools Modules 1 credit(s) 2 period(s) lecture + lab
Introduction to the multiple elements of a selected visual art software package using the microcomputer. Basic foundation in the use of electronic techniques including appropriate input and output production devices. Prerequisites: ART100, or permission of instructor.

ART180AC
Designer's Tools: QuarkExpress
ART180AD
Designer's Tools: Adobe Illustrator
ART180AI
Designer's Tools: 3-D Studio Textures
ART180AJ
Designer's Tools: 3-D Special Effects
ART180AK
Designer's Tools: Adobe Premiere
ART180AL
Designer Tools: Character Studio

ART181
Graphic Design I 3 credit(s) 6 period(s) lecture + lab
Basic understanding of design principles and the stages of graphic design, with an emphasis on final product and presentation. Prerequisites: ART100 or permission of Instructor.

ART182
Graphic Design II 3 credit(s) 6 period(s) lecture + lab
Utilizing graphic design essentials of typography, contrast and layout to develop design solutions to problems in consumer advertising, typography and structure. Prerequisites: ART181 or permission of instructor.

ART183
Computer Aided Graphic Arts I 3 credit(s) 6 period(s) lecture + lab
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. Prerequisites or Corequisites: ART100 or permission of instructor.

ART/MMT184
Computer Animation 3 credit(s) 6 period(s) lecture + lab
The art of animation (animated sequences, special effects, titles, etc.) using the computer. Construction characters, background graphics, color, scaling, story boarding, cells, timing, editing, and surface rendering. Screening and discussion of selected animated short films and videos. Prerequisites: ART100, or ART111, or ART116, or permission of instructor.

ART/MMT185
3-D Modeling for Animation 3 credit(s) 6 period(s) lecture + lab
Basic concepts of 3-D modeling. Anatomy of computer geometry; basic elements that make computer models-curves, surfaces, nurb, and polygons. 3-D translation, shading, materials, and rendering. Prerequisites: ART/MMT184, or ART184AC, or permission of the instructor.

ART190
Art of Web Site Design 3 credit(s) 6 period(s) lecture + lab
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: ART100, or permission of Instructor. CIS133DA recommended.

ART190AA
Art of Website Design I 1 credit(s) 2 period(s) lecture + lab
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. Prerequisites: ART100, or permission of Instructor. CIS133DA recommended.

ART190AB
Art of Website Design II 1 credit(s) 2 period(s) lecture + lab
Producing Web site pages, using design and Hyper Text digital text and graphics. Discussion of color, proportion, typography and Web-specific design principles. Prerequisites: ART100 and ART190AA, or permission of Instructor. CIS133DA recommended.

Course information is subject to change. Visit http://www.maricopa.edu/academic/ccta/ for most current information.
ART100C Art of Website Design III
1 credit(s) 2 period(s) lecture + lab
Producing Web sites using artistic form and content. Emphasizes design of cross-browser compatible interfaces that optimize usability, accessibility and browser interoperability. Prerequisites: ART100 and ART190AB, or permission of Instructor. C1533DA recommended.

ART191 Storyboarding and Layout
2 credit(s) 4 period(s) lecture + lab
Introduction to storyboarding including film storytelling and scene presentation. Prerequisites: ART111 or ART187 or ART188.

ART192 Advanced Web Presentation Design
3 credit(s) 6 period(s) lecture + lab
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: ART190 or permission of instructor. ART180AM and ART180AN suggested but not required.

ART219 Coloring, Toning and Lettering for Comic and Sequential Art
3 credit(s) 3 period(s) lecture + lab
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: None.

ART220 Publishing for the Comic Industry
3 credit(s) 3 period(s) lecture
Understanding of the comics industry. Includes researching, marketing, packaging, and distributing comics. Emphasis on selling and submitting to comics' publishers and understanding contracts and copyrights involved in the process of publishing comics. Prerequisites: None.

ART221 Comics Creation
3 credit(s) 3 period(s) lecture + lab
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: None.

ART245 Advanced 3D Modeling and Animation
4 credit(s) 8 period(s) lecture + lab
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: ART/ MMT185.

ART/THP246 Introduction to Digital 3D Fabrication Tools
3 credit(s) 6 period(s) lecture + lab
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.

ART250 Introduction to Printmaking
3 credit(s) 6 period(s) lecture + lab
Introduction to concepts and techniques involved in Fine Art field of Printmaking. Deals with three most basic Printmaking modes of Serigraphy, Woodcut, and Monoprinting in first part of course. Overview of Etching, Lithography and Papermaking in second part of course. Prerequisites: ART111 and ART113.

ART255 Art Marketing
3 credit(s) 3 period(s) lecture
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.

ART255AA Self Promotion
1 credit(s) 1 period(s) lecture
Career goals, presentation of artist, communication skills, keeping files and records, developing self-promotional materials. Prerequisites: None.

ART255AB The Portfolio
1 credit(s) 1 period(s) lecture
Choosing the right pieces to include, presenting art work, developing the portfolio. Prerequisites: ART182, or ART/MMT185, or ART255AA, or permission of Instructor.

ART256 Glass Fusing and Slumping III
3 credit(s) 6 period(s) lecture + lab
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: ART156. Course Notes: ART256 may be repeated for a total of fifteen (15) credits.

ART257 Glass Fusing and Slumping IV
3 credit(s) 6 period(s) lecture + lab
Further study of advanced glass fusing and slumping including problems, professional practices, personal expression and experimental research into various techniques. Prerequisites: ART256. Course Notes: ART257 may be repeated for a total of fifteen (15) credits.

ART270 Intermediate Computer Photographic Imaging
3 credit(s) 6 period(s) lecture + lab
Intermediate microcomputer-based photographic imaging techniques. Refinement of aesthetic awareness and personal expression. Prerequisites: ART177 or (ART177AA and ART177AB).

ART273 AC Special Topics: Multimedia Arts
3 credit(s) 6 period(s) lecture + lab
Multimedia art studio course examining new and/or current topics in media and/or multimedia arts. Prerequisites: Permission of Instructor. Course Note: ART273AC is designed to offer special topics and/or specialized training for students in multimedia arts. Activities may also be appropriate for portfolio enhancement.

ART275 Lost Wax Casting I
3 credit(s) 6 period(s) lecture + lab
Introduction to lost wax casting techniques for jewelry and small sculptures. Emphasis on design concepts as related to three-dimensional forms. Prerequisites: None.

ART276 Lost Wax Casting II
3 credit(s) 6 period(s) lecture + lab
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: ART275.
ART/ADA283
Computer Aided Graphic Arts II
3 credit(s) 6 period(s) lecture + lab
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: ADA/ART183 or permission of instructor.

ART285
Multipresentation Graphics
3 credit(s) 6 period(s) lecture + lab
Computer aided design and development of a company identity program; development of a videotape demonstrating market impact; preparation of a portfolio of completed art and graphics. Prerequisites: ART100, ADA/ART163, or permission of instructor.

ART/ADA289
Computer Illustration
3 credit(s) 6 period(s) lecture + lab
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 input and output devices. Prerequisites or Corequisites: ART100 or permission of instructor.

ART290AC
Studio Art
3 credit(s) 6 period(s) lecture + lab
Studio course for art majors allowing continuation in a subject field. Prerequisites: Permission of Instructor. Course Note: ART290AC may be repeated for credit.

ART291
Digital Prepress
3 credit(s) 6 period(s) lecture + lab
Introduction to multiple elements of digital prepress concepts and techniques using the microcomputer. Basic foundation in the use of trapping and stripping software for the desktop. Use of electronic page layout techniques including color separations, registration, spot colors, impositions, signatures, and output production devices. Emphasis on prepress concepts. Prerequisites: ART100 or permission of instructor.

ART297AB
Computer Graphic Design Internship
2 credit(s) 2 period(s) lecture + lab
Computer graphic design work experience in a business or industry. 80 hours of designated work per credit. Maximum of 3 credits allowed. Prerequisites: Departmental approval.

ART298AA-AC
Special Projects
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of 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.

ART – (Photography)

ART131
Photography I
3 credit(s) 6 period(s) lecture + lab
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. Course Note: Camera required.

ART132
Photography II
3 credit(s) 6 period(s) lecture + lab
Advanced camera and darkroom techniques. Aesthetic awareness with personal expression. Prerequisites: ART131, or permission of instructor.

ART133
Photography III
3 credit(s) 6 period(s) lecture + lab
Refinement of aesthetic and technical aspects producing convincing images of highest quality. Prerequisites: ART132 or permission of instructor.

ART135
Photojournalism I
3 credit(s) 6 period(s) lecture + lab
Basic technical knowledge of photographic process as applied by mass media. Prerequisites: ART131 or permission of instructor.

ART137
Alternative Photographic Processes
3 credit(s) 6 period(s) lecture + lab
Emphasis on development of alternative photographic processes including technique, aesthetics, and creative imagery. Exploration of various types of non-silver photographic processes including cyanotype, Van Dyke, Polaroid imaging, and others. Prerequisites: None.

ART138
Commercial Photography I
3 credit(s) 6 period(s) lecture + lab
Basic techniques of lighting, camera work, and reproduction of commercial photography. Cooperation with commercial art community. Prerequisites: (ART131 or ART142) or permission of Instructor.

ART139
Commercial Photography II
3 credit(s) 6 period(s) lecture + lab
Continuation of ART138. Advanced techniques with portfolio organization and presentation. Prerequisites: ART138.

ART140
Portrait Photography
2 credit(s) 4 period(s) lecture + lab
Insight into the profession of Portrait Photography. Application of the principles of design and fine art in lighting, composition, and posing. Prerequisites: ART131 or permission of instructor.

ART142
Introduction to Digital Photography
3 credit(s) 6 period(s) lecture + lab
Fundamentals of digital photography. Includes camera operations, exposure techniques, introduction to digital output, and theory of digital photography. Prerequisites: None. Course Note: Digital camera required.

ART143
Intermediate Digital Photography
3 credit(s) 6 period(s) lecture + lab
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: ART142 or permission of instructor. Course Note: Semi-adjustable, high-resolution digital camera is required.

ART/ADA177
Computer-Photographic Imaging
3 credit(s) 6 period(s) lecture + lab
Introduction to the multiple elements of microcomputer-photographic imaging. Basic foundation in the use of the photographic manipulation of images using software programs. Special attention to aesthetic foundations underlying photographic composition. Prerequisites or Corequisites: ART100 or permission of instructor.
ART234
Color Photography I
3 credit(s) 6 period(s) lecture + lab
Basic principles of color theory, camera and input and output techniques using slide film or digital photography. Prerequisites: ART131 or ART142 or permission of instructor. Course Note: Film or digital camera required.

ART235
Color Photography II
3 credit(s) 6 period(s) lecture + lab
Basic theories and techniques of color negative materials. Prerequisites: ART234 or permission of instructor.

ART237
Fashion Photography
3 credit(s) 6 period(s) lecture + lab
Practical application of photographic techniques within the fashion industry. Includes the photographing of models, garments, and accessories. Prerequisites: (ART131 or ART142) or permission of instructor. Course Notes: ART235 may be repeated for credit. Digital Single Lens Reflex (DSLR) camera required.

ART290AC
Studio Art
3 credit(s) 6 period(s) lecture + lab
Studio course for art majors allowing continuation in a subject field. Prerequisites: Permission of Instructor. Course Note: ART290AC may be repeated for credit.

ART295DA, DB, and DC
Art Workshop/Seminar: Photography 1, 2, and 3 credit(s) 2, 4, and 6 period(s) lecture + lab
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/Division Chair.

ASB, ASM – Anthropology

ASB102
Culture in a Globalizing World
3 credit(s) 3 period(s) lecture
Principles of cultural and social anthropology, with illustrative materials from a variety of cultures. The nature of culture; social, political, and economic systems; religion, aesthetics and language. Prerequisites: None.

ASB/AFR202
Ethnic Relations in the United States
3 credit(s) 3 period(s) lecture
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.

ASB211
Women in Other Cultures
3 credit(s) 3 period(s) lecture
Cross-cultural analysis of the economic, social, political, and religious factors that affect women’s status in traditional and modern societies. Prerequisites: None.

ASB214
Magic, Witchcraft and Healing: An Introduction to Comparative Religion
3 credit(s) 3 period(s) lecture
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.

ASB222
Buried Cities and Lost Tribes: New World
3 credit(s) 3 period(s) lecture
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 North American, Central America, and South America. Prerequisites: None.

ASB235
Southwest Archaeology
3 credit(s) 3 period(s) lecture
Anthropological perspective and comparative study of the cultures of prehistoric native peoples of the North American southwest. Prerequisites: None.

ASB245
Indians of the Southwest
3 credit(s) 3 period(s) lecture
Comparative study of the cultures, including the histories and present status, of Indians of the Southwest. Prerequisites: None.

ASM104
Bones, Stones, and Human Evolution
4 credit(s) 5 period(s) lecture + lab
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.

ASM/FOR275
Introduction to Forensic Anthropology
3 credit(s) 3 period(s) lecture
Introduction to forensic anthropology. Survey of the role of forensic anthropologist, from the crime scene to the courtroom. Understand how a forensic anthropologist can determine life history of an individual. Contributions of forensic anthropology to crime scene and other legal investigations. How forensic anthropology is used to decipher historic cases, and how it is depicted in popular culture. Case studies involving criminal investigations, mass disaster incidents, and global human rights issues. Prerequisites: None.
AST– Astronomy

AST101 Survey of Astronomy
3 credit(s) 3 period(s) lecture
Survey of astronomy for the non-technical student. The history, contents, 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.

AST102 Survey of Astronomy Laboratory
1 credit(s) 3 period(s) lab
Astronomical observations and exercises designed to familiarize students with the sky, telescopes, and methods used in astronomy. Prerequisites: None. May accompany AST101.

AST111 Introduction to Solar System Astronomy
3 credit(s) 3 period(s) lecture
Introduction to astronomy for the non-science major. History of astronomy, properties of light, instruments, the solar system and nearby stars. Prerequisites: MAT092 or higher.

AST112 Introduction to Stars, Galaxies, and Cosmology
3 credit(s) 3 period(s) lecture
Introduction to astronomy for the non-science major. Structure and evolution of stars; star clusters; galaxies; cosmology. Prerequisites: MAT092 or higher.

AST113 Introduction to Solar System Astronomy Laboratory
1 credit(s) 3 period(s) lab
Astronomical observations and exercises to supplement AST111. Prerequisites or Corequisites: AST111.

AST114 Introduction to Stars, Galaxies, and Cosmology Laboratory
1 credit(s) 3 period(s) lab
Astronomical observations and exercises to supplement AST112. Prerequisites or Corequisites: AST112.

BIO – Biology

BIO100 Biology Concepts
4 credit(s) 6 period(s) lecture and lab
Introductory course covering basic principles and concepts of biology. Methods of scientific inquiry and behavior of matter and energy in biological systems are explored. Prerequisites: None. Course Notes: Field trips may be required at students’ expense.

BIO105 Environmental Biology
4 credit(s) 6 period(s) lecture and lab
Fundamentals of ecology and their relevance to human impact on natural ecosystems. Field trips may be required at students’ expense. Prerequisites: None.

BIO107 Introduction to Biotechnology
4 credit(s) 6 period(s) lecture and lab
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.

BIO108 Plants and Society
4 credit(s) 6 period(s) lecture and lab
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.

BIO109 Natural History of the Southwest
4 credit(s) 6 period(s) lecture and lab
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. Course Note: Field trips may be required.

BIO145 Marine Biology
4 credit(s) 6 period(s) lecture and lab
A survey of marine environments and their biotic communities with emphasis on the natural history of marine organisms. Prerequisites: None.

BIO156 General Biology (Majors) II
4 credit(s) 6 period(s) lecture and lab
Continuation of structure and function of the human body. Topics include endocrine, circulatory, lymphatic, respiratory, digestive, urinary, and reproductive systems; and fluid and electrolyte balance. Prerequisites: A grade of “C” or better in BIO101 or BIO156X or BIO181 or BIO181X or one year of high school chemistry and biology. Prerequisites: None.

BIO181 General Biology (Majors) I
4 credit(s) 6 period(s) lecture and lab
The study and principles of structure and function of organisms at the molecular and cellular levels. A detailed explanation of the chemistry of life, the cell, and genetics. Prerequisites: Grade of C or better in RDG091 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 biology and chemistry is strongly recommended.

BIO182 General Biology (Majors) II
4 credit(s) 6 period(s) lecture and lab
Continuation of structure and function of the human body. Topics include endocrine, circulatory, lymphatic, respiratory, digestive, urinary, and reproductive systems; and fluid and electrolyte balance. Prerequisites: A grade of “C” or better in BIO101 or BIO156X or BIO181 or BIO181X or one year of high school chemistry and biology. Prerequisites: None.

BIO201 Human Anatomy and Physiology I
4 credit(s) 6 period(s) lecture and lab
Continuation of structure and function of the human body. Topics include endocrine, circulatory, lymphatic, respiratory, digestive, urinary, and reproductive systems; and fluid and electrolyte balance. Prerequisites: A grade of “C” or better in BIO101 or BIO156X or BIO181 or BIO181X or one year of high school chemistry and biology. Prerequisites: None.

BIO202 Microbiology
4 credit(s) 6 period(s) lecture and lab
Study of microorganisms and their relationship to health, ecology, and related fields. Prerequisites: A grade of “C” or better in BIO101 or BIO156X or BIO181 or BIO181X or one year of high school biology) and a grade of “C” or better in RDG091 or higher or eligibility for CRE101 as indicated by appropriate reading placement test score. CHM130 or higher or one year of high school chemistry suggested but not required.
### Course Descriptions

#### BIO214
**Biotechnology Internship**
4 credit(s) 4 period(s) lecture
Internship experience in a biotechnology laboratory. Requires 320 clock hours in the laboratory setting. 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:** Permission of program director. **Corequisites:** BIO212AC.

#### BIO215
**Biotechnology Internship**
3 credit(s) 3 period(s) lab
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:** (BIO208 or BIO209 or BIO212AA or BIO212BA or BIO213 completed within the last year) AND permission of Program Director. **Course Note:** BIO215 requires 240 clock hours in the laboratory setting. BIO215 may be repeated for a total of six (6) credit hours.

#### BIO240
**General Genetics**
4 credit(s) 4 period(s) lecture
Intensive introduction to the field of genetics including historical perspective, Mendelian insights and patterns of inheritance, exceptions to expected Mendelian ratios, quantitative genetics, non-Mendelian inheritance, pedigree analysis, molecular levels of gene expression, genetic control of metabolic pathways, analytic dissection of molecular mechanisms behind DNA replication, transcription, translation, and gene regulation in both prokaryotes and eukaryotes, population genetics, genetics of behavior, and genetics of evolution and speciation. **Prerequisites:** BIO181.

#### BPC – Business–Personal Computers

**BPC101**
**Introduction to Computers**
3 credit(s) 4 period(s) lecture + lab
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.

**BPC101AA**
**Introduction to Computers I**
1 credit(s) 2 period(s) lecture + lab
Computer software applications for the personal computer, including electronic spreadsheet and word processing, keyboarding review, and a desktop environment. **Prerequisites:** None.

**BPC110**
**Computer Usage and Applications**
3 credit(s) 4 period(s) lecture + lab
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.

**BPC/OAS111AA**
**Computer Keyboarding I**
1 credit(s) 1.7 period(s) lecture + lab
Mastery of essential microcomputer keyboarding skills. Emphasis on touch typing of alphabetic and numeric keys and symbols. **Prerequisites:** None.

### CCS – Chicana and Chicano Studies

#### CCS101
**Chicana and Chicano Studies**
3 credit(s) 3 period(s) lecture
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:** ENG101, or ENG107, or equivalent.

#### CCS282AA
**Volunteerism for Chicana and Chicano Studies: A Service Learning Experience**
1 credit(s) 1 period(s) lab
Service learning field experience within private/public agencies such as museums and libraries, and citizen volunteer groups. May be repeated for a total of six (6) CCS282 credit hours; may not repeat specific assignment for more than three (3) credit hours. Standard grading available according to procedures outlined in catalog. **Prerequisites:** Permission of instructor.

#### CCS298AA-AC
**Special Projects**
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities 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.

### CFS – Child/Family Studies

#### CFS106
**Stress Management in the Family**
1 credit(s) 1 period(s) lecture
(Not offered every semester)
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.

#### CFS101AH
**Art Activities for the Young Child**
1 credit(s) 1 period(s) lecture
(Not offered every semester)
The creative use of art media and techniques at appropriate developmental levels. **Prerequisites:** None.

#### CFS101AP
**Science Activities for the Young Child**
1 credit(s) 1 period(s) lecture
(Not offered every semester)
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.

#### CFS109
**Parent/Child Communication**
1 credit(s) 1 period(s) lecture
(Not offered every semester)
Communication between parents and children. Developing self-esteem, responsibility and empathic listening. Pitfalls to communication. **Prerequisites:** None.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Periods</th>
<th>Type</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFS114</td>
<td>Working With The Hyperactive Child</td>
<td>1</td>
<td>Lecture</td>
<td>1</td>
<td>Causes of hyperactivity in children; focus on the family's role in identification, treatment and school/community support. Prerequisites: None.</td>
</tr>
<tr>
<td>CFS116</td>
<td>Discipline and Guidance</td>
<td>3</td>
<td>Lecture</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CFS121AA</td>
<td>Single Parent Family-Adjustment</td>
<td>1</td>
<td>Lecture</td>
<td>1</td>
<td>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.</td>
</tr>
<tr>
<td>CFS125</td>
<td>Safety in Early Childhood Settings</td>
<td>1</td>
<td>Lecture</td>
<td>1</td>
<td>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.</td>
</tr>
<tr>
<td>CFS130</td>
<td>Demystifying Adolescence</td>
<td>1</td>
<td>Lecture</td>
<td>1</td>
<td>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.</td>
</tr>
<tr>
<td>CFS157</td>
<td>Marriage and Family Life</td>
<td>3</td>
<td>Lecture</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CFS176</td>
<td>Child Development</td>
<td>3</td>
<td>Lecture</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CFS177</td>
<td>Parent-Child Interaction</td>
<td>3</td>
<td>Lecture</td>
<td>3</td>
<td>Positive methods to strengthen relationships and resolve conflicts with children. Focus on effective interpersonal skills and guidance techniques. Prerequisites: None.</td>
</tr>
<tr>
<td>CFS178</td>
<td>Survey of Early Childhood Education</td>
<td>3</td>
<td>Lecture</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CFS182</td>
<td>Parenting the Early Adolescent: Ages Ten to Fourteen</td>
<td>1</td>
<td>Lecture</td>
<td>1</td>
<td>Emphasis on the early adolescent developmental period, ages ten to fourteen, and the importance of the parent-child relationship, as well as strategies to ensure successful teen years. Prerequisites: None.</td>
</tr>
<tr>
<td>CFS183</td>
<td>Contemporary Issues in Adolescence</td>
<td>3</td>
<td>Lecture</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CFS205</td>
<td>Human Development</td>
<td>3</td>
<td>Lecture</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CFS212</td>
<td>Creative Activities for the Young Child</td>
<td>3</td>
<td>Lecture</td>
<td>3</td>
<td>Children's development in play, creativity and the arts. Focus on learning environment for creative expression. Field experiences with children in groups required. Prerequisites: CFS176 or ECH176 or permission of instructor.</td>
</tr>
<tr>
<td>CFS222</td>
<td>Developing Child: Theory-Practice, Birth-Prekindergarten</td>
<td>3</td>
<td>Lecture</td>
<td>3</td>
<td>Understanding and working with young children, birth through prekindergarten. Development of young children's physical, emotional, social, cognitive and linguistic characteristics. Special focus on children from diverse multicultural backgrounds. Typical and atypical development. Implications for teachers and parents. Includes opportunities for observations and curriculum planning. Prerequisites: None.</td>
</tr>
<tr>
<td>CFS242</td>
<td>Curriculum Planning for Diversity</td>
<td>3</td>
<td>Lecture</td>
<td>3</td>
<td>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: CFS/ECH176.</td>
</tr>
<tr>
<td>CFS256</td>
<td>Management in the Family</td>
<td>3</td>
<td>Lecture</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>CFS257</td>
<td>Working with Families with Diverse Needs</td>
<td>3</td>
<td>Lecture</td>
<td>3</td>
<td>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.</td>
</tr>
</tbody>
</table>

[For additional information on MCCCD course competencies, visit: http://www.maricopa.edu/academic/ccta/]

– Consult with Academic Advisement for details.
Course Descriptions

PHOENIX COLLEGE 2015–2016 CATALOG AND HANDBOOK

CFS263
Child and Family Studies Seminar
1 credit(s) 1 period(s) lecture
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: Departmental approval. Corequisites: CFS264AA or CFS264AB or CFS264AC, initial enrollment in internship module.

CFS264AA
Child and Family Studies Internship
1 credit(s) 5 period(s) lab
Laboratory portion of Child and Family Studies Internship. Five hours of work weekly. Supervision and evaluation by a coordinator. May be repeated for a total of six (6) credits. Prerequisites: Departmental approval. Corequisites: CFS263, when initially enrolled in CFS264AA or CFS264AB or CFS264AC module.

CFS264AB
Child and Family Studies Internship
2 credit(s) 10 period(s) lab
Laboratory portion of Child and Family Studies Internship. Ten hours of work weekly. Supervision and evaluation by a coordinator. May be repeated for a total of six (6) credits. Prerequisites: Departmental approval. Corequisites: CFS263, when initially enrolled in CFS264AA or CFS264AB or CFS264AC module.

CFS264AC
Child and Family Studies Internship
3 credit(s) 15 period(s) lab
Laboratory portion of Child and Family Studies Internship. Fifteen hours of work weekly. Supervision and evaluation by a coordinator. May be repeated for a total of six (6) credits. Prerequisites: Departmental approval. Corequisites: CFS263, when initially enrolled in CFS264AA or CFS264AB or CFS264AC module.

CFS/ECH271
Arranging the Environment
1 credit(s) 1 period(s) lecture
(Not offered every semester)
Exploration of the influence of the environment on the behavior of young children. Indoor and outdoor spaces considered and analysis of environments practiced. Prerequisites: None.

CFS/ECH275
Literacy Development and the Young Child
1 credit(s) 1 period(s) lecture
(Not offered every semester)
Literacy from birth through the early childhood years. Focus on developmentally appropriate ways to encourage speaking, listening, writing, and reading in the home and classroom. Prerequisites: None.

CFS277
Adult-Adolescent Interaction
3 credit(s) 3 period(s) lecture
(Not offered every semester)
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.

CFS281
Adolescent School Success
1 credit(s) 1 period(s) lecture
(Not offered every semester)
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.

CFS283
Multicultural Early Child Education
1 credit(s) 1 period(s) lecture
(Not offered every semester)
Practical early childhood classroom applications for a diverse ethnic population, including integration of multicultures into the classroom, facilitation of a second language acquisition, and practical teaching strategies which are also developmentally appropriate. Prerequisites: CFS/ECH176.

CFS/ECH287
Professional Development in Early Childhood Education
1 credit(s) 1 period(s) lecture
(Not offered every semester)
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.

CFS290AA
Child Abuse: Identification and Reporting in Child Care Settings
1 credit(s) 1 period(s) lecture
(Not offered every semester)
Identification, recording, and reporting by child care providers of sexual abuse, physical abuse, or neglect of young children. Prerequisites: None.

CHM – Chemistry

CHM090
Preparation for Fundamental Chemistry
1 credit(s) 1 period(s) lecture
A developmental course designed to review basic math and chemistry principles for students deficient or insecure in these areas. Stresses individualized instruction and hands-on experience. Serves to prepare the student for CHM130. Prerequisites: None.

CHM107 and 107LL
Chemistry and Society and Lab
4 credit(s) 6 period(s) lecture and lab
LEC: A survey of chemistry and its impact on the environment. Completion of CHM107LL is required to meet the Natural Science requirement. Prerequisites: None.
LAB: Laboratory experience in support of CHM107. Prerequisites or Corequisites: CHM107.

CHM130 and 130LL
Fundamental Chemistry and Lab
4 credit(s) 6 period(s) lecture and lab
LEC: 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. Designed to meet needs of students in such diverse areas as agriculture, nursing, home economics, physical education and water technology. Prerequisites: A grade of “C” or better in [CHM090 or MAT090 or MAT091 or MAT092 or (MAT092AA and MAT092AB) or MAT093 or (MAT103AA and MAT103AB) or higher or satisfactory score on math placement exam] and (RDG091 or eligibility for CRE101 as indicated by appropriate reading placement test score).
LAB: Laboratory experience in support of CHM130. Prerequisites or Corequisites: A grade of “C” or better in CHM130.

CHM138 and 138LL
Chemistry For Allied Health and Lab
4 credit(s) 6 period(s) lecture and lab
LEC: Elements of fundamental and organic chemistry. Includes the general chemical behavior of inorganic matter and the structure of organic and biochemical systems. This course is designed for specific allied health programs at MCCCD. It may not be applicable to other allied health programs or transferable. Prerequisites: A grade of “C” or better in CHM090, or one year of high school chemistry with a grade of “C” or better, or MAT092, or satisfactory score on placement exam. LAB: Laboratory experience in support of CHM138. Chemistry for Allied Health. Prerequisites: None. Corequisites: CHM138.

Course information is subject to change. Visit http://www.maricopa.edu/academic/ccta/ for most current information.
CHM150
General Chemistry I
4 credit(s) 4 period(s) lecture
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 (MAT151 or higher level mathematics course). Completion of all prerequisites within the last two years is recommended. **Course Note:** Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.

CHM151 and 151LL **SUN:** CHM 1151
General Chemistry I and Lab
4 credit(s) 6 period(s) lecture and lab **LEC:** 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 (MAT151 or higher level mathematics course). Completion of all prerequisites within the last two years is recommended. **Course Note:** Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA. **LAB:** Laboratory experience in support of CHM150 or CHM151.

**Prerequisites or Corequisites:** A grade of "C" or better in CHM150 or CHM151. **Course Notes:** Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.

CHM152 and 152LL **SUN:** CHM 1152
General Chemistry II and Lab
4 credit(s) 6 period(s) lecture and lab **LEC:** 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. Completion of prerequisites within the last two years recommended. **Course Notes:** Completion of CHM152LL required to meet the Natural Science requirement. Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA. **LAB:** Laboratory experience in support of CHM152. **Prerequisites or Corequisites:** A grade of "C" or better in CHM152. **Course Notes:** Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA.

CHM220 and 230LL **SUN:** CHM 2230
Fundamental Organic Chemistry and Lab
4 credit(s) 6 period(s) lecture and lab **LEC:** Chemistry of representative groups of organic compounds, emphasizing biological applications. **Prerequisites:** (CHM130 and CHM130LL), or (CHM150 or CHM151 and CHM151LL). Completion of (CHM130 and CHM130LL) or (CHM150 or CHM151 and CHM151LL) within the last two years recommended. **Course Note:** CHM230 course content is designed to meet the needs of students in such areas as agriculture, home economics, nursing, pre-physician assistant, and physical education, among others. **LAB:** Laboratory experience in support of CHM230. **Prerequisites or Corequisites:** CHM230.

CHM235 and 235LL **SUN:** CHM 2235
General Organic Chemistry I and Lab
4 credit(s) 7 period(s) lecture and lab **(Fall only)** **LEC:** 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). Completion of prerequisites within the last two years recommended. **LAB:** Laboratory experience in support of CHM235. **Prerequisites or Corequisites:** A grade of "C" or better in CHM235. Completion of prerequisites within the last two years recommended.

CHM236 and 236LL **SUN:** CHM 2236
General Organic Chemistry II and Lab
5 credit(s) 9 period(s) lecture and lab **(Spring only)** **LEC:** 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. Completion of prerequisites within the last two years recommended. **LAB:** Laboratory experience in support of CHM236. **Prerequisites or Corequisites:** A grade of "C" or better in CHM236. Completion of prerequisites within the last two years recommended.

CHM238 and 238LL
General Organic Chemistry IIIB and Lab
5 credit(s) 9 period(s) lecture and lab **(Spring only)** **LEC:** Alternate to CHM236. Study of chemistry of carbon-containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized. Recommended for chemistry, chemical engineering and mining engineering majors. **Prerequisites:** CHM235 and CHM235LL or equivalent. **LAB:** Laboratory experience in support of CHM238. **Prerequisites or Corequisites:** CHM238.

CHM298AA-AC
Special Projects
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of 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.

CIS – Computer Information Systems

**CIS105 **SUN **CIS 1120**
Survey of Computer Information Systems
3 credit(s) 4 period(s) lecture + lab
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.

**CIS113DE **
Microsoft Word: Word Processing
3 credit(s) 4 period(s) lecture
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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS105AE</td>
<td>Excel: Level I</td>
<td>None</td>
</tr>
<tr>
<td>CIS105DE</td>
<td>Excel Spreadsheet 3</td>
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<td>Windows Operating System: Level I</td>
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<td>CIS112DA</td>
<td>Internet/Web Development Level I</td>
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<td>CIS114AE</td>
<td>Adobe Flash Level I: Digital Animation 3</td>
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<td>CIS116AC</td>
<td>Visual C++: Level I</td>
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<tr>
<td>CIS117DM</td>
<td>Microsoft Access: Database Management 3</td>
<td>None</td>
</tr>
<tr>
<td>CIS122AE</td>
<td>Windows Operating System: Level II</td>
<td>None</td>
</tr>
<tr>
<td>CIS123DA</td>
<td>Programming Fundamentals 3</td>
<td>None</td>
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<tr>
<td>CIS124AB</td>
<td>PowerPoint: Level I</td>
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<tr>
<td>CIS126AA</td>
<td>UNIX Operating System: Level I</td>
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<td>CIS126DA</td>
<td>UNIX Operating System 3</td>
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<tr>
<td>CIS126LC</td>
<td>Linux Operating System 3</td>
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</tr>
<tr>
<td>CIS127AB</td>
<td>Visual Basic Programming I 3</td>
<td>None</td>
</tr>
<tr>
<td>CIS132AL</td>
<td>Web Scripting/Programming 3</td>
<td>None</td>
</tr>
</tbody>
</table>

**Course Descriptions**

**CIS105AE**

Excel: Level I

1 credit(s) 2 period(s) lecture + lab

Computer spreadsheet skills for solving business problems using Excel, including calculations, forecasting, and projections. **Prerequisites:** None.

**CIS112AE**

Adobe Flash Level I: Digital Animation 3 credit(s) 4 period(s) lecture + lab

Focuses on entry-level skill expectations for digital animation using Adobe Flash. Covers basic animation techniques used in the creation, manipulation, and editing of Flash animation graphics. Helps students prepare for the Adobe certifications related to Adobe Flash. **Prerequisites:** None.

**CIS117DM**

Microsoft Access: Database Management 3 credit(s) 5 period(s) lecture + lab

Introduction to the basic elements, exploration of additional components and common database management problems related to the Microsoft Access program. **Prerequisites:** None. Course Note: Combines the contents of CIS117AM and CIS117BM and CIS117CM.

**CIS122AE**

Windows Operating System: Level II 1 credit(s) 2 period(s) lecture + lab

Additional capabilities of the Windows program that configure devices and customize the presentation of the operating system. **Prerequisites:** See instructor.

**CIS126AA**

UNIX Operating System: Level I 1 credit(s) 2 period(s) lecture + lab

Use of the UNIX operating system: system components, built-in commands, files and directories, editors, and UNIX shell and command lines. **Prerequisites:** None.

**CIS126DA**

UNIX Operating System 3 credit(s) 4 period(s) lecture + lab

Use of a UNIX operating system including system components, built-in commands, files, and directories, editors, and UNIX shell and command lines. **Prerequisites:** None.

**CIS126LC**

Linux Operating System 3 credit(s) 4 period(s) lecture + lab

Introduction to the Linux Operating system. Develop knowledge and skills required to install, configure and troubleshoot a Linux-based workstation including basic network functions. **Prerequisites:** None.

**CIS132AL**

Web Scripting/Programming 3 credit(s) 4 period(s) lecture + lab

Overview of the Internet and its resources. Hands-on experience with various Internet communication tools. **Prerequisites:** None.
CIS166AA
Introduction to JavaScripting
3 credit(s) 4 period(s) lecture + lab
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: CIS133CA or CIS133DA or permission of instructor.

CIS166AB
Web Scripting with Perl/CGI
3 credit(s) 4 period(s) lecture + lab
Introduction to basic server-side programming using the common gateway interface (CGI) with the Perl programming language. Covers basic form development programming logic, Structured Query Language (SQL) and the Perl Database Interface (DBI) and CGI modules. Prerequisites: CIS133CA or CIS133DA or permission of instructor.

CIS166AC
Web Scripting with Active Server Pages (ASP).NET
3 credit(s) 4 period(s) lecture + lab
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: (CIS133CA or CIS133DA) and (CIS159 or CIS162AD) or permission of instructor.

CIS166AE
Web Scripting with PHP: Hypertext Preprocessor (PHP)
3 credit(s) 4 period(s) lecture + lab
Introduction to web scripting with PHP (PHP: Hypertext Preprocessor). Web application development using Hypertext Markup Language (HTML), PHP, programming logic, and Structured Query Language (SQL). Prerequisites: CIS133CA or CIS133DA or permission of instructor.

CIS190
Introduction to Local Area Networks
3 credit(s) 4 period(s) lecture + lab
Overview of local area networks. Emphasis on the elements of a local area network, current issues and products, and use of a local area network. Include terminology, hardware and software components, connectivity, resource monitoring and sharing, electronic mail and messaging, and security issues. Prerequisites: CIS105, or permission of instructor.

CIS224
Project Management Microsoft Project for Windows
3 credit(s) 4 period(s) lecture + lab
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.

CIS225
Business Systems Analysis and Design
3 credit(s) 4 period(s) lecture + lab
Investigation, analysis, design, implementation and evaluation of business computer systems. Prerequisites: Any programming language or permission of Instructor.

CIS225AB
Object-Oriented Analysis and Design
3 credit(s) 4 period(s) lecture + lab
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 program language, or permission of Instructor.

CIS233DA
Internet/Web Development Level II
3 credit(s) 4 period(s) lecture + lab
Design and create pages on the World Wide Web with a variety of markup languages, programming languages, scripts, and multimedia. Hands-on experience authoring and preparing sophisticated web documents. Exploration of best practices/issues for web design and publishing and careers in web development and e-commerce. Prerequisites: CIS133CA or CIS133DA or permission of instructor.

CIS234
XML Application Development
3 credit(s) 4 period(s) lecture + lab
The use of Extensible Markup Language (XML) to make documents smarter, simplify Web automation, and to communicate between databases, both within and between corporations. Includes techniques for XML generation, data extraction and sharing, and transformation and managing of XML files. Prerequisites: CIS133CA or CIS133DA or permission of the Instructor.

CIS235
e-Commerce
3 credit(s) 4 period(s) lecture + lab
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: CIS133CA, or CIS133DA, or permission of instructor.

CIS236
Web-Based Teaching and Learning I
2 credit(s) 3 period(s) lecture + lab
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: CIS133CA or CIS133DA, or permission of instructor.

CIS237
Web-Based Teaching and Learning II
2 credit(s) 3 period(s) lecture + lab
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: CIS236, or permission of instructor.

CIS238DL
Linux System Administration
3 credit(s) 4 period(s) lecture + lab
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 resource control. Preparation for industry certifications such as the SAIR/ GNU LCP and LCA certificates, CompTIA's Linux+, RHCT, RHCE, and LPIC. Prerequisites: CIS126AL, CIS126BL, and CIS126CL; or CIS126DL or Permission of Instructor.

For additional information on PC program competencies, visit: http://www.maricopa.edu/academic/ccta/

For additional information on MCCCCD course competencies, visit: http://www.maricopa.edu/academic/ccta/
CIS250
Management of Information Systems
3 credit(s) 4 period(s) lecture
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: CIS105.

CIS259
Visual Basic Programming II
3 credit(s) 4 period(s) lecture + lab
Use of the Visual Basic programming language to identify and solve advanced problems using suitable examples from business or other disciplines. Prerequisites: Prerequisites: CIS150 or permission of instructor.

CIS262AD
C# Level II
3 credit(s) 4 period(s) lecture + lab
Advanced C# programming with emphasis on data structures, dynamic memory allocation, object-oriented programming, user interfaces, and database processing. Overview of web applications, network programming, and reporting tools. Prerequisites: CIS162AD, or permission of instructor.

CIS290AA, AB, and AC
Computer Information Systems Internship
1, 2, and 3 credit(s) 6, 12, and 18 period(s) lab
Work experience in business or industry. Prerequisites: Permission of instructor.

CIS298AA, AB, and AC
Special Projects
1, 2, and 3 credit(s) 1, 2, and 3 period(s)
lab
Organized and tailored around the interests and needs of 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.

COM – Communication

COM100 ENG
COM 1100
Introduction to Human Communication
3 credit(s) 3 period(s) lecture
Theory and practice of communication skills in public, small group, and interpersonal settings. Includes study of the speech communication process. Prerequisites: None.

COM110 SUN
COM 1110
Interpersonal Communication
3 credit(s) 3 period(s) lecture
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.

COM225
Public Speaking
3 credit(s) 3 period(s) lecture
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: ENG101 or ENG107, or equivalent.

COM230
Small Group Communication
3 credit(s) 3 period(s) lecture
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.

COM259
Communication in Business and Professions
3 credit(s) 3 period(s) lecture
Interpersonal, group, and public communication in business and professional organizations. Emphasis on oral communication. Prerequisites: ENG101 or ENG107 or equivalent.

COM263
Elements of Intercultural Communication
3 credit(s) 3 period(s) lecture
Basic concepts, principles, and skills for improving oral communication between persons from different minority, racial, ethnic, and cultural backgrounds. Prerequisites: None.

COM298AA-AC
Special Projects
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of 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.

CPD – Counseling and Personal Development

CPD100
Orientation for Student Development
1 credit(s) 1 period(s) lecture
Offered to orient new students to college life. Emphasis on assessing students’ academic potential, facilitating curricular advisement and registration procedures, learning academic survival skills, and becoming aware of all services available to students on campus and in the community. Prerequisites: None.

CPD101
Personal Development
2 credit(s) 2 period(s) lecture
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.

CPD102 Counseling Topics
Counseling courses offered as special topics for students. Emphasis on skill development in areas of personal concern.

CPD102AA
Assertiveness Training
2 credit(s) 2 period(s) lecture
Designed to help students differentiate assertive, non-assertive and aggressive behavior, overcome 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. Prerequisites: None.

CPD102AB
Career Exploration
2 credit(s) 2 period(s) lecture
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. Course Notes: CPD102AB may be repeated for a total of six (6) credit hours.
**CPD102AD**  
Eliminating Self-Defeating Behavior  
*2 credit(s) 2 period(s) lecture*  
Designed to help students change behaviors that work against their potential, i.e., inferior feelings, shyness, nervousness, stage fright, underachievement, etc. Focus on identifying undesirable thoughts, emotions and behaviors, for the purpose of developing alternative, and more desirable thoughts, emotions, and behaviors. **Prerequisites:** None.  

**CPD102AH**  
Stress Management  
*2 credit(s) 2 period(s) lecture*  
Reviews the sources of stress, the physiological effects and the psychological impact of stress on the individual. Provides strategies to reduce stress. **Prerequisites:** None.  

**CPD102AN**  
Anger Management  
*2 credit(s) 2 period(s) lecture*  
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.  

**CPD102AR**  
Relaxation Training  
*1 credit(s) 1 period(s) lecture*  
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.  

**CPD102AS**  
Conflict Resolution  
*2 credit(s) 2 period(s) lecture*  
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.  

**CPD102AT**  
Building Self-Esteem  
*2 credit(s) 2 period(s) lecture*  
Practice in specific methods for building and keeping self-esteem. Personal assessment of attitudes, values, support systems, and goals. **Prerequisites:** None.  

**CPD103**  
Counseling Groups  
*Counseling courses offered to meet the needs of special groups of students. Emphasis on self-assessment to increase students’ confidence and potential.*

**CPD103BA**  
Women in Transition  
*2 credit(s) 2 period(s) lecture*  
Designed to assist and support women who are experiencing life transitions. Emphasis on assessing self-potential, increasing self-confidence, managing life change, and exploring educational/career/life options in terms of the realities of roles for women today. **Prerequisites:** None.  

**CPD103BC**  
African American Cultural Pride and Awareness  
*2 credit(s) 2 period(s) lecture*  
Develop an awareness of cultural roots, history, and traditions with emphasis on the shaping of personal identity, social, career, and educational decisions. **Prerequisites:** None.  

**CPD103BD**  
Latino/Hispanic American Pride and Awareness  
*2 credit(s) 2 period(s) lecture*  
Develop an awareness of cultural roots, history, and traditions with emphasis on the shaping of personal identity, social, career, and educational decisions. **Prerequisites:** None.  

**CPD103BE**  
Native American Cultural Pride and Awareness  
*2 credit(s) 2 period(s) lecture*  
Develop an awareness of cultural roots, history, and traditions with emphasis on the shaping of personal identity, social, career, and educational decisions. **Prerequisites:** None.  

**CPD104**  
Career and Personal Development  
*3 credit(s) 3 period(s) lecture*  
An overview of the process of career/life planning through self-awareness and understanding. Focus on specific skill development such as dealing with change, decision making, goal setting and understanding lifestyles. Provides opportunity to evaluate interests, skills and values. Emphasis on the development of a comprehensive career search process which includes current occupational information, specific tools for researching the job market and acquiring employment. **Prerequisites:** None.  

**CPD108**  
Personal Money Management for College Students  
*1 credit(s) 1 period(s) lecture*  
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.  

**CPD/AAA115**  
Creating College Success  
*1 credit(s) 1 period(s) lecture*  
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.  

**CPD/GBS126**  
Writing Resumes  
*1 credit(s) 1.7 period(s) lecture + lab*  
Planning, organizing, and writing a professional resume. Focus on presentation skills including format and language. **Prerequisites:** None.  

**CPD/AAA150**  
Strategies for College Success  
*3 credit(s) 3 period(s) lecture*  
Focus on increasing student success through college orientation and personal growth, study skills development, and educational and career planning. **Prerequisites:** None.  

**CPD160**  
Introduction to Multiculturalism  
*3 credit(s) 3 period(s) lecture*  
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:** ENG101, or ENG107, or permission of Instructor.  

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**CRE – Critical Reading**  
*Please Note: For additional Reading courses, see RDG, starting on page 284.*  

**CRE101**  
College Critical Reading  
*3 credit(s) 3 period(s) lecture*  
Apply critical inquiry skills to varied and challenging reading materials. Includes analysis, synthesis, and evaluation through at least two substantial writing and/or speaking tasks. **Prerequisites:** (A grade of “C” or better in ENG101 or ENG107) and (appropriate reading placement test score or a grade of “C” or better in RDG091 or RDG095 or RDG100 or RDG111 or RDG112 or RDG113 or permission of Instructor).
### CRW – Creative Writing

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Hours</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>CRW120</td>
<td>Introduction to Writing</td>
<td>3</td>
<td></td>
<td>CRW150 or permission of Instructor</td>
</tr>
<tr>
<td>CRW170</td>
<td>Introduction to Writing Fiction</td>
<td>3</td>
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<td>CRW150 or permission of Instructor</td>
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<tr>
<td>CRW180</td>
<td>Introduction to Writing Nonfiction</td>
<td>3</td>
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<td>CRW150 recommended but not required.</td>
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<tr>
<td>CRW190</td>
<td>Introduction to Screenwriting</td>
<td>3</td>
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<td>CRW150 recommended but not required.</td>
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<td>CRW200</td>
<td>Readings for Writers</td>
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<td>CRW220</td>
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<td>CRW260</td>
<td>Intermediate Poetry Writing</td>
<td>3</td>
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<td>CRW160 or permission of Instructor</td>
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<tr>
<td>CRW270</td>
<td>Intermediate Fiction Writing</td>
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<td>CRW170 or permission of Instructor</td>
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<tr>
<td>CRW271</td>
<td>Topics in Writing: Fiction</td>
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<td>CRW150 or permission of instructor</td>
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<tr>
<td>CRW272</td>
<td>Planning and Structuring the Novel</td>
<td>3</td>
<td></td>
<td>CRW150 or permission of instructor</td>
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</table>
| CRW272  | Writing the Novel  
| 3 credit(s) 3 period(s) lecture  
| 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:** CRW272 or permission of instructor. |
| CRW274  | Revising the Novel  
| 3 credit(s) 3 period(s) lecture  
| Studio course workshop format. Requires a complete novel finished, in manuscript, ready for revision and polishing.  
| **Prerequisites:** CRW272 or permission of instructor. |
| CRW281  | Topics in Writing: Non-Fiction  
| 3 credit(s) 3 period(s) lecture  
| Analysis, writing, and revision of genre or element within non-fiction.  
| **Prerequisites:** CRW150 or permission of instructor. |
| CRW290  | Intermediate Screenwriting  
| 3 credit(s) 3 period(s) lecture  
| Drafting and revision of original screenplay; overview of marketing a screenplay.  
| **Prerequisites:** CRW190 or permission of instructor. |
| CRW291  | Topics in Writing: Plays  
| 3 credit(s) 3 period(s) lecture  
| Analysis, writing, and revision of genre or element within plays and/or motion picture screenplays.  
| **Prerequisites:** CRW150 or permission of instructor. |

### CUL – Culinary Arts

| CUL105  | Principles and Skills for Professional Cooking  
| 3 credit(s) 5 period(s) lecture + lab  
| 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, entrées and eggs. Emphasis on practical experience in a commercial kitchen.  
| **Prerequisites:** None. |

| CUL107  | Principles and Techniques of Garde Manger  
| 3 credit(s) 5 period(s) lecture + lab  
| **(Not offered every semester)**  
| Prepares students for employment in garde manger pantry positions in restaurants and resorts. Includes costing out and ordering food products; food and safety factors; preparing and garnishing pantry product. Emphasis on classical food presentation.  
| **Prerequisites:** A grade of "C" or better in CUL105. |

| CUL109  | Menu Planning Development  
| 2 credit(s) 2 period(s) lecture  
| **(Not offered every semester)**  
| Principles and techniques of menu planning for food service operations where food is served in quantity; includes applications for health care institutions, commercial kitchens, school cafeterias, and industrial facilities.  
| **Prerequisites:** None. |

| CUL111  | Purchasing for Food Service Systems  
| 3 credit(s) 3 period(s) lecture  
| **(Not offered every semester)**  
| Food purchasing for institutions: cost factors, quality standards, purchasing practices and controls.  
| **Prerequisites:** None. |

| CUL112AA  | Customer Service Practicum  
| 1 credit(s) 4 period(s) lecture + lab  
| Professional food and beverage experience in a commercial food service operation. Focuses on food server, host/hostess cashier, busperson. Includes beverage preparation, application of sanitation and safety concepts. Stresses professionalism in service, demeanor, and appearance.  
| **Prerequisites:** FON104 and Permission of Department or Division.  
| **Course Notes:** CUL123AA may be repeated for a total of four (4) credits. |

| CUL117  | Commercial Baking: Classical Desserts  
| 3 credit(s) 5 period(s) lecture + lab  
| **(Not offered every semester)**  
| 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. |

| CUL119  | Baking Theory and Retail Operations  
| 3 credit(s) 3 period(s) lecture  
| Baking principles to include detailed study of ingredients, heat transfer, and recipe conversions. Basic business operations for a retail bakery including bakery product line and floor plan design.  
| **Prerequisites:** None. |

| CUL137  | Specialty Breads and Breakfast Pastry  
| 3 credit(s) 5 period(s) lecture + lab  
| 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, brioches, and other international classics. Completion of edible centerpieces made out of various styles of bread.  
| **Prerequisites:** CUL113 or permission of Program Director. |

| CUL145  | Banquet Food and Beverage Service Externship  
| 1 credit(s) 5 period(s) lab  
| **(Not offered every semester)**  
| 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:** CUL121, CUL123, and FON104. |
CUL201
International Cuisine
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
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.

CUL203
American Regional Cuisine
3 credit(s) 5 period(s) lecture + lab
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, Cajun/Creole, New England, Mid-West, and Pacific Coast. Prerequisites: A grade of "C" or better in CUL105.

CUL205
French Cuisine
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
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.

CUL207
Pacific Rim Cuisine
3 credit(s) 5 period(s) lecture + lab
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.

CUL209
Italian Cuisine
3 credit(s) 5 period(s) lecture + lab
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.

CUL211AA
Professional Cooking Practicum
1 credit(s) 3 period(s) lecture + lab
Preparation of hot and cold foods in a commercial food service operation; experience in volume food production preparing salads, soups, stocks, sauces, entrees, starchy, and vegetables; designed to develop knowledge and skills necessary to cook in a variety of commercial kitchens. Prerequisites: CUL105, FON104, and permission of Department or Division. Course Notes: CUL211AA may be repeated for a total of seven (7) credits.

CUL211BA
Professional Cooking Practicum
4 credit(s) 11 period(s) lecture + lab
Preparation of hot and cold foods in a commercial food service operation; experience in volume food production preparing salads, soups, stocks, sauces, entrees, starchy, and vegetables; designed to develop knowledge and skills necessary to cook in a variety of commercial kitchens. Prerequisites: (CUL105 and FON104) or permission of Department or Division. Corequisites: CUL211BB.

CUL211BB
Professional Cooking Practicum
3 credit(s) 6 period(s) lecture + lab
Preparation of hot and cold foods in a commercial food service operation; experience in volume food production preparing salads, soups, stocks, sauces, entrees, starchy, and vegetables; designed to develop knowledge and skills necessary to cook in a variety of commercial kitchens. Prerequisites: (CUL105 and FON104) or permission of Department or Division. Corequisites: CUL211BA.

CUL215
Advanced Pastry Arts
3 credit(s) 5 period(s) lecture + lab
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 gumpaste, pastillage, chocolate, or marzipan. Includes desserts for special diets and spa desserts. Prerequisites: CUL113 and CUL127, or permission of Program Director. Course Note: CUL215 may be repeated for a total of six (6) credits.

CUL217
Commercial Wedding Cake Production
3 credit(s) 5 period(s) lecture + lab
Basic and advanced execution for special occasion, wedding, and groom’s cakes to include initial design work, baking, icing, and advanced finishing techniques to include the use of fondant and gum paste. Enhancement of cakes to include basic sugar, pastillage, and chocolate decoration. Prerequisites: CUL113 or permission of Program Director.

CUL219
Professional Pastry Techniques
3 credit(s) 5 period(s) lecture + lab
Advanced production techniques for plated desserts, frozen desserts, modern and classical gateaux, petits fours, and chocolates. Prerequisites: CUL113 and CUL127, or permission of Program Director.

CUL223
Food Service Management
3 credit(s) 3 period(s) lecture
(Not offered every semester)
Administrative procedures and personnel relationships: Management of materials costs, record keeping and legal aspects of food and beverage service operations. Prerequisites: None.

CUL231AA
Culinary Studies Internship
1 credit(s) 5 period(s) lab
Work experience preparing hot and cold foods in a commercial food service operation, experience in volume food production preparing salads, soups, stocks, sauces, entrees, starchy, and vegetables. Five (5) hours of work weekly. Supervision and evaluation by an internship coordinator. Prerequisites: CUL105, FON104, and permission of Department or Division. Course Notes: CUL231AA may be repeated for a total of seven (7) credits.
DAE224  
General Clinical Practice  
1 credit(s) 5 period(s) lab  
Placement of students in general practice dental facilities for supervised practical experience. **Prerequisites:** DAE112 and DAE156, or Permission of Program Director. **Corequisites:** DAE140 or permission of Program Director.

DAE225  
Pediatric Clinical Practice  
1 credit(s) 5 period(s) lab  
Placement of students in pediatric practice dental facilities for supervised practical experience. **Prerequisites:** DAE112 and DAE156, or Permission of Program Director. **Corequisites:** DAE140 or permission of Program Director.

DAE226  
Periodontal Clinical Practice  
1 credit(s) 5 period(s) lab  
Placement of students in periodontal practice dental facilities for supervised practical experience. **Prerequisites:** DAE112 and DAE156, or Permission of Program Director. **Corequisites:** DAE140 or permission of Program Director.

DAE227  
Orthodontic Clinical Practice  
1 credit(s) 5 period(s) lab  
Placement of students in orthodontic practice dental facilities for supervised practical experience. **Prerequisites:** DAE112 and DAE156, or Permission of Program Director. **Corequisites:** DAE140 or permission of Program Director.

DAE228  
Oral and Maxillofacial Surgery Clinical Practice  
1 credit(s) 5 period(s) lab  
Placement of students in oral and maxillofacial surgical facilities for supervised practical experience. **Prerequisites:** DAE112 and DAE156, or Permission of Program Director. **Corequisites:** DAE140 or permission of Program Director.

DAE256  
Dental Assisting IV  
1.5 credit(s) 3 period(s) lecture and lab  
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:** DAE212 or permission of Program Director.

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**Course Descriptions**

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**CUL231AB**  
Culinary Studies Internship  
2 credit(s) 10 period(s) lab  
Work experience preparing hot and cold foods in a commercial food service operation, experience in volume food production preparing salads, soups, stocks, sauces, entrées, starches, and vegetables. Ten (10) hours of work weekly. Supervision and evaluation by an internship coordinator. **Prerequisites:** CUL105, FON104, and permission of Department or Division. **Course Notes:** CUL231AB may be repeated for a total of six (6) credits.

**CUL231AC**  
Culinary Studies Internship  
3 credit(s) 15 period(s) lab  
Work experience preparing hot and cold foods in a commercial food service operation, experience in volume food production preparing salads, soups, stocks, sauces, entrées, starches, and vegetables. Fifteen (15) hours of work weekly. Supervision and evaluation by an internship coordinator. **Prerequisites:** CUL105, FON104, and permission of Department or Division. **Course Notes:** CUL231AC may be repeated for a total of six (6) credits.

**DAE124**  
Dental Radiography  
2 credit(s) 2 period(s) lecture  
Physics of radiography, theory of radiation production, exposure techniques, radiation protection, digital image production, film processing, mounting, and interpretation of radiographs. **Prerequisites:** DAE156 or permission of Program Director. **Corequisites:** DAE131 or permission of Program Director.

**DAE131**  
Dental Radiography Laboratory  
2 credit(s) 6 period(s) lab  
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:** DAE156 or permission of Program Director. **Corequisites:** DAE124 or permission of Program Director.

**DAE140**  
Dental Issues Seminar  
1 credit(s) 1 period(s) lecture  
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:** DAE156 or permission of Program Director. **Corequisites:** (DAE224, DAE225, DAE226, DAE227, and DAE228) or permission of Program Director.

**DAE156**  
Dental Assisting II  
7 credit(s) 16 period(s) lecture and lab  
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:** DAE112 or permission of Program Director.

**DAE212**  
Dental Assisting III  
2 credit(s) 4 period(s) lecture and lab  
Advanced dental assisting skills, with an emphasis in assisting for dental specialty procedures, including pediatrics, endodontics, periodontics, orthodontics, prosthetics, 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:** DAE156 or permission of Program Director.

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**Course Descriptions**

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**CWE – Career Work Experience**

**CWE198AA**  
Career/Work Experience  
1 credit(s) 1 period(s) lecture and lab  
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.

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**DAE – Dental Assisting Education**

**DAE112**  
Dental Assisting I  
7 credit(s) 19 period(s) lecture and lab  
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. **Prerequisites:** Acceptance into the Dental Assisting Program or permission of Program Director.

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**DAE224**  
General Clinical Practice  
1 credit(s) 5 period(s) lab  
Placement of students in general practice dental facilities for supervised practical experience. **Prerequisites:** DAE112 and DAE156, or Permission of Program Director. **Corequisites:** DAE140 or permission of Program Director.

**DAE225**  
Pediatric Clinical Practice  
1 credit(s) 5 period(s) lab  
Placement of students in pediatric practice dental facilities for supervised practical experience. **Prerequisites:** DAE112 and DAE156, or Permission of Program Director. **Corequisites:** DAE140 or permission of Program Director.

**DAE226**  
Periodontal Clinical Practice  
1 credit(s) 5 period(s) lab  
Placement of students in periodontal practice dental facilities for supervised practical experience. **Prerequisites:** DAE112 and DAE156, or Permission of Program Director. **Corequisites:** DAE140 or permission of Program Director.

**DAE227**  
Orthodontic Clinical Practice  
1 credit(s) 5 period(s) lab  
Placement of students in orthodontic practice dental facilities for supervised practical experience. **Prerequisites:** DAE112 and DAE156, or Permission of Program Director. **Corequisites:** DAE140 or permission of Program Director.

**DAE228**  
Oral and Maxillofacial Surgery Clinical Practice  
1 credit(s) 5 period(s) lab  
Placement of students in oral and maxillofacial surgical facilities for supervised practical experience. **Prerequisites:** DAE112 and DAE156, or Permission of Program Director. **Corequisites:** DAE140 or permission of Program Director.

**DAE256**  
Dental Assisting IV  
1.5 credit(s) 3 period(s) lecture and lab  
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:** DAE212 or permission of Program Director.
DHE298AA-AC  
Special Projects  
1-3 credit(s) 1-3 period(s) lab  
Organized and tailored around the interests and needs of 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.

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**DHE – Dental Hygiene Education**

**DHE110**  
Pharmacology  
3 credit(s) 3 period(s) lecture  
Study of the principles of pharmacology and drugs affecting dental treatment. Topics include drug interactions, oral manifestations, drugs used in dentistry and complementary medicine. **Prerequisites:** Admission to the Dental Hygiene Program or permission of instructor.

**DHE112**  
Oral Pathology  
3 credit(s) 3 period(s) lecture  
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. Multi-media resources are used extensively for identification of oral lesions. **Prerequisites:** Admission to the Dental Hygiene Program or permission of instructor.

**DHE115**  
Emergency Medicine  
2 credit(s) 2 period(s) lecture  
Introduction to recording and interpreting medical history. Additional 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. **Prerequisites:** Admission to the Dental Hygiene Program.

**DHE117**  
Dental Radiography  
2 credit(s) 2 period(s) lecture  
Physics of radiography, theory of radiation production, exposure techniques, radiation protection, film processing, mounting, and interpretation of radiographs. Course activities include multi-media resources. **Prerequisites:** Admission to the Dental Hygiene Program or permission of Instructor.

**DHE119**  
Head and Neck Anatomy  
3 credit(s) 3 period(s) lecture  
Study of the structures of the head and neck relevant to dental hygiene. Topics include: osteology, musculature, blood supply, glandular tissue, cranial nerves and routes of infection. Course activities include use of skulls, models and multi-media resources. **Prerequisites:** Admission to the Dental Hygiene Program or permission of instructor.

**DHE120**  
Pre-Clinical Dental Hygiene  
6 credit(s) 12 period(s) lecture + lab  
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.

**DHE121**  
Dental Anatomy, Embryology and Histology  
2 credit(s) 3 period(s) lecture + lab  
Includes the histology and embryology of oral tissues; developmental disturbances of the face, oral cavity, and related structures; tooth composition and morphology; eruption patterns and occlusal evaluation. Use of skulls, models and multi-media resources also covered. **Prerequisites:** Admission to the Dental Hygiene Program.

**DHE125**  
Dental Radiography Laboratory  
1 credit(s) 3 period(s) lab  
Radiation safety and infection control procedures for operator and patient. Film placement, exposure, development, mounting and evaluation of dental radiographs. Operation and maintenance of X-ray and processing equipment. Interpretation of radiographic findings. **Prerequisites or Corequisites:** (DHE117 and admission to the Dental Hygiene Program) or permission of Instructor.

**DHE127**  
Prevention of Dental Disease  
3 credit(s) 3 period(s) lecture  
Introduction of preventive concepts to help clients achieve control of oral diseases and injury. Topics include etiologic agents, caries process, nutrition, fluorides, sealants and patient/client motivation techniques. Multi-media resources used extensively. **Prerequisites:** Admission to the Dental Hygiene Program or permission of Instructor.

**DHE132**  
Dental Hygiene Theory I  
3 credit(s) 5 period(s) lecture + lab  
Continued 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:** DHE120 and admission to the Dental Hygiene Program or permission of instructor. **Corequisites:** DHE133.

**DHE133**  
Dental Hygiene Clinic I  
3 credit(s) 9 period(s) lab  
Application of the dental hygiene process of care with emphasis on assessment, planning, and implementation. Introduction to evaluation of dental hygiene therapy. **Prerequisites:** DHE120 and admission to the Dental Hygiene Program. **Corequisites:** DHE132 and current CPR card.

**DHE201**  
Dental Materials  
2 credit(s) 2 period(s) lecture  
Composition, properties and criteria for use of dental materials. Principles of mixing techniques of restorative, preventive, and laboratory dental materials. **Prerequisites:** Admission to the Dental Hygiene Program or permission of Instructor. **Corequisites:** DHE202.

**DHE202**  
Dental Materials Laboratory  
1 credit(s) 3 period(s) lab  
Manipulate permanent and temporary restorative materials, impression material, dental waxes, cements, periodontal dressings, bases and liners. Fabricate mouth protectors, study models, and custom impression trays. Laboratory proficiency in margination of permanent restorative materials. **Prerequisites:** Admission to the Dental Hygiene Program or permission of Instructor. **Corequisites:** DHE201.

**DHE212**  
Dental Hygiene Theory II  
2 credit(s) 2 period(s) lecture  
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:** DHE132 and DHE133 and admission to the Dental Hygiene Program. **Corequisites:** DHE213.
DHE213 Dental Hygiene Clinic II
5 credit(s) 15 period(s) lab
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:** DHE132 and DHE133 and admission to the Dental Hygiene Program. **Corequisites:** DHE212.

DHE219 Practice Management
2 credit(s) 2 period(s) lecture
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.

DHE225 Periodontics
3 credit(s) 3 period(s) lecture
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.

DHE227 Dental Anesthesia
2 credit(s) 4 period(s) lecture and lab
A comprehensive lecture and laboratory course providing concepts and techniques for the administration of local anesthetic agents and nitrous oxide. Experience gained in medical history review, record keeping, patient management and hands on experience administering local anesthetics and nitrous oxide in a clinical setting. **Prerequisites:** DHE119 and current CPR certification.

DHE229 Community Oral Health
3 credit(s) 3 period(s) lecture
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.

DHE232 Dental Hygiene Theory III
2 credit(s) 3 period(s) lecture + lab
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:** (DHE212 and DHE213), and admission to the Dental Hygiene Program. **Corequisites:** DHE232.

DHE233 Dental Hygiene Clinic III
5 credit(s) 15 period(s) lab
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:** (DHE212 and DHE213), and admission to the Dental Hygiene Program. **Corequisites:** DHE232.

DHE298AA-AC Special Projects
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of 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.

DPR – Disaster Preparedness and Emergency Response

DPR/AJS/FSC139 Emergency Response to Terrorism
3 credit(s) 3 period(s) lecture
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.

DPR/AJS/FSC146 Disaster Recovery Operations
3 credit(s) 3 period(s) lecture
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.

DPR/AJS/FSC147 Emergency Preparedness
3 credit(s) 3 period(s) lecture
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.

ECE – Engineering Science

ECE102 EGR 1102 Engineering Analysis Tools and Techniques
2 credit(s) 4 period(s) lecture + lab
Learning culture of engineering, engineering use of computer tools, and computer modeling as applied to engineering analysis and design. **Prerequisites:** Two years of high school algebra or MAT122 or departmental approval. **Corequisites:** MAT151 or MAT182 or MAT187.

ECE103 EGR 1102 Engineering Problem Solving and Design
2 credit(s) 4 period(s) lecture + lab
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:** (ECE102 or ECE102AA) and (high school physics, or PHY111, or PHY111A).
ECE211  
Engineering Mechanics - Statics  
3 credit(s) 5 period(s) lecture and lab  
Mathematical treatment of the basic physical principles of statics. Methods of vector algebra and vector calculus.  
**Prerequisites:** ECE103, (MAT230 or MAT231), and (PHY115 or PHY121).  
**Corequisites:** MAT241.

ECE212  
Engineering Mechanics - Dynamics  
3 credit(s) 5 period(s) lecture and lab  
Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles.  
**Prerequisites:** ECE211 and MAT241.

ECE241  
Plane Surveying  
3 credit(s) 5 period(s) lecture + lab  
Theory and field work in construction and land surveys. Includes use of the level and transit, horizontal measurement by tape and computation, establishment of line and grade.  
**Prerequisites:** Knowledge of right triangle trigonometry.

ECH – Early Childhood Education

ECH/CFS176  
Child Development  
3 credit(s) 3 period(s) lecture  
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.

ECH182  
Enhancing Toddler Development  
1 credit(s) 1 period(s) lecture  
(Not offered every semester)  
Overview of the developmental needs of children from 15 through 30 months. Emphasis on the adult role in providing a safe, stimulating everyday environment where toddlers may explore, imitate and communicate with others.  
**Prerequisites:** None.

ECH236  
Learning Materials for Young Children  
1 credit(s) 1 period(s) lecture  
(Not offered every semester)  
Design aspects of traditional early childhood play materials examined for teaching/learning potential. Includes design, production, and field-testing of teacher-made devices.  
**Prerequisites:** None.

ECH270  
Observing Young Children  
1 credit(s) 1 period(s) lecture  
(Not offered every semester)  
Introduction to techniques of observing young children. Recording methods, interpretation and use of collected information including legal and ethical implications.  
**Prerequisites:** None.

ECH/CFS271  
Arranging the Environment  
1 credit(s) 1 period(s) lecture  
(Not offered every semester)  
Exploration of the influence of the environment on the behavior of young children. Indoor and outdoor spaces considered and analysis of environments practiced.  
**Prerequisites:** None.

ECH274  
Books and Verse For the Young Child  
1 credit(s) 1 period(s) lecture  
(Not offered every semester)  
Introduction to verse, storytelling, books and bookmaking for infants, toddlers, and preschoolers. Information as well as storybooks considered.  
**Prerequisites:** None.

ECH/CFS275  
Literacy Development and the Young Child  
1 credit(s) 1 period(s) lecture  
(Not offered every semester)  
Literacy from birth through the early childhood years. Focus on developmentally appropriate ways to encourage speaking, listening, writing, and reading in the home and classroom.  
**Prerequisites:** None.

ECH281  
Movement/Music for the Young Child  
1 credit(s) 1 period(s) lecture  
(Not offered every semester)  
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.

ECH/CFS287  
Professional Development in Early Childhood Education  
1 credit(s) 1 period(s) lecture  
(Not offered every semester)  
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.

ECH288  
Community Resources and Referral  
1 credit(s) 1 period(s) lecture  
(Not offered every semester)  
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.

ECN – Economics

ECN211  
ECN 211  
ECN 2201  
Microeconomic Principles  
3 credit(s) 3 period(s) lecture  
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.

ECN212  
ECN 212  
ECN 2202  
Microeconomic Principles  
3 credit(s) 3 period(s) lecture  
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.

ECN263  
The Economics of Natural Resources, Population and the Environment  
3 credit(s) 3 period(s) lecture  
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:** ECN100, or ECN211, or ECN212.

Course information is subject to change. Visit http://www.maricopa.edu/academic/ccta/ for most current information.
EDU – Education

**EDU220**
Introduction to Serving English Language Learners (ELL)
3 credit(s) 3 period(s) lecture
Rationale for and current educational and legal issues for serving English Language Learners (ELL). Comparison and evaluation of various types of language educational models including Structured English Immersion (SEI), English as a Second Language (ESL) and bilingual. Includes SEI, ESL, and bilingual strategies. **Prerequisites:** None. **Course Note:** Approved school-based practicum is required. EDU220 incorporates the 45-hour curricular framework for provisional SEI endorsement through the Arizona Department of Education.

**EDU221**
Introduction to Education
3 credit(s) 3 period(s) lecture
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. **Course Note:** Requires minimum of 30 hours of field experience in elementary or secondary classroom environment.

**EDU222**
Introduction to the Exceptional Learner
3 credit(s) 3 period(s) lecture
Overview of the exceptional learner, one who differs from the average or normal, with emphasis on factors relating to current practices, identification, characteristics, and educational adaptations. Issues related to mildly disabled, severely disabled, emotionally and behaviorally disordered, intellectually disabled, and gifted students. **Prerequisites:** None. **Course Notes:** EDU222 requires an approved field experience.

**EDU230**
Cultural Diversity in Education
3 credit(s) 3 period(s) lecture
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.

**EDU250**
Teaching and Learning in the Community College
3 credit(s) 3 period(s) lecture
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.

**EDU/ENH291**
Children’s Literature
3 credit(s) 3 period(s) lecture
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.

**EDU/HUM/STO292**
The Art of Storytelling
3 credit(s) 3 period(s) lecture
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.

**EDU298AA-AC**
Special Projects
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of 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.

**EED – Early Education**

**EED215**
Early Learning: Health, Safety, Nutrition and Fitness
3 credit(s) 3 period(s) lecture
Consideration of public health issues and safety procedures within early childhood settings, serving young children birth to age eight. Overview of nutritional needs and issues of physical fitness and well-being in young children. Includes field experiences. **Prerequisites:** None.

**EMT – Emergency Medical Technology**

**EMT101**
Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers
0.5 credit(s) 0.45 period(s) lecture + lab
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. **Course Notes:** EMT101 may be repeated for credit.

**EMT/FSC104**
Emergency Medical Technology
9 credit(s) 11.4 period(s) lecture + lab
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, and medical operations, IV monitoring, patient-assisted medication administration, automated external defibrillators (AEDs), and blood-glucose monitoring. **Prerequisites:** EMT101 or a current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer and (appropriate score on Reading placement test to demonstrate minimum tenth grade level reading or completion of an Associate’s degree or higher from an accredited institution). **Course Notes:** Students are required to complete additional hours in a competency-based clinical, vehicular, and/or scenario based experience. This may be completed through EMT104AB or program director-approved rotation. Students must meet National Registry of EMTs requirements for certification. Additional information available at nrermt.org

**EMT106**
Ambulance Operations
2 credit(s) 2 period(s) lecture + lab
Practical application of rules and regulations governing care and transport of patient. Inventory, methods of disinfection, and charge procedures covered. Practical and defensive techniques and maintenance of the ambulance demonstrated and practiced, according to the U.S. Department of Transport (DOT) National Highway Traffic Safety Administration (NHTSA). **Prerequisites:** EMT at any level of certification.
EMT116
Emergency Medical Communications (EMD)
1.5 credit(s) 1.8 period(s) lecture + lab
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, assessment, and deployment. Includes interactive computer lab and scheduled observation with assignment at a dispatch center.
Prerequisites or Corequisites: EMT101, or any current American Red Cross, or CPR for the Professional Rescuer, or American Heart Association Basic Life Support Health Care Provider validation.

EMT120
Spanish for Emergency-Care Providers
1 credit(s) 1 period(s) lecture
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.

EMT165
Pediatric Education for Prehospital Providers: Basic
2 credit(s) 2.87 period(s) lecture + lab
An interactive, scenario-based course designed for Basic EMTs 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: EMT104, or permission of instructor.

EMT200
Refresher Course for Certified EMTs
2 credit(s) 2.7 period(s) lecture + lab
Designed to meet National and Arizona Department of Health Services (A-DHS) recertification for EMTs. Enhances the knowledge base of the Emergency Medical Technician (EMT) and reinforces basic skills competencies.
Prerequisites: Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer or permission of instructor.

EMT200AA
EMT Certification Renewal Challenge
0.6 credit(s) 0.6 period(s) lecture
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 permission of instructor, MAT082 or higher, suggested but not required.

EMT201
Interactive Basic EMT Refresher
1 credit(s) 2.2 period(s) lecture + lab
Designed to contribute to Arizona Department of Health Services recertification requirements for Emergency Medical Technicians (EMT) according to the U.S. 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.
Prerequisites: Current Basic Life Support (BLS) Healthcare Provider/Professional Rescuer with basic skills in analysis and interpretation, pharmacologic agents, and other interventions used in Advanced Cardiovascular Life Support (ACLS).

EMT230
Advanced Concepts for EMTs
1.5 credit(s) 1.5 period(s) lecture + lab
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.
Prerequisites: Current EMT certification in the state of Arizona.

EMT235
Basic ECG Rhythm Analysis and Interpretation in the Emergency Setting
3 credit(s) 3 period(s) lecture
Designed to provide the allied healthcare provider with basic skills in analysis and interpretation of sinus, atrial, junctional and ventricular rhythms from electrocardiographs (ECG) in the emergency setting. Also addresses heart block and electronically paced rhythms.
Prerequisites: Current basic life support (BLS) healthcare provider/professional rescuer card and (EMT/FSC104 or permission of Instructor).

EMT236
Pharmacology in an Emergency Setting
3 credit(s) 3 period(s) lecture
Designed for the allied healthcare provider to integrate knowledge of pharmacology into the management plan in the emergency setting. Includes principles of pharmacology, pharmacokinetics, pharmacodynamics, physiology of pharmacology, calculating medication dosages, and medication profiles.
Prerequisites: Current basic life support (BLS) healthcare provider/professional rescuer card and (EMT/FSC104 or permission of Instructor), MAT082 or higher, suggested but not required.

EMT/FSC238
Vehicular Extrication and Patient Stabilization
2 credit(s) 2 period(s) lecture
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.
Prerequisites: Basic EMT certification, current enrollment in EMT Basic program, nurse with emergency department experience, or law enforcement personnel, or permission of instructor.

EMT240
Advanced Cardiac Life Support (ACLS)
2 credit(s) 4 period(s) lecture + lab
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 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 (ECG) rhythm interpretation, pharmacologic agents, and other interventions used in Advanced Cardiac Life Support (ACLS).
Prerequisites: Current Basic Life Support (BLS) healthcare provider/professional rescuer card and (EMT235 and EMT236, or permission of Instructor).
EMT241
Advanced Cardiac Life Support Refresher
0.5 credit(s) 1.5 period(s) lecture + lab
Designed to provide the healthcare professional with a review and updated information in emergency cardiovascular care and protocols for the patient in cardiac arrest, post-resuscitative patient management, and core cases in Advanced Cardiac Life Support (ACLS) according to current Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care 2004. Includes the ACLS approach to cardiovascular emergencies, elements of emergency cardiovascular care, ethical and legal issues, review and validation of the techniques of airway assessment and management, ventilation techniques, oxygen therapy, intravenous therapy, analyzing and interpreting the electrocardiogram (ECG), analyzing and interpreting the 12-lead ECG, myocardial ischemia, injury, and infarction, electrical interventions, cardiovascular pharmacology, acute coronary syndromes, emergency cardiovascular care algorithms, acute stroke and transient ischemic attack, and special resuscitation situations. Prerequisites: (Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer or EMT240) or permission of instructor.

EMT242
Pediatric Advanced Life Support (PALS)
1 credit(s) 2 period(s) lecture + lab
Designed for the allied healthcare provider who initiates, directs, or participates in the management of an infant or child in respiratory compromise, circulatory compromise, or cardiopulmonary arrest according to current cardiopulmonary resuscitation (CPR) and emergency cardiovascular care (ECC) guidelines. Requires prior knowledge of basic electrocardiograph (ECG) rhythm interpretation, pharmacologic agents, and other interventions used in pediatric advanced life support (PALS). Prerequisites: Current basic life support (BLS) healthcare provider/professional rescuer card, and (EMT235 and EMT236 or permission of Instructor). Course Notes: EMT242 is required for American Heart Association Provider approval and validation.

EMT243
Pediatric Advanced Life Support Refresher
0.5 credit(s) 1.5 period(s) lecture + lab
Current American Red Cross or American Heart Association Health Care Provider validation. Current validation in Pediatric Advanced Life Support. Prerequisites: EMT242, or permission of instructor.

EMT245
Trauma Management I
2 credit(s) 3.5 period(s) lecture + lab
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 stabilization, transportation of the victim to an emergency care facility, and documentation. Prerequisites: Basic EMT certification or nurse with emergency room experience, or permission of department.

EMT246
Trauma Management II
4 credit(s) 4 period(s) lecture + lab
Designed to instruct advanced prehospital care personnel in the critical skills necessary to manage the trauma victim and the emergency scene through the Incident Command System (ICS). Enhances advanced emergency medical technology (EMT) skills by focusing on emergency care interventions. Provides advanced exposure to victim assessment, initial treatment, resuscitative skills, invasive techniques, electrical and pharmacologic interventions, stabilization, transportation of the victim to an emergency care facility, and documentation. Prerequisites: Certified as a Basic EMT, Intermediate EMT, Paramedic, or Arizona registered prehospital nurse, or permission of instructor.

EMT249
12 Lead ECG Rhythm Analysis
0.5 credit(s) 0.5 period(s) lecture
Designed to acquaint all levels of emergency care providers with electrocardiographic (ECG) rhythm analysis and interpretation using the 12-lead electrocardiogram (ECG). Required content for identification and treatment of myocardial infarction and its complications. Prerequisites: EMT235, or permission of instructor.

EMT255AB
Advanced Cardiac Life Support
Instructional Strategies
1 credit(s) 1 period(s) lecture
A participative course to prepare advanced EMTs (Paramedics), physicians, and/or nurses as instructors in Advanced Cardiac Life Support courses. Includes American Heart Association Standards and guidelines, teaching and testing skills, writing objectives, preparing class and course schedules, preparing for lectures, developing and using audio visual (AV) aides; processing assignments and exams, classroom discipline, counseling, and student/instructor evaluation methods. Successful completion qualifies individual to teach Advanced Cardiac Life Support Classes. Prerequisites: Current certification as Advanced Cardiac Life Support Provider and (State of Arizona EMT [Paramedic] certification or Arizona Registered Nurse or licensed physician or physician assistant) or permission of instructor.

The Course Equivalency Guide (CEG) shows how courses transfer from community college to ASU, NAU and U of A. Visit www.aztransfer.com
Course information is subject to change. Visit http://www.maricopa.edu/academic/ccta/ for most current information.
EMT272LA
Advanced Emergency Medical Technology Practicum Part I
3.75 credit(s) 18.75 period(s) lab
Clinical and vehicular practicum using diagnostic and advanced emergency medical treatment skills learned in the classroom. Emphasis on hands-on application of skills to real-life scenarios involving acute illness and serious injuries.
Prerequisites or Corequisites: EMT272AA.

EMT272LB
Advanced Emergency Medical Technology Practicum Part II
3.75 credit(s) 18.75 period(s) lab
Clinical and vehicular practicum using diagnostic and advanced emergency medical treatment skills learned in the classroom. Emphasis on hands-on application of skills to real-life scenarios involving acute illness and serious injuries.
Prerequisites: EMT272AA and EMT272LA.

EMT272LL
Advanced Emergency Medical Technology Practicum
7.5 credit(s) 37.5 period(s) lab
Clinical and vehicular practicum using diagnostic and advanced emergency medical treatment skills learned in the classroom. Emphasis on hands-on application of skills to real-life scenarios involving acute illness and serious injuries.
Prerequisites or Corequisites: EMT272AA and EMT272AB.

EMT273
Advanced Life Support Refresher Course
3.5 credit(s) 2 period(s) lecture + 1 lab
Designed to meet requirements for EMT-Intermediate and EMT- Paramedic under guidelines of the U.S. Department of Transportation (U.S. DOT), National Registry of EMTs (NREMT) as recognized by the Arizona Department of Health Services (ADHS) Bureau of Emergency Services (B-EMS). Provides updated knowledge and skills related to hypoperfusion states, respiratory arrest or insufficiency, seizure states, cardiovascular emergencies, unconscious of undetermined etiology, head injury with altered levels of consciousness, and chest trauma. Validates requisite knowledge, validates skills, reviews and informs students of new standards and technologies. Trains and educates out of state applicants in knowledge, procedures, medications, and skills specific to Arizona’s system. Remediate students who have been unsuccessful three times on the certification examinations, and refreshes information for those who have expired certifications and desire re-entry into the EMS system.
Prerequisites: (EMT - Intermediate certification or EMT - Paramedic certification or NREMT) or permission of instructor.

ENG – English

NOTE: The student must complete course placement for English placement in order to register for some ENG courses. Seek Academic Advisement.

ENG071
Preparatory Academic Writing I
3 credit(s) 3 period(s) lecture
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.

ENG081
Preparatory Academic Writing II
3 credit(s) 3 period(s) lecture
Emphasizes preparation for college-level composition and related reading tasks with a focus on critical writing, reading, and thinking skills and processes. Prerequisites: Appropriate writing placement test score, or a grade of C or better in ENG071 or ESL077, or permission of Department or Division.

ENG091
Preparatory Academic Writing III
3 credit(s) 3 period(s) lecture
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: Appropriate writing placement test score, or a grade of C or better in ENG081 or ESL087, or permission of Department or Division.

ENG100AA
American-English Spelling System
1 credit(s) 1 period(s) lecture
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.

ENG100AC
The Mechanics of Written English
1 credit(s) 1 period(s) lecture
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.

ENG101
First-Year Composition
3 credit(s) 3 period(s) lecture
Emphasis on rhetoric and composition with a focus on expository writing and understanding writing as a process. Developing advanced 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 ENG101.

ENG102
First-Year Composition
3 credit(s) 3 period(s) lecture
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: Grade of C or better in ENG101.

ENG107
First-Year Composition for ESL
3 credit(s) 3 period(s) lecture
Equivalent of ENG 101 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.
ENG108  
First-Year Composition for ESL  
3 credit(s) 3 period(s) lecture  
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: Grade of C or better in ENG107.

ENG111  
Technical and Professional Writing  
3 credit(s) 3 period(s) lecture  
Covers analyzing, planning, organizing, researching, and writing correspondence, reports, and presentations for specific work-related audiences. Includes integrating data and graphics into work-related documents and presentations. Prerequisites: ENG101 with a grade of C, or better, or permission of instructor.

ENG200  
Reading and Writing About Literature  
3 credit(s) 3 period(s) lecture  
Emphasis on critical analysis of various genres of literature; includes study of necessary terminology, introduction to methods of literary criticism, and practice in interpretation and evaluation. Prerequisites: ENG102.

ENG213  
Introduction to the Study of Language  
3 credit(s) 3 period(s) lecture  
Study of language as code; phonetics, phonology, morphology, syntax, semantics; language acquisition; historical and sociolinguistics. Prerequisites: ENG102 or ENG111, with a grade of "C" or better, or permission of instructor.

ENG215  
Strategies of Academic Writing  
3 credit(s) 3 period(s) lecture  
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.

ENG216  
Persuasive Writing on Public Issues  
3 credit(s) 3 period(s) lecture  
Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers research based. Prerequisites: ENG102.

ENG217  
Personal and Exploratory Writing  
3 credit(s) 3 period(s) lecture  
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: ENG101 or ENG107 or equivalent.

ENG19  
Life Stories  
3 credit(s) 3 period(s) lecture  
Uses of biography and autobiography to pass on stories, hand down traditions, and share wisdom. Analysis and practice of biographical and autobiographical writing. Prerequisites: ENG101 and ENG102.

ENG235  
Magazine Article Writing  
3 credit(s) 3 period(s) lecture  
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.

ENH – English  

ENH110  
Introduction to Literature  
3 credit(s) 3 period(s) lecture  
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.

ENH12  
Chicano Literature  
3 credit(s) 3 period(s) lecture  
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.

ENH14  
African-American Literature  
3 credit(s) 3 period(s) lecture  
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.

ENH17  
Rap Literature: The Oral Tradition  
3 credit(s) 3 period(s) lecture  
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 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. Prerequisites: None.

ENH204  
Introduction to Contemporary Literature  
3 credit(s) 3 period(s) lecture  
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.

ENH214  
Poetry Study  
3 credit(s) 3 period(s) lecture  
(Spring only)  
Involves reading, discussing, and analyzing poetry of various forms and from selected periods. Prerequisites: None.

ENH221  
Survey of English Literature Before 1800  
3 credit(s) 3 period(s) lecture  
(Fall only)  
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: (ENG101 or ENG107) or equivalent.

ENH222  
Survey of English Literature After 1800  
3 credit(s) 3 period(s) lecture  
(Spring only)  
Emphasizes the social and political backgrounds as well as the form and content of English literature in the nineteenth and twentieth centuries. Prerequisites: (ENG101 or ENG107) or equivalent.

ENH230  
Introduction to Shakespeare  
3 credit(s) 3 period(s) lecture  
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 between the late 16th century and the late 20th century. Prerequisites: None.

ENH235  
Survey of Gothic Literature  
3 credit(s) 3 period(s) lecture  
(Spring only)  
A study of the origins, common elements and characteristics, and historical development of Gothic literature with an exploration of the literary techniques and psychological aspects of the genre. Prerequisites: None.

ENH241  
American Literature Before 1860  
3 credit(s) 3 period(s) lecture  
(Fall only)  
Includes literature written prior to 1860 in the United States. Prerequisites: None.
ENH242 American Literature After 1860
3 credit(s) 3 period(s) lecture
(Spring only)
Includes literature written after 1860 in the United States. Prerequisites: None.

ENH251 Mythology
3 credit(s) 3 period(s) lecture
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.

ENH254 Literature and Film
3 credit(s) 3 period(s) lecture
Presents works of literature and their film versions and analyzes distinguishing techniques of each medium. Prerequisites: ENG101, or ENG107, or equivalent.

ENH256 Shakespeare on Film
3 credit(s) 3 period(s) lecture
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.

ENH259 American Indian Literature
3 credit(s) 3 period(s) lecture
Contemporary American Indian forms of literary expression. Selected oral traditions of American Indians. Trends and movements within American Indian literary history. Prerequisites: None.

ENH260 Literature of the Southwest
3 credit(s) 3 period(s) lecture
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.

ENH280 Topics in American Literature
3 credit(s) 3 period(s) lecture
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: (ENG101 or ENG107) or permission of Instructor. Course Note: ENH280 may be repeated for a total of nine (9) credit hours.

ENH/WST285 Contemporary Women Writers
3 credit(s) 3 period(s) lecture
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.

ENH/EDU291 Children’s Literature
3 credit(s) 3 period(s) lecture
Review of folk and modern literature, including application of literary criteria to folk and modern literature for children. Prerequisites: None.

ESL – English As a Second Language

ESL002 Basic English as a Second Language II
6 credit(s) 6 period(s) lecture
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: ESL001, or ESL001BC, ELS001CB or permission of Instructor. Course Notes: ESL002 may be repeated for a total of twelve (12) credits. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog.

ESL010 English as a Second Language I:
Grammar
3 credit(s) 3 period(s) lecture
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. Course Notes: ESL010 may be repeated for a maximum of six (6) credits. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog.

ESL011 English as a Second Language I:
Listening and Speaking
3 credit(s) 3 period(s) lecture
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 ESL002. Course Notes: ESL011 may be repeated for a maximum of six (6) credits.

ESL012 ESL I-Writing with Oral Practice
3 credit(s) 3 period(s) lecture
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. Course Notes: ESL012 may be repeated for a maximum of six (6) credits.

ESL013 Vocabulary for ESL I
1 credit(s) 1 period(s) lecture + lab
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. Course Notes: ESL013 may be repeated for a maximum of two (2) credits.

ESL020 English as a Second Language II:
Grammar
3 credit(s) 3 period(s) lecture
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, or (ESL010AA, ESL010AB, and ESL010AC). Course Notes: ESL020 may be repeated for a maximum of six (6) credits. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog.

ESL021 English as a Second Language II:
Listening and Speaking
3 credit(s) 3 period(s) lecture
Emphasis on listening and speaking skills involving social exchange. Asking and answering questions, using tag questions. Practice with question and answer patterns. Polite questions and responses. Prerequisites: Appropriate ESL placement test score or ESL010 or ESL011 or ESL012 or RDG/ESL016. Course Notes: ESL021 may be repeated for a maximum of six (6) credits.

ESL022 ESL II-Writing with Oral Practice
3 credit(s) 3 period(s) lecture
Emphasis on basic writing skills, accompanied by recitation of short writings. Sentence patterns and introduction of paragraph writing. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL012, or permission of instructor.
ESL023
Vocabulary for ESL II
1 credit(s) 1 period(s) lecture + lab
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. Course Notes: ESL023 may be repeated for a maximum of two (2) credits.

ESL030
English as a Second Language III:
Grammar
3 credit(s) 3 period(s) lecture
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, or (ESL020AA, ESL020AB, and ESL020AC). Course Notes: ESL030 may be repeated for a maximum of six (6) credits. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog.

ESL031
English as a Second Language III:
Listening and Speaking
3 credit(s) 3 period(s) lecture
Emphasis on listening and speaking skills related primarily to academic environment. Asking questions, working in small groups, using college resources, informal oral presentation. Prerequisites: Appropriate ESL placement test score or ESL020 or ESL021 or ESL022 or RDG/ESL026. Course Notes: ESL031 may be repeated for a total of six (6) credit hours.

ESL032
ESL III-Writing with Oral Practice
3 credit(s) 3 period(s) lecture
Emphasis on complex sentence patterns in writing and speech. Introduction to the prewriting and writing process in a college setting. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL022, or permission of instructor.

ESL033
Vocabulary for ESL III
1 credit(s) 1 period(s) lecture + lab
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. Course Notes: ESL033 may be repeated for a maximum of two (2) credits.

ESL040
English as a Second Language IV:
Grammar
3 credit(s) 3 period(s) lecture
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, or (ESL030AA, ESL030AB, and ESL030AC). Course Notes: ESL040 may be repeated for a maximum of six (6) credits. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog.

ESL041
English as a Second Language IV —
Listening and Speaking
3 credit(s) 3 period(s) lecture
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 ESL030 or ESL031 or ESL032 or RDG/ESL036. Course Notes: ESL041 may be repeated for a maximum of six (6) credits.

ESL042
ESL IV-Writing with Oral Practice
3 credit(s) 3 period(s) lecture
Emphasis on paragraph writing and oral recitation of complex sentences and paragraphs. Introduction to the prewriting and writing process for short essays. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL032, or permission of instructor.

ESL050
Review Grammar For ESL
3 credit(s) 3 period(s) lecture
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 ESL030, or (ESL030AA, ESL030AB, and ESL030AC), or permission of Instructor. Course Notes: ESL050 may be repeated for a total of two (2) credits.

ESL051
Pronunciation Improvement for ESL Speakers
3 credit(s) 3 period(s) lecture
Individualized pronunciation practice and drills for ESL (English as a Second Language) students who want to practice sentence skills in English. Prerequisites: Appropriate ESL course placement score, or a grade of "P" or "C" or better in ESL030, or (ESL030AA, ESL030AB, and ESL030AC), or permission of Instructor. Course Notes: ESL051 may be repeated for a total of six (6) credits.

ESL054
American Culture
3 credit(s) 3 period(s) lecture
Reading and writing about American culture including history, institutions and sports, and entertainment. Prerequisites: Appropriate ESL course placement test score, or a grade of C or better in ESL040, or (ESL040AA, ESL040AB, and ESL040AC), or RDG/ESL046, or permission of instructor.

ESL054AA
American Culture: History
1 credit(s) 1 period(s) lecture + lab
Reading and writing about American history. Prerequisites: Appropriate ESL placement test score, or a grade of C or better in ESL040, or (ESL040AA, ESL040AB, and ESL040AC), or RDG/ESL046, or permission of Instructor.
ESL054AC
American Culture: Sports and Entertainment
1 credit(s) 1 period(s) lecture + lab
Reading and writing about American sports and entertainment. Prerequisites: Appropriate ESL placement test score, or a grade of C or better in ESL040, or (ESL040AA, ESL040AB, and ESL040AC), or RDG/ESL046, or permission of Instructor.

ESL077
Language Skills: Speaking and Writing Standard English for English Language Learners
3 credit(s) 3 period(s) lecture
Emphasis on basic Standard English speaking and writing skills. Focus on essential idiomatic grammar in developing effective sentence-level speaking and writing strategies. Prerequisites: Appropriate writing placement test score or permission of Department or Division.

ESL087
Basic Writing Skills for English Language Learners
3 credit(s) 3 period(s) lecture
Emphasis on basic writing skills using Standard English in sentences and short paragraphs incorporating correct, clear, and idiomatic English in preparation for college-level composition. Establish effective writing strategies through six or more writing projects. Prerequisites: Appropriate writing placement test score, or grade of C or better in ESL077 or ENGL071, or permission of Department or Division.

FON – Food and Nutrition

FON100
Introductory Nutrition
3 credit(s) 3 period(s) lecture
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 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.
Prerequisites: None.

FON104
Certification in Food Service Safety and Sanitation
1 credit(s) 1 period(s) lecture
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 illnesses, pest control, accident prevention, standards for cleaning and sanitizing, and regional regulations and standards. Prerequisites: None.

FON142AB
Applied Food Principles
3 credit(s) 5 period(s) lecture + lab
Exploration and application of scientific principles involved in food preparation; experiences with basic cooking methods; emphasis on the rationale of cooking techniques. Prerequisites: None.

FON241
Principles of Human Nutrition
3 credit(s) 3 period(s) lecture
Scientific principles of human nutrition. Emphasis on health promotion and concepts for conveying accurate nutrition information in a professional setting. Addresses therapeutic nutrition principles for treatment of common health conditions. Includes exploration of food sources of nutrients, basic metabolism of nutrients in the human body, relationship between diet and other lifestyle factors, use of supplements, current recommendations for food selection throughout the life cycle, and use of nutrition tools for planning food intake or assessment of nutritional status. Prerequisites: None.

FRE – French

FRE101
Elementary French I
4 credit(s) 4 period(s) lecture
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.

FRE102
Elementary French II
4 credit(s) 4 period(s) lecture
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: FRE101, or FRE101AA, or permission of Department or Division. Completion of prerequisites within the last three years is required.
FSC – Fire Science

FSC101
Intro to Fire Service Selection
3 credit(s) 4 period(s) lecture + lab
Overview of the application and selection processes used by various fire departments and fire service organizations. Elements of fire service culture and their effects on personal growth and interpersonal relationships. Major components of 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. Preparation for on-site experiences at a fire station. General components of the selection process, the importance of general education, and components of lifelong learning in career choices. Prerequisites: None.

FSC102
Fire Department Operations
11 credit(s) 19.6 period(s) lecture + lab
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. Prerequisites: (EMT104, FSC105 and FSC130) and permission of instructor. Corequisites: FSC134.

FSC/EMT104
Emergency Medical Technology
9 credit(s) 11.4 period(s) lecture + lab
Techniques of emergency medical care in accordance with national and state curriculum. Study of the human body, patient assessment, treatment of medically or traumatologically compromised patients, special hazards, and medical operations, IV monitoring, patient-assisted medication administration, automated external defibrillators (AEDs), and blood-glucose monitoring. Prerequisites: EMT101 or a current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer and appropriate score on Reading placement test to demonstrate minimum tenth grade level reading or completion of an Associate’s degree or higher from an accredited institution. Course Notes: Students are required to complete additional hours in a competency-based clinical, vehicular, and/or scenario-based experience. This may be completed through EMT104AB or program director-approved rotation. Students must meet National Registry of EMTs requirements for certification. Additional information available at nremt.org

FSC105
Hazardous Materials/First Responder
3 credit(s) 3 period(s) lecture
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. Confined space operations in accordance with the National Fire Protection Agency. Prerequisites: None.

FSC106
Introduction to Fire Protection
3 credit(s) 3 period(s) lecture
History and evaluation of fire department organization. Role of the fire service in the community. Responsibilities of the fire administrator including organization, departmental functions, interdepartmental relationships, management of buildings and equipment; techniques of firefighting. Also includes emergency medical services and fire prevention. Prerequisites: None.

FSC108
Fundamentals of Fire Prevention
3 credit(s) 3 period(s) lecture
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.

FSC112PS
Public Safety Emergency Telecommunications
3 credit(s) 3 period(s) lecture + lab
In-depth coverage of established techniques and procedures for handling routine and emergency 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. Prerequisites: None.

FSC117
Fire Apparatus
3 credit(s) 3 period(s) lecture
Principles of care, maintenance, and operation of fire apparatus and pumps. Includes pump construction and accessories, pumping techniques, power development, and transmission. Driving, troubleshooting, and producing effective fire streams. Prerequisites: None.

FSC118
Fire Hydraulics
3 credit(s) 3 period(s) lecture
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 pumps. Prerequisites: None.

FSC119
Introduction Fire Service Ethics
3 credit(s) 3 period(s) lecture
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.

FSC131
Introduction to Urban Technical Rescue
3 credit(s) 3 period(s) lecture + lab
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.

FSC134
Fitness and Conditioning for Firefighters
3 credit(s) 4.6 period(s) lecture + lab
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.
FSC/EMT136
Women Firefighter Preparation
2 credit(s) 2.87 period(s) lecture + lab
Designed for women firefighting candidates. Includes firefighting techniques and procedure, physical/mental conditioning, health concerns, occupational opportunities, and mentorship programs. Prerequisites or Corequisites: FSC134 or permission of instructor.

FSC/AJS/DPR139
Emergency Response to Terrorism
3 credit(s) 3 period(s) lecture
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.

FSC/AJS/DPR146
Disaster Recovery Operations
3 credit(s) 3 period(s) lecture
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.

FSC/AJS/DPR147
Emergency Preparedness
3 credit(s) 3 period(s) lecture
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.

FSC/AJS/DPR148
Fundamentals of Emergency Management
3 credit(s) 3 period(s) lecture
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.

FSC/AJS/DPR149
Hazard Mitigation
3 credit(s) 3 period(s) lecture
Knowledge and skills required to develop programs to reduce losses from future disasters, emergencies, and other extreme events caused by natural and manmade hazards. Prerequisites: None.

FSC152
Engine Company Officer
1 credit(s) 1 period(s) lecture
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.

FSC202
Supervisory Training for Firefighters
3 credit(s) 3 period(s) lecture
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.

FSC204
Firefighting Tactics and Strategy
3 credit(s) 3 period(s) lecture
Methods of coordinating personnel, equipment, and apparatus on the fireground. Practical methods of controlling and extinguishing structural and other types of fires. Includes simulation exercises. Prerequisites: FSC113 or permission of instructor or equivalent.

FSC205
Command Strategies for Major Emergencies
3 credit(s) 3 period(s) lecture
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: FSC204.

FSC208
Firefighter Safety and Building Construction
3 credit(s) 3 period(s) lecture
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: FSC113 or permission of instructor or equivalent.

FSC209
Fire Investigation I
3 credit(s) 3 period(s) lecture
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.

FSC214
Human Resource Management in Fire Service
3 credit(s) 3 period(s) lecture
Management of fire service personnel functions. Includes selection procedures, employee discipline, performance ratings, elements of supervision. Labor relations and related personnel responsibilities. Prerequisites: FSC202 or four years in the fire service.

FSC221
Ladder Company Officer
1 credit(s) 1 period(s) lecture
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.

FSC/EMT238
Vehicular Extrication and Patient Stabilization
2 credit(s) 2 period(s) lecture
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. Prerequisites: Basic EMT certification, current enrollment in EMT Basic program, nurse with emergency department experience, or law enforcement personnel, or permission of instructor.

FSC/AJS/EMT/SWU258
Victimology and Crisis Management
3 credit(s) 3 period(s) lecture
Victimology, the criminal justice system, techniques of crisis intervention, and the importance of a multicultural and global perspective. Includes sexual assault, family violence, post-traumatic stress disorder, the role of substance abuse, effective coping skills, appropriate community resources and the responsiveness of the justice system. Prerequisites: None.
GBS – General Business

GBS103  Principles of Banking  3 credit(s) 3 period(s) lecture
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.

GBS110  Human Relations in Business and Industry  3 credit(s) 3 period(s) lecture
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.

GBS114  Principles of Quality Service  3 credit(s) 3 period(s) lecture
Quality service principles in credit/service industries emphasizing total quality and continuous improvement as a model for change. Identifying/understanding customer requirements, mapping a work process, measuring the amount of change in a process’ performance and solving work process problems. Collecting data and data analysis. **Prerequisites:** None.

GBS131  Business Calculations  3 credit(s) 3 period(s) lecture
Review of basic arithmetic and application of mathematics to business problems, includes percentage, interest, discount, and markups. **Prerequisites:** None.

GBS151  Introduction to Business  3 credit(s) 3 period(s) lecture
Characteristics and activities of current local, national, and international business. An overview of economics, marketing, management and finance. **Prerequisites:** None.

GBS205  Legal, Ethical, and Regulatory Issues in Business  3 credit(s) 3 period(s) lecture
Legal theories, ethical issues and regulatory climate affecting business policies and decisions. **Prerequisites:** None.

GBS206  Business Law (UCC)  3 credit(s) 3 period(s) lecture
Legal and ethical aspects of contracts, sales, commercial paper, secured transactions, documents of title, letter of credit, bank deposits, and collections. **Prerequisites:** None.

GBS207  Business Law (General Corporate)  3 credit(s) 3 period(s) lecture
Legal and ethical aspects of agency, partnerships, corporations, bankruptcy, antitrust, securities, and other regulations of business. **Prerequisites:** None.

GBS220  Quantitative Methods in Business  3 credit(s) 3 period(s) lecture
Business applications of quantitative optimization methods in operations management decisions. **Prerequisites:** (Grade of “C” or better in MAT150, MAT151, or MAT152) or equivalent or satisfactory score on District placement exam.

GBS221  BUS 2201  3 credit(s) 3 period(s) lecture
Business Statistics

GBS223  Business Communication  3 credit(s) 3 period(s) lecture
Internal and external business communications, including verbal and nonverbal techniques. **Prerequisites:** ENG101 or ENG107 with grade of “C” or better, or permission of department/division.

GBS261  Investments I  3 credit(s) 3 period(s) lecture
Various investment forms available, including study of inflation, taxation, government securities, stocks and bonds, real estate and retirement plans. **Prerequisites:** None.

GBS270AA  Business Internship  1 credit(s) 1 period(s) lab
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.

GBS270AB  Business Internship  2 credit(s) 2 period(s) lab
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.

GBS270AC  Business Internship  3 credit(s) 3 period(s) lab
General business work experience in a business or industry. Eighty hours of designated work per credit. **Prerequisites:** Permission of Department or Division. **Course Note:** GBS270AC may be repeated for a total of six (6) credits.

GBS294  Consumer Credit  3 credit(s) 3 period(s) lecture
Consumer lending by financial institutions. **Prerequisites:** None.

GBS298AA-AC  Special Projects  1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of 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.

GCU – Cultural Geography

GCU102  Introduction to Human Geography  3 credit(s) 3 period(s) lecture
Systematic study of human use of the earth. Spatial organization of economic, social, political, and perceptual environments. **Prerequisites:** None.

GCU121  GEO 1121  3 credit(s) 3 period(s) lecture
World Geography I: Eastern Hemisphere

GCU122  World Geography II: Western Hemisphere  3 credit(s) 3 period(s) lecture
Description and analysis of areal variations in social, economic, and political phenomena in major world regions. Emphasis on Europe, Russia, North Africa, and the Asian world. **Prerequisites:** None.

GCU221  Arizona Geography  3 credit(s) 3 period(s) lecture
The historical to modern development of Arizona. The interplay between the physical, cultural and economic factors affecting Arizona today. **Prerequisites:** None.
GLG – Geology

GLG101 Intro to Geology I - Physical Lecture
3 credit(s) 3 period(s) lecture
A study of the kind and arrangement of materials composing the Earth’s crust and the geological processes at work on and within the Earth’s surface. Prerequisites: None.

GLG103 Intro to Geology I - Physical Lab
1 credit(s) 3 period(s) lab
May accompany GLG101. Study of common rock-forming minerals, rocks, and maps. Prerequisites: None.

GLG110 Geological Disasters and the Environment
3 credit(s) 3 period(s) lecture
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 floods, earthquakes, and landslides; use of fossil fuels; mining of raw materials. Prerequisites: None.

GLG111 Geological Disasters and the Environment Lab
1 credit(s) 3 period(s) lab
May accompany GLG110. Basic geological processes and concepts. Emphasis on geology-related environmental problems concerning Arizona. Case histories and field studies. May require field trips. Prerequisites: None.

GLG280 Geology of Arizona Lecture
3 credit(s) 3 period(s) lecture
Acquaints students with the physical and historical geology of Arizona, including the origin of present-day landforms and outstanding modern geologic features and processes now in operation. Prerequisites: None.

GLG281 Geology of Arizona Lab
1 credit(s) 3 period(s) lab
May accompany GLG280. Examples of specific geologic processes and local areas. May require field trips. Prerequisites: None.

GPH – Physical Geography

GPH111 Introduction to Physical Geography
4 credit(s) 6 period(s) lecture + lab
Spatial and functional relationships among climates, landforms, soils, water, and plants. Prerequisites: None.

GPH112 Introduction to Physical Geography
3 credit(s) 3 period(s) lecture
Spatial and functional relationships among climates, landforms, soils, water, and plants. Prerequisites: None.

GPH113 Intro to Physical Geography Lab
1 credit(s) 3 period(s) lab
Laboratory experience in support of GPH112. Prerequisites or Corequisites: GPH112.

GPH212 Introduction to Meteorology I
3 credit(s) 3 period(s) lecture
Atmospheric processes and elements. General and local circulation, heat exchange and atmospheric moisture. Prerequisites: None.

GPH213 Introduction to Climatology
3 credit(s) 3 period(s) lecture
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.

GPH214 Introduction to Meteorology Laboratory I
1 credit(s) 3 period(s) lab
Basic meteorological and climatological measurements. Prerequisites: None. Corequisites: GPH212.

GPH215 Introduction to Climatology Laboratory
1 credit(s) 3 period(s) lab
A mathematical, statistical, and spatial analysis of climatological phenomena. Prerequisites: None. Corequisites: GPH213.

GPH219 Introduction to GIS Using ArcGIS
3 credit(s) 3 period(s) lecture + lab
An introduction to desktop Geographic Information Systems (GIS) technology using ArcGIS software. Prerequisites: CIS105 or CSC180 or permission of instructor.

The Course Equivalency Guide (CEG) shows how courses transfer from community college to ASU, NAU and U of A.

Visit: www.aztransfer.com

HCC – Health Core Curriculum

HCC130 Fundamentals in Health Care Delivery
3 credit(s) 3 period(s) lecture
Overview of current 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 principles of body mechanics in daily living activities. Basic communication skills which facilitate 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. Prerequisites: None.

HCC145 Medical Terminology for Health Care Workers
3 credit(s) 3 period(s) lecture
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.

HCC145AA Medical Terminology for Health Care Workers I
1 credit(s) 1 period(s) lecture
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 terms using basic word parts. Selected medical abbreviations and symbols and term spelling. Prerequisites: None.

HCC146 Common Medical Terminology for Health Care Workers
2 credit(s) 2 period(s) lecture
Common medical terms used in health care. 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.

Curriculum

Visit: www.aztransfer.com
HCC164
Pharmacology for Allied Health
0.5 credit(s) 0.5 period(s) lecture
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: HCC130 or (HCC130AD, HCC130AE, HCC130AF, HCC130AC, HCC130AD, HCC130AE and HCC130AF), or equivalent.

HCC204
Clinical Pathophysiology
3 credit(s) 3 period(s) lecture
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: HCC130 or (HCC130AD, HCC130AB, HCC130AC, HCC130AD, HCC130AE and HCC130AF), or equivalent and (BIO160 or BIO201).

HCC208
Health Care Leadership
1 credit(s) 1 period(s) lecture
Introduction to concepts and skills required of health care leaders. Discussion of leadership styles and conflict management. Application of motivation, delegation, and communication techniques to teamwork and leadership. Prerequisites: HCC130 or (HCC130AD, HCC130AB, HCC130AC, HCC130AD, HCC130AE and HCC130AF), or equivalent.

HCR – Health Care Related

HCR210
Clinical Health Care Ethics
3 credit(s) 3 period(s) lecture
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: ENG102.

HCR220
Introduction to Nursing and Health Care Systems
3 credit(s) 3 period(s) lecture
Introduction to the social, political, and economic contexts of the nursing profession and health care systems in the United States. Prerequisites: Grade of "C" or better in ENG102 or ENG108.

HCR230
Culture and Health
3 credit(s) 3 period(s) lecture
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.

HCR240
Human Pathophysiology
4 credit(s) 4 period(s) lecture
Chemical, biological, 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: BIO202 or BIO205 or equivalent.

HCR240AA
Human Pathophysiology I
2 credit(s) 2 period(s) lecture
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: BIO202 or BIO205 or equivalent. Corequisites: HCR240AB or permission of instructor.

HCR240AB
Human Pathophysiology II
2 credit(s) 2 period(s) lecture
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: BIO202 or BIO205 or equivalent. Corequisites: HCR240AA or permission of instructor.

HES – Health Science

HES100
Healthful Living
3 credit(s) 3 period(s) lecture
Health and wellness and their application to an optimal lifestyle. Explores current topics of interest such as stress management nutrition, fitness, and environmental health. Evaluates common risk factors associated with modern lifestyles. Prerequisites: None.

HES126
Women’s Health Issues
3 credit(s) 3 period(s) lecture
Develops awareness of women’s health issues across cultures, lifespan, socioeconomic status, education and addresses global concerns and inequalities. The course introduces women’s health issues through the history of the Women’s Health Movement and the political climate and economic systems in the United States. Addresses women’s health issues regarding sexual health and reproduction and examines many chronic diseases common to women. Explores predisposing and precipitating factors affecting women’s health and reviews current treatment of disease. Identifies interpersonal and social issues related to women’s health and focuses on the development of behaviors that promote a healthy and productive life. Prerequisites: None.

HES154
First Aid/ Cardiopulmonary Resuscitation
3 credit(s) 3 period(s) lecture
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.

HES201
Substance Abuse and Behavior
3 credit(s) 3 period(s) lecture
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.

HES210
Cultural Aspects of Health and Illness
3 credit(s) 3 period(s) lecture
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.

HES271
Prevention and Treatment of Athletic Injuries
3 credit(s) 3 period(s) lecture
Prevention and care of athletic injuries, emphasizing use of modern training techniques and support materials. Utilization of preventive taping, strapping, bandaging, cardiopulmonary resuscitation, massage, cryotherapy, hydrotherapy, and practical application of muscle reconditioning. Prerequisites: None.
HES272
Clinical Practicum in Athletic Training
1 credit(s) 7.5 period(s) lab
Practical application, in a clinical setting and under direct supervision, of methods and techniques of treatment of athletic injuries. Prerequisites: HES271.

HES273
Athletic Training: Advanced Wrapping
and Taping Techniques
2 credit(s) 2 period(s) lecture
Expands and enhances practical uses of basic taping and wrapping skills. Hands-on experience in the use of braces, athletic taping, and elastic wraps for athletic injuries. Prerequisites: HIM180, HES271 or HES273 or permission of Program Director.

HIM – Health Information Management

HIM101
Introduction to Health Information Management
1 credit(s) 1 period(s) lecture
Detailed investigation of the history and development of the health information management profession. Career opportunities, ethics, history, and functions of the health information management profession in relationship to the healthcare delivery system. Overview of health information systems used to identify, file, and store patient health information. Prerequisites: HCC130 or permission of Program Director.

HIM105
Computers in Healthcare and Health Record Systems
2 credit(s) 2 period(s) lecture
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: HCC130 or permission of Program Director.

HIM106
Legal Aspects of Health Information Management
3 credit(s) 3 period(s) lecture
Legal aspects of health records and health information, management. Application of general principles of law as related to health information management. Emphasis on regulations regarding protected health information, patient privacy, and patient confidentiality. Prerequisites: HCC130 or permission of Program Director.

HIM106AA
Legal Aspects of Health Information Management I
1.5 credit(s) 1.5 period(s) lecture
Legal aspects of health records and health information management. Types of patient authorizations and procedures for access and release of protected health information. Prerequisites: HCC130 or permission of Program Director.

HIM106AB
Legal Aspects of Health Information Management II
1.5 credit(s) 1.5 period(s) lecture
Application of general principles of law as related to health information management. Emphasis on regulations regarding protected health information, patient privacy, and patient confidentiality. Prerequisites: HIM106AA or permission of Program Director.

HIM140
Acute Care Documentation and Standards
2 credit(s) 3 period(s) lecture + lab
A comprehensive review of acute care hospital health records. Study of the origin, development, content, flow, and format of acute care records. Documentation standards and chart analysis guidelines specific to accreditation standards, state licensing, and Medicare certification requirements. Prerequisites: HIM101 or permission of Program Director. Prerequisites or Corequisites: HIM101 or permission of Program Director.

HIM150
Health Care Data
2 credit(s) 3 period(s) lecture + lab
Introduction to data collection methods for health information systems including structure, content, and standards. Study of the datasets and databases used in various health care settings. Overview of the creation and maintenance of health information disease registries and indexes. Prerequisites: HIM140 and (BPC110 or CIS105), or permission of Program Director.

HIM180
Introduction to Medical Billing and Reimbursement
2 credit(s) 2 period(s) lecture
An overview of the medical billing profession, the claims process, and federal billing guidelines. Study of major medical third-party payers including coverage offered, client eligibility, and reimbursement methodologies. Prerequisites: HCC130 or permission of Program Director.

HIM181
Medical Claims Processing
3 credit(s) 5 period(s) lecture + lab
Application of third-party payer billing information to claims processing in the non-hospital setting. Use of the computer for claims submission. Management of claims to ensure confidentiality, data retention, and successful payment for services. Prerequisites: [BPC110, HIM180, and (HIM208 or HIM209)], or permission of Program Director. Prerequisites or Corequisites: HIM214 or permission of Program Director.

HIM182
Human Diseases for Coding in Long Term Care Settings
2 credit(s) 2 period(s) lecture
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: (BIO160 and HCC146) or permission of Program Director.

HIM183
Diagnostic Coding in Long Term Care Settings
2 credit(s) 4 period(s) lecture and lab
Introduction to International Classification of Diseases (ICD) in long term care, home health and hospice settings. Principles for diagnostic coding. Standards of ethical coding. Emphasis on diagnostic coding for reimbursement and coding compliance. Prerequisites: (BIO160 and HCC146) or permission of Program Director. Prerequisites or Corequisites: HIM182 or permission of Program Director.
HIM204  
Cancer Registry  
4 credit(s) 6 period(s) lecture + lab  
Requirements for managing a cancer registry, including comparisons of systems and data related to a hospital and central cancer registry and other registry standard-setting organizations. Organization and management of the basic functions of cancer registry operations. Analysis and presentation of cancer data and use in studies.  
Prerequisites: HCC145 or permission of instructor.  
Corequisites: (BIO202 and HIM150) or permission of instructor.

HIM205  
Health Information Management  
Systems in Long Term Care Settings  
1 credit(s) 2 period(s) lecture + lab  
Overview of the health information management department roles, systems, policies and procedures in long term care settings. Introduction to computer applications used in long term care (LTC). Creation and maintenance of the LTC indices. Application of relevant healthcare statistics.  
Prerequisites or Corequisites: HIM101 or permission of Program Director.

HIM206  
Health Information Management in  
Alternative Care Settings  
2 credit(s) 3 period(s) lecture + lab  
Characteristics of non-acute care organizations in the United States. Standards and regulations for health records in those settings according to state, federal, and accrediting agencies. Applicable health record content and health information practices.  
Prerequisites: HIM140 or permission of Program Director.

HIM206AA  
Health Information Management in  
Alternative Care Settings: Long Term  
1 credit(s) 1.5 period(s) lecture + lab  
Characteristics of long term care organizations, including home health and hospice, in the United States. Standards and regulations for health records in those settings according to state, federal, and accrediting agencies. Applicable health record content and health information practices.  
Prerequisites: HIM140 or permission of Program Director.

HIM207  
Health Information Organizational  
Resource Management  
2 credit(s) 2 period(s) lecture  
Principles and practices essential to the efficient use of human, financial, and physical resources within health information systems. Focus on roles and responsibilities applicable to practice as a health information team performing planning, organizing, directing, and controlling functions.  
Prerequisites: (HIM150 and HIM206), or permission of Program Director.

HIM208  
ICD-10-CM Diagnostic Coding  
2 credit(s) 4 period(s) lecture + lab  
International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) diagnostic code assignment. Use of appropriate guidelines and federal, state, and local compliance standards for coding diagnoses. Application of diagnostic codes for inpatient, outpatient, and ambulatory coding assignment.  
Prerequisites: [HCC145, HIM214, and (BIO160 or BIO201)] or permission of Program Director.  
Corequisites: HCC204 or permission of Program Director.

HIM209  
ICD Coding  
4 credit(s) 6 period(s) lecture + lab  
International Classification of Diseases (ICD) code assignment. Use of appropriate coding guidelines and federal, state, and local compliance standards for diagnoses and procedures. Application of diagnostic and procedural codes for inpatient, outpatient, and ambulatory settings. Introduction of references and software to assist in code assignment.  
Prerequisites: [HCC145 and (BIO160 or BIO201)], or permission of Program Director.  
Corequisites: HCC204 or permission of Program Director.

HIM210  
ICD-10-PCS Coding and ICD  
Applications  
2 credit(s) 4 period(s) lecture + lab  
International Classification of Diseases, 10th Revision, Procedure Coding System (ICD-10-PCS) code assignment. Use of appropriate guidelines and federal, state, and local compliance standards for procedure coding in inpatient settings. Application of comprehensive coding skills to case studies. Introduction to technology for coding processes.  
Prerequisites or Corequisites: (BIO202, HCC204, and HIM208), or permission of Program Director.

HIM211  
Advanced Applications of Coding and  
Reimbursement  
4 credit(s) 6 period(s) lecture + lab  
Use of references, source documents, and computers for International Classification of Diseases (ICD) code assignment. Uniform Hospital Discharge Data Set and diagnostic-related group guidelines and federal regulations for hospital-based settings. Coding guidelines, code sets, and code assignment for home health, long term care, rehabilitation, and other health care settings. Identification of care provider documentation that supports code assignment. Use of codes for administrative purposes, reimbursement, marketing, and meeting regulatory requirements.  
Prerequisites: (BIO202, HCC204, (HIM208 or HIM209), and HIM210, or permission of Program Director.

HIM212  
CPT Coding I  
2 credit(s) 4 period(s) lecture + lab  
Prerequisites: [HCC145 and (BIO160 or BIO201)], or permission of Program Director.  
Corequisites: HCC204, or permission of Program Director.

HIM214  
CPT Coding II  
2 credit(s) 4 period(s) lecture + lab  
Prerequisites: (HCC204 and HIM212) or permission of Program Director.

HIM215  
Physician-Based Billing and Coding  
Seminar  
1 credit(s) 1 period(s) lecture  
Content and development of physician-based services billing and coding compliance programs. Forum for discussion of classroom, laboratory, and professional practice experiences.  
Prerequisites: [HCC204, (HIM208 or HIM209), and HIM212], or permission of Program Director.  
Corequisites: HIM216 or permission of Program Director.  
Corequisites or Corequisites: HIM214 or permission of Program Director.

HIM216  
Professional Practice in Physician-Based  
Billing and Coding  
1 credit(s) 5 period(s) lab  
Prerequisites: HCC204, (HIM208 or HIM209), HIM212, and permission of Program Director.  
Corequisites: HIM215, or permission of Program Director.  
Corequisites or Corequisites: (HIM181 and HIM214) or permission of Program Director.
HIM217
Health Information Management Seminar I
1 credit(s) 1 period(s) lecture
Theory of and practice in specialized health information activities. Forum for discussion of classroom, laboratory, and clinical affiliation experiences. Prerequisites: HIM106, HIM150, HIM201, and HIM206, or permission of Program Director. Corequisites: HIM218 or permission of Program Director.

HIM218
Professional Practice
1 credit(s) 5 period(s) lab
Practical application of acquired health information technical knowledge in health care settings. Prerequisites: HIM106, HIM150, HIM201, and HIM206, and permission of Program Director. Corequisites: HIM217 or permission of Program Director.

HIM219
Health Information Management Systems
3 credit(s) 5 period(s) lecture + lab
Overview of the fundamental concepts, terminology, and structure of health information systems with emphasis on computer applications used to manage electronic health information. Review of electronic health information concepts and its impact on health care delivery in multiple settings. Prerequisites: HIM150 or permission of Program Director.

HIM220
Health Information Management Seminar II
1 credit(s) 1 period(s) lecture
Survey of current practices and trends in health information management. Application of problem solving and research concepts to health information practices. Professional development preparation and career opportunities for health information management professionals. Prerequisites: HIM207, HIM217, HIM218, and HIM219, or permission of Program Director. Corequisites: HIM224 or permission of Program Director.

HIM221
Medical Coding Seminar
0.5 credit(s) 0.5 period(s) lecture
Content and development of coding compliance programs. Forum for discussion of classroom, laboratory, and professional practice experience. Prerequisites: HIM212. Prerequisites or Corequisites: HIM211 and HIM214 or permission of Program Director. Corequisites: HIM222 or permission of Program Director.

HIM222
Professional Practice in Medical Coding
1 credit(s) 5 period(s) lab
Practical application of coding guidelines for medical coding. Use of the International Classification of Diseases and Current Procedural Terminology systems to code patient services. Prerequisites or Corequisites: HIM211 and HIM214 or permission of Program Director. Corequisites: HIM221 or permission of Program Director.

HIM224
Advanced Professional Practice
1 credit(s) 5 period(s) lab
Practical application of advanced health information management knowledge in a variety of health-related settings. Focus on supervision and management, interdepartmental policies and procedures, budget and staffing considerations, as well as committee planning and preparation. Prerequisites: HIM207, HIM217, HIM218, and HIM219, and permission of Program Director. Corequisites: HIM220 or permission of Program Director.

HIM230
Quality Management and Performance Improvement
2 credit(s) 2 period(s) lecture
Focus on the history and development of quality assurance in various health care facilities, including quality assessment techniques, utilization management, risk management, credentialing, and medical staff services as related to health information management. Prerequisites: HIM207 and HIM219, or permission of Program Director.

HIM298AA-AC
Special Projects
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of 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.

HIS101
History of West Civilization Middle Ages to 1789
3 credit(s) 3 period(s) lecture
Survey of origin and development of Western civilization and its institutions from the Renaissance and Reformation through the Age of Enlightenment. Prerequisites: None.

HIS102
History of Western Civilization 1789 to Present
3 credit(s) 3 period(s) lecture
Survey of the origin and development of Western civilization and its institutions from French Revolution through the present. Prerequisites: None.

HIS103
United States History to 1865
3 credit(s) 3 period(s) lecture
The political, economic, and social development of the United States from the Pre-Columbian period through the end of the Civil War (1865). Prerequisites: None.

HIS104
United States History 1865 to Present
3 credit(s) 3 period(s) lecture
The political, economic, and social development of United States from 1865 to the present time. Prerequisites: None.

HIS105
Arizona History
3 credit(s) 3 period(s) lecture
The prehistoric and contemporary Native American experience, Spanish colonial times, the Mexican National period, the U.S. federal territorial years, and Arizona's political and economic development during the twentieth century. Prerequisites: None.

HIS106
Southwest History
3 credit(s) 3 period(s) lecture
Survey of Hispanic, Anglo, African-American and Native cultures of the peoples who have settled the American Southwest. Emphasis on cattle, mining, fur trade and transportation industries and role development of the region. Prerequisites: None.

HIS108
United States History 1945 to the Present
3 credit(s) 3 period(s) lecture
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.
HIS109  
Mexican-American History and Culture  
3 credit(s) 3 period(s) lecture  
Examination of origins and development of the Spanish-American and Mexican-American peoples and their contribution to the culture, history and development of the United States. Emphasis on Mexican-American War and its impact on educational, social, and economic conditions of the Mexican-Americans of the southwest.  
Prerequisites: None.

HST170  
Overview of Histology (Anatomic) Laboratory  
1 credit(s) 1 period(s) lecture  
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.  
Corequisites: HST171 and HST172.

HST171  
Chemistry of Fixation  
2 credit(s) 2 period(s) lecture  
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.  
Corequisites: HST170 and HST172.

HST172  
Practicum: Chemistry of Fixation  
3 credit(s) 6 period(s) lab  
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 the microtome. 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: HST172.  
Corequisites: HST173.

HST173  
Microtomy  
3 credit(s) 3 period(s) lecture  
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 set-up and maintenance, and sharps safety practices for the microtome. Includes techniques for microtomy, specialized microtomy, frozen section, and cytology specimen preparation.  
Prerequisites: HST172.  
Corequisites: HST174.

HST174  
Practicum: Microtomy  
3 credit(s) 6 period(s) lab  
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: HST172.  
Corequisites: HST173.

HST175  
Cellular Biological Staining  
3 credit(s) 3 period(s) lecture  
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: HST173 and HST174.  
Corequisites: HST176.

HST176  
Practicum: Cellular Biological Staining  
3 credit(s) 6 period(s) lab  
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: HST173 and HST174.  
Corequisites: HST175.

The Course Equivalency Guide (CEG) shows how courses transfer from community college to ASU, NAU and U of A.  
Visit: www.aztransfer.com

HIS145  
History of Mexico  
3 credit(s) 3 period(s) lecture  
Survey of the political, economic, and social forces which have shaped the development of Mexico from Precolumbian times to the present.  
Prerequisites: None.

HIS/AIS170  
American Indian History of the Southwest  
3 credit(s) 3 period(s) lecture  
Covers history of Indian peoples in the southwestern United States from pre-Columbian era to the present. Includes historical events, the development and implementation of Spanish-Mexican and United States’ policies and their impact on Indian peoples in these areas, and current issues of importance to Indian peoples.  
Prerequisites: None.

HIS203  
African-American History to 1865  
3 credit(s) 3 period(s) lecture  
History and cultural heritage of African-Americans from their beginnings in Ancient Africa through the experience of chattel slavery in the Americas to their eventual emancipation and participation in the American Civil War.  
Prerequisites: None.

HIS209  
The Chicano in 20th Century America  
3 credit(s) 3 period(s) lecture  
Analysis of the twentieth century experience. Historical perspective of the emergence of Chicanos as an influential minority in the United States.  
Prerequisites: None.
### HST177
**Cellular Biological and Immunohistochemical Staining**  
3 credit(s) 3 period(s) lecture  

### HST178
**Practicum: Cellular Biological and Immunohistochemical Staining**  
3 credit(s) 6 period(s) lab  
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:** HST175 and HST176. **Corequisites:** HST177.

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### HUM - Humanities

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Period(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HUM108</td>
<td>Contemporary Humanities</td>
<td>3</td>
<td>3 period(s)</td>
<td>An exploration of human expression in contemporary arts and sciences. <strong>Prerequisites:</strong> None.</td>
</tr>
<tr>
<td>HUM120</td>
<td>Cultural Viewpoints in the Arts</td>
<td>3</td>
<td>3 period(s)</td>
<td>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. <strong>Prerequisites:</strong> None.</td>
</tr>
<tr>
<td>HUM190 AA-AI</td>
<td>Honors Forum</td>
<td>1</td>
<td>1 period(s)</td>
<td>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. <strong>Prerequisites:</strong> Admission to the College Honors Program or permission of instructor.</td>
</tr>
<tr>
<td>HUM202</td>
<td>Humanities: Universal Themes</td>
<td>3</td>
<td>3 period(s)</td>
<td>The hero/heroine; fool; the social world, and the future as themes in the humanities. <strong>Prerequisites:</strong> None.</td>
</tr>
<tr>
<td>HUM/TTH 205</td>
<td>Introduction to Cinema</td>
<td>3</td>
<td>3 period(s)</td>
<td>Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. <strong>Prerequisites:</strong> None.</td>
</tr>
<tr>
<td>HUM/WST 209</td>
<td>Women and Films</td>
<td>3</td>
<td>3 period(s)</td>
<td>Analysis of images of women in films from both historical and contemporary perspectives. <strong>Prerequisites:</strong> None.</td>
</tr>
<tr>
<td>HUM213</td>
<td>Hispanic Film</td>
<td>3</td>
<td>3 period(s)</td>
<td>Analysis of Hispanic film as art form and as social commentary. <strong>Prerequisites:</strong> None.</td>
</tr>
<tr>
<td>HUM250</td>
<td>Ideas and Values in the Humanities</td>
<td>3</td>
<td>3 period(s)</td>
<td>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. <strong>Prerequisites:</strong> ENG101.</td>
</tr>
<tr>
<td>HUM251</td>
<td>Ideas and Values in the Humanities</td>
<td>3</td>
<td>3 period(s)</td>
<td>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. <strong>Prerequisites:</strong> ENG101.</td>
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### IBS – International Business

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Period(s)</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>IBS 101</td>
<td>Introduction to International Business</td>
<td>3</td>
<td>3 period(s)</td>
<td>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. <strong>Prerequisites:</strong> None.</td>
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### INT – Interior Design

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Period(s)</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>INT 100</td>
<td>Interior Design Drafting</td>
<td>3</td>
<td>6 period(s)</td>
<td>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. <strong>Prerequisites:</strong> None.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>INT105</td>
<td>Introduction to Interior Design</td>
<td>Departmental approval. Prerequisites: None.</td>
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<tr>
<td>INT120</td>
<td>Modern Architecture and Furniture</td>
<td>Prerequisites: AR (ARC121 or INT100).</td>
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<tr>
<td>INT140</td>
<td>Introduction to CAD for Interior Design</td>
<td>Prerequisites: AR (AC121 or INT100).</td>
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<tr>
<td>INT145</td>
<td>Drawing and Rendering</td>
<td>Prerequisites: AR (AC121 or INT100).</td>
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<tr>
<td>INT150</td>
<td>Color and Design</td>
<td>Prerequisites: AR (AC121 or INT100).</td>
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<tr>
<td>INT160</td>
<td>Fabrics for Interiors</td>
<td>Prerequisites: None.</td>
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<tr>
<td>INT170</td>
<td>Interior Materials</td>
<td>Prerequisites: INT105 or permission of Instructor.</td>
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<tr>
<td>INT175</td>
<td>Custom Design</td>
<td>Prerequisites: INT105 and (ARC121 or INT100).</td>
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<tr>
<td>INT190</td>
<td>Space Planning</td>
<td>Prerequisites: ARC141 or INT140.</td>
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<tr>
<td>INT215</td>
<td>Professional Practices</td>
<td>Prerequisites: AR (AC121 or INT100).</td>
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<tr>
<td>INT240</td>
<td>Kitchen and Bath Design</td>
<td>Prerequisites: AR (AC121 or INT140).</td>
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<tr>
<td>INT268</td>
<td>Lighting Design</td>
<td>Prerequisites: AAS Degree in Interior Design or permission of Department or Division.</td>
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<tr>
<td>INT271AA</td>
<td>Interior Design Internship</td>
<td>Prerequisites: Departmental approval. Prerequisites: Departmental approval.</td>
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<tr>
<td>INT271AB</td>
<td>Interior Design Internship</td>
<td>Prerequisites: Departmental approval. Prerequisites: Departmental approval.</td>
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<tr>
<td>INT271AC</td>
<td>Interior Design Internship</td>
<td>Prerequisites: Departmental approval. Prerequisites: Departmental approval.</td>
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<tr>
<td>INT274AA</td>
<td>Interior Design Study Tour</td>
<td>Prerequisites: Departmental approval. Prerequisites: Departmental approval.</td>
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<tr>
<td>INT274AC</td>
<td>Interior Design Study Tour</td>
<td>Prerequisites: Departmental approval. Prerequisites: Departmental approval.</td>
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<tr>
<td>INT285</td>
<td>Design Portfolio Development</td>
<td>Prerequisites: Program Director.</td>
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</table>

Course information is subject to change. Visit [http://www.maricopa.edu/academic/ctca](http://www.maricopa.edu/academic/ctca) for most current information.
IPP – Interpreter Preparation Program

Also see Sign Language, SLG on page 286.

IPP205
Introduction to Interpreting
3 credit(s) 3 period(s) lecture
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: SLG201 with a grade of "C" or better, or permission of Department or Division. Completion of prerequisites within the last three years is required. Course Notes: IPP205 may be repeated for a total of nine (9) credit hours.

IPP208
Advanced American Sign Language Discourse
4 credit(s) 4 period(s) lecture
(Spring only)
Advanced study of terminology and discourse in various fields such as 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). Prerequisites: A grade of B or better in SLG203. Completion of prerequisites within the last three years is required.

IPP215
ASL to English Consecutive Interpreting
2 credit(s) 3 period(s) lecture + lab
(Fall only)
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, practice of skills, techniques for self and peer evaluations, and application of theoretical models. Prerequisites: A grade of "B" or better in IPP215, or permission of department/division.

IPP216
ASL to English Simultaneous Interpreting
3 credit(s) 4 period(s) lecture + lab
(Spring only)
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 IPP216, or permission of department/division.

IPP218
English to ASL Consecutive Interpreting
2 credit(s) 3 period(s) lecture + lab
(Fall only)
Sequential development of consecutive 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, guidance for discovering personal "filters," practice of skills, techniques for self and peer evaluations, and application of theoretical models. Prerequisites: (Acceptance into the Interpreter Preparation Program or permission of Department or Division) and IPP218 with a grade of "B" or better. IPP219 suggested but not required.

IPP219
English to ASL Simultaneous Interpreting
3 credit(s) 4 period(s) lecture + lab
(Spring only)
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, or permission of IPP219 with a grade of "B" or better. Completion of prerequisites within the last three years is required.

IPP220
Interactive Interpreting I
4 credit(s) 5 period(s) lecture + lab
(Fall only)
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 or Corequisites: IPP215 and IPP221, or permission of Department or Division. Completion of prerequisites within the last three years is required.

IPP221
Interactive Interpreting II
3 credit(s) 4 period(s) lecture + lab
(Spring only)
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, or permission of Department or Division. Completion of prerequisites within the last three years is required.

IPP222
Interpreter Preparation Internship
Seminar
1 credit(s) 1 period(s) lecture
(Spring only)
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: IPP230A or IPP230AB. Course Notes: IPP222 may be repeated for a total of four (4) credit hours.

For additional information on PC program competencies, visit: http://www.maricopa.edu/academic/ccta/

For additional information on MCCCD course competencies, visit: http://www.maricopa.edu/academic/ccta/
IPP230AA
Interpreter Preparation Program Internship
1 credit(s) 5 period(s) lab (Spring only)
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 AAS degree students. May be repeated for a total of four (4) credits. Prerequisites: Acceptance into the Interpreter Preparation Program and/or program director approval. Corequisites: IPP229.

IPP230AB
Interpreter Preparation Program Internship
2 credit(s) 10 period(s) lab (Spring only)
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 AAS degree students. May be repeated for a total of four (4) credits. Prerequisites: Acceptance into the Interpreter Preparation Program and/or program director approval. Corequisites: IPP229.

IPP242
Educational Interpreting
3 credit(s) 3 period(s) lecture
Principles, vocabulary, and techniques used specifically in educational interpreting and transliterating. Introduces students to issues in primary, secondary, vocational, and post-secondary settings. Covers sign systems, technical signs, and methods of sign invention. Includes required student observations of educational interpreting outside class. Prerequisites: (IPP205 and SLG200) or permission of Department or Division. SLG203 suggested but not required. Course Notes: IPP242 may be repeated for a total of nine (9) credits.

IPP250AA
Special Topics: Interpreter Preparation
1 credit(s) 1 period(s) lecture + lab
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. Prerequisites: Acceptance into the Interpreter Preparation Program or permission of Program Director. Course Note: IPP250AA may be repeated for credit.

IPP250AB
Special Topics: Interpreter Preparation
2 credit(s) 2 period(s) lecture + lab
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. Prerequisites: Acceptance into the Interpreter Preparation Program or permission of Program Director. Course Note: IPP250AB may be repeated for credit.

IPP250AC
Special Topics: Interpreter Preparation
3 credit(s) 3 period(s) lecture + lab
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. Prerequisites: Acceptance into the Interpreter Preparation Program or permission of Program Director. Course Note: IPP250AC may be repeated for credit.

LAS100
The Paralegal Profession
3 credit(s) 3 period(s) lecture
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.

LAS101
Introduction to Law
3 credit(s) 3 period(s) lecture
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. Prerequisites: None.

LAS109
Civil Procedures I
3 credit(s) 3 period(s) lecture
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. Prerequisites or Corequisites: LAS101 and (BPC110 or CIS105 or permission of Program Director).

LAS110
Civil Procedures II
3 credit(s) 3 period(s) lecture
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: LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS115
Criminal Trial Procedure
3 credit(s) 3 period(s) lecture
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: LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS131
Legal Writing
3 credit(s) 3 period(s) lecture
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. Prerequisites or Corequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).
LAS203
Ethics and Professional Practice
3 credit(s) 3 period(s) lecture
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: LAS131 and (BPC110 or CIS105 or permission of Program Director).

LAS204
Contract Law
3 credit(s) 3 period(s) lecture
Examination of contracts and their regulation by the Uniform Commercial Code. Review and drafting of basic agreements. Prerequisites or Corequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS208
Probate
3 credit(s) 3 period(s) lecture
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: LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS211
Legal Research
3 credit(s) 3 period(s) lecture
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. Prerequisites or Corequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS212
Tort Law
3 credit(s) 3 period(s) lecture
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: LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS214
Business Organizations
3 credit(s) 3 period(s) lecture
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: LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS217
Family Law
3 credit(s) 3 period(s) lecture
Legal analysis of marriage, dissolution of marriage, parental rights and duties; pleading and practice. Prerequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS220
Paralegal Internship Seminar
1 credit(s) 1 period(s) lecture
Coordinates on-the-job experiences with interpersonal relations, communications, time-management, and case-management skills. Provides opportunity to discuss problems encountered during internship. Prerequisites: LAS203, LAS211, (LAS204 or LAS212), and (BPC110 or CIS105 or permission of Program Director). Corequisites: LAS221AB.

LAS221AB
Paralegal Internship
2 credit(s) 10 period(s) lab
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. Corequisite: LAS220. Course Notes: LAS221AB requires a minimum of 160 hours of field experience in a legal setting.

LAS225
Legal Research, Analysis, and Writing
3 credit(s) 3 period(s) lecture
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: LAS131 and LAS211 and (BPC110 or CIS105 or permission of Program Director).

LAS229
Litigation Technologies
3 credit(s) 3 period(s) lecture
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: LAS110 and (BPC110 or CIS105 or permission of Program Director).

LAS237
Civil Interviewing and Investigation
3 credit(s) 3 period(s) lecture
Foundations for interviewing and investigation. Questioning of clients, witnesses, and experts. Documenting and summarizing interviews. Factual investigation sources and techniques. Role of formal discovery (including E-discovery). Document analysis and preservation. Memorializing results of factual investigations. Prerequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS261
Bankruptcy
3 credit(s) 3 period(s) lecture
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 contested matters and adversary proceedings, and debtors' and creditors' rights and obligations. Prerequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS265
Regulatory Compliance
3 credit(s) 3 period(s) lecture
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: LAS109 and (BPC110 or CIS105 or permission of Program Director).
LAS280
Paralegal Studies Portfolio Capstone
1 credit(s) 1 period(s) lecture
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. Prerequisites: LAS110, LAS203, LAS204, LAS214 and (BPC110 or CIS105 or permission of Program Director). Prerequisites or Corequisites: (LAS225, LAS229, and LAS237) or permission of Program Director.

LBA – Laboratory Assisting

LBA150
Overview of Laboratory Assisting
1 credit(s) 1 period(s) lecture
Overview of laboratory services, laboratory professionals, and the role of a laboratory assistant. Understanding of certification, accreditation, and regulatory agencies. Emphasis on process improvement, laboratory mathematics, documentation, medico-legal implications, and specimen integrity. Application of pre-analytical and basic testing principles, infection control, and laboratory safety. Recognition of acceptable quality control and quality management principles. Includes information systems and information management in laboratories. Importance of professional growth and ethical conduct. Prerequisites: (HCC130 and HCC145AA and PLB109 and PLB110 and PLB111), or permission of Program Director.

LBA152
Laboratory Assisting: Principles and Procedures
2 credit(s) 6 period(s) lecture + lab
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, 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 or Corequisite: LBA150.

LBA158
Laboratory Assisting Practicum
2 credit(s) 6 period(s) lab
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: LBA150 and LBA152 and permission of Program Director.

MAS – Medical Assisting

MAS125
Professionalism in Healthcare
1 credit(s) 1 period(s) lecture
Principles and procedures for professional behaviors in a healthcare environment. Includes discussion and evaluation of professional behaviors for students, with coworkers, with superiors, with patients, and in communications. Prerequisites: None.

MAS126
Administrative Procedures
3 credit(s) 3 period(s) lecture
Principles and procedures for front office administrative skills. Methods of telephone management, correspondence and mail processing, appointment scheduling, medical records management and data collection. Includes medical assistant as office manager. Prerequisites: Acceptance into the Medical Assisting or Medical Front Office program, and permission of Program Director. Corequisites: (MAS127, MAS128, MAS129, and MAS210) and permission of Program Director.

MAS127
Insurance, Billing and Coding
3 credit(s) 3 period(s) lecture + lab
Application of insurance, coding and billing. Includes legal and ethical issues, federal, state and private insurance claims, procedural and diagnostic coding, and banking and accounting principles. Prerequisites: Acceptance into the Medical Assisting or Medical Front Office program, and permission of Program Director. Corequisites: MAS126 and permission of Program Director.

MAS128
Electronic Health Records for Medical Assisting
2 credit(s) 2 period(s) lecture + lab
Introduction to the electronic health record in the physician’s office, including health record content and structure, origin of clinical information and merging clinical information into the record, implementation of the electronic health record system, Health Insurance Portability and Accountability Act (HIPAA) regulations, and security measures for electronic health records (EHR). Prerequisites: Acceptance into the Medical Assisting or Medical Front Office program, and permission of the Program Director. Corequisites: MAS126 and MAS129, and permission of Program Director.

MAS129
Automated Computer System for Medical Office Management
2 credit(s) 4 period(s) lecture + lab
Principles and procedures in using an office automated computerized system for entering patient information and tracking patient billing, including basic computer navigation skills and use of accounting cycle from originating data to closing ledger entries. Prerequisites: Acceptance into the Medical Assisting or Medical Front Office program, and permission of Program Director. Corequisites: MAS126 and MAS128, and permission of Program Director.

MAS130
Orientation to the Pathophysiology and Psychology of Body Systems
1 credit(s) 1 period(s) lecture
Application of basic pathophysiology and psychology of body systems as they relate to an entry-level health care professional’s role. Prerequisites: A grade of “C” or better in (MAS126, MAS127, MAS128, and MAS129), acceptance into the Medical Assisting program, and permission of Program Director.

MAS210
Aseptic Techniques
1 credit(s) 3 period(s) lecture + lab
Fundamentals of microbial control. Includes procedures for sanitation, disinfection, and sterilization. Specimen collection and handling. Compliance with Occupational Safety and Health Administration (OSHA), the United States Centers for Disease Control and Prevention (CDC), and Clinical Laboratory Improvement Amendments (CLIA). Prerequisites: A grade of “C” or better in (MAS127, MAS128, and MAS129), acceptance into the Medical Assisting program, and permission of Program Director. Corequisites: MAS126 and MAS220, and permission of Program Director.
MAS220
Laboratory Testing in Patient Care Service Centers
1 credit(s) 1.5 period(s) lecture + lab
Basic Point of Care testing in a clinical setting. Includes procedures for urinalysis, whole blood hematology, glucose monitoring, cholesterol and coagulation testing. Specimen collection and handling. Compliance with Occupational Safety and Health Administration (OSHA) and the Clinical Laboratory Improvement Amendments (CLIA) regulations. Prerequisites: A grade of "C" or better in (MAS126, MAS127, MAS128, MAS129, and MAS210), acceptance into the Medical Assisting program, and permission of Program Director.

MAS230
Emergency in the Medical Office
1.5 credit(s) 1.5 period(s) lecture + lab
Emphasis on methods of identification and response to emergencies in a medical office. Prerequisites: Acceptance into the Medical Assisting program and permission of Program Director. Corequisites: MAS260 and permission of Program Director.

MAS240
Applied EKG
1 credit(s) 1.5 period(s) lecture + lab
Entry-level training to professionally perform, process, and explain the electrocardiogram. Overview of cardiac anatomy, physiology, and conduction systems. Overview of commonly encountered drugs in cardiac medicine. Data collection, selection, processing, and presentation for the appropriate medical/clinical professional to review. Selected specific non-invasive cardiac testing procedures. Prerequisites: Acceptance into the Medical Assisting program or permission of Program Director. Corequisites: MAS260 or permission of Program Director.

MAS260
Clinical Procedures
3 credit(s) 5 period(s) lecture + lab
Principles and procedures for the medical assistant. Methods of assisting clinicians with physical examinations, procedures, treatments, and minor surgical procedures in the medical office. Includes vital signs, height, and weight, collection of patient data and documentation. Prerequisites: (Acceptance into the Medical Assisting program), a grade of "C" or better in (MAS126, MAS127, MAS128, MAS129, MAS210, and SPA117), and permission of Program Director. Corequisites: MAS230 and MAS240.

MAS265
Administration of Medication
3 credit(s) 6 period(s) lecture + lab
Principles and procedures for administering medications. Includes classifications, uses, effects, legal regulations, calculating dosages, and correct terminology. Emphasis on oral and parenteral drug administration. Prerequisites: (Acceptance into the Medical Assisting program and permission of Program Director) and (a grade of "C" or better in (MAS125, MAS126, MAS127, MAS128, MAS129, MAS130, MAS210, MAS220, MAS230, MAS240, MAS260 and SPA117)). Corequisites: PLB109 and permission of Program Director.

MAT – Mathematics

MAT081
Basic Arithmetic
4 credit(s) 4 period(s) lecture
Primary emphasis placed on fundamental operations with whole numbers, fractions, decimals, integers, and rational numbers; proportions, and percentages. Other topics include representations of data, geometric figures, and measurement. Prerequisites: Satisfactory score on district placement exam. Course Notes: Students may receive credit for only one of the following: MAT081, MAT082, or MAT083.

MAT082
Basic Arithmetic
3 credit(s) 3 period(s) lecture
Primary emphasis placed on fundamental operations with whole numbers, fractions, decimals, integers, and rational numbers; proportions, and percentages. Other topics include representations of data, geometric figures, and measurement. Prerequisites: Satisfactory score on district placement exam. Course Notes: Students may receive credit for only one of the following: MAT081, MAT082, or MAT083.

MAT090
Developmental Algebra
5 credit(s) 5 period(s) lecture
Linear behavior, linear equations and inequalities in one and two variables; graphs; systems of equations in two variables; function notation, graphs, and data tables; operations on polynomials; properties of exponents; applications. Prerequisites: A grade of "C" or better in MAT082 or successful completion of required Maricopa Modules or satisfactory score on District placement exam. Course Notes: Students may receive credit for only one of the following: MAT090, MAT091, MAT092, or MAT093. MAT102, completed with a grade of "C" or better prior to Fall 2015, meets course prerequisite.
MAT091
Introductory Algebra
4 credit(s) 4 period(s) lecture
Linear behavior; linear equations and inequalities in one and two variables; graphs; systems of equations in two variables; function notation, graphs, and data tables; operations on polynomials; properties of exponents; applications. Prerequisites: A grade of "C" or better in MAT082 or successful completion of required Maricopa Modules or satisfactory score on District placement exam. Course Notes: Students may receive credit for only one of the following: MAT090, MAT091, MAT092, or MAT093. MAT102, completed with a grade of "C" or better prior to Fall 2015, meets course prerequisite.

MAT092
Introductory Algebra
3 credit(s) 3 period(s) lecture
Linear behavior; linear equations and inequalities in one and two variables; graphs; systems of equations in two variables; function notation, graphs, and data tables; operations on polynomials; properties of exponents; applications. Prerequisites: A grade of "C" or better in MAT082 or successful completion of required Maricopa Modules or satisfactory score on District placement exam. Course Notes: Students may receive credit for only one of the following: MAT090, MAT091, MAT092, or MAT093. MAT102, completed with a grade of "C" or better prior to Fall 2015, meets course prerequisite.

MAT108
Tutored Mathematics
2 credit(s) 2 period(s) lecture
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: MAT082, or MAT090, or MAT091, or MAT092, or MAT120, or MAT121, or MAT122, or MAT140, or MAT 141, or MAT 142, or MAT150, or MAT151, or MAT152, or permission of department chair. Course Note: MAT108 may be repeated for a total of ten (10) credits.

MAT112
Mathematical Concepts and Applications
3 credit(s) 3 period(s) lecture
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: A grade of "C" or better in MAT090, or MAT091, or MAT092, or MAT093, or successful completion of Maricopa modules, or satisfactory score on District placement exam.

MAT120
Intermediate Algebra
5 credit(s) 5 period(s) lecture
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 MAT090, or MAT091, or MAT092, or MAT093), or successful completion of required Maricopa Modules, or satisfactory score on District placement exam. Course Note: Students may receive credit for only one of the following: MAT120, MAT121, or MAT122. MAT121
Intermediate Algebra
5 credit(s) 5 period(s) lecture
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 MAT090, or MAT091, or MAT092, or MAT093), or successful completion of required Maricopa Modules, or satisfactory score on District placement exam. Course Note: Students may receive credit for only one of the following: MAT120, MAT121, or MAT122. MAT122
Intermediate Algebra
3 credit(s) 3 period(s) lecture
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 MAT090, or MAT091, or MAT092, or MAT093), or successful completion of required Maricopa Modules, or satisfactory score on District placement exam. Course Note: Students may receive credit for only one of the following: MAT120, MAT121, or MAT122. MAT140
College Mathematics
5 credit(s) 5 period(s) lecture
College-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include set theory, probability, statistics, finance, and geometry. Prerequisites: (A grade of "C" or better in MAT090, or MAT091, or MAT092, or MAT093), or successful completion of Maricopa Modules, or satisfactory score on District placement exam, or a grade of "C" or better in MAT120, or MAT121, or MAT122. Course Notes: Students may receive credit for only one of the following: MAT140, MAT141, or MAT142. MAT150
College Algebra/Functions
5 credit(s) 5 period(s) lecture
Analysis and interpretation of the behavior and nature of functions including polynomial, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, modeling and solving real world problems. Additional topics may include matrices, combinatorics, sequences and series, and conics. Prerequisites: Grade of C or better in MAT120, or MAT121, or MAT122, or equivalent, or satisfactory score on District placement exam. Course Notes: Students may receive credit for only one of the following: MAT150, MAT151, MAT152, or MAT187.
MAT151 SUN MAD 1151  
College Algebra/Functions  
4 credit(s) 4 period(s) lecture  
Analysis and interpretation of the behavior and nature of functions including polynomial, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, modeling and solving real world problems. Additional topics may include matrices, combinatorics, sequences and series, and conics.  
Prerequisites: Grade of "C" or better in MAT120, MAT121, MAT122, equivalent, or satisfactory score on District placement exam.  
Course Note: May receive credit for only one of the following: MAT150, MAT151, MAT152, or MAT187.  

MAT152  
College Algebra/Functions  
3 credit(s) 3 period(s) lecture  
Analysis and interpretation of the behavior and nature of functions including polynomial, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, modeling and solving real world problems. Additional topics may include matrices, combinatorics, sequences and series, and conics.  
Prerequisites: Grade of "B" or better in MAT120, or MAT121, or MAT122, or equivalent, or satisfactory score on District placement exam.  

MAT182  
Plane Trigonometry  
3 credit(s) 3 period(s) lecture  
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: Grade of "C" or better in MAT120, or MAT150, or MAT151, or MAT152, or equivalent, or concurrent registration in MAT150, or MAT151, or MAT152, or satisfactory score on District placement exam.  

MAT187 SUN MAD 1187  
Precalculus  
5 credit(s) 5 period(s) lecture  
A precalculus course combining topics from college algebra and trigonometry. Preparation for analytic geometry and calculus.  
Prerequisites: Grade of "B" or better in MAT120, or MAT121, or MAT122, or equivalent, or satisfactory score on district placement exam.  
Course Note: Strongly recommended that students have some knowledge of trigonometry. Students may receive credit for only one of the following: MAT150, MAT151, MAT152, or MAT187.  

MAT206 SUN MAD 1160  
Elements of Statistics  
3 credit(s) 3 period(s) lecture  
Basic concepts and applications of statistics, including data description, estimation and hypothesis tests.  
Prerequisites: A grade of "C" or better in MAT140 or MAT141 or MAT142 or (A grade of "C" or better in MAT150 or MAT151 or MAT152) or equivalent, or satisfactory score on District placement exam.  

MAT212 SUN MAD 2212  
Brief Calculus  
3 credit(s) 3 period(s) lecture  
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: Grade of C or better in MAT150, or MAT151, or MAT152, or MAT187, or appropriate Math placement test score.  
Course Note: Students may receive credit for only one of the following: MAT212 or MAT213.  

MAT213  
Brief Calculus  
4 credit(s) 4 period(s) lecture  
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: Grade of C or better in MAT150, or MAT151, or MAT152, or MAT187, or appropriate Math placement test score.  
Course Note: Students may receive credit for only one of the following: MAT212 or MAT213.  

MAT217  
Mathematical Analysis for Business  
3 credit(s) 3 period(s) lecture  
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: Grade of C or better in MAT220 or MAT221.  

MAT220 SUN MAD 2220  
Calculus with Analytic Geometry I  
5 credit(s) 5 period(s) lecture  
Limits, continuity, differential and integral calculus of functions of one variable.  
Prerequisites: Grade of "C" or better in [MAT182 and (MAT150, MAT151 or MAT152)], or MAT187, or appropriate Math placement test score.  
Course Note: Students may receive credit for only one of the following: MAT220 or MAT221.  

MAT221  
Calculus with Analytic Geometry I  
4 credit(s) 4 period(s) lecture  
Limits, continuity, differential and integral calculus of functions of one variable.  
Prerequisites: Grade of C or better in [MAT182 and (MAT150, MAT151 or MAT152)], or MAT187, or appropriate Math placement test score.  
Course Note: Students may receive credit for only one of the following: MAT220 or MAT221.  

MAT225  
Elementary Linear Algebra  
3 credit(s) 3 period(s) lecture  
Introduction to matrices, systems of linear equations, determinants, vector spaces, linear transformations and eigenvalues. Emphasizes the development of computational skills.  
Prerequisites: Grade of "C" or better in MAT212 or MAT220, or MAT221, or equivalent.  

MAT230 SUN MAD 2230  
Calculus with Analytic Geometry II  
5 credit(s) 5 period(s) lecture  
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: Grade of "C" or better in MAT220 or MAT221 or equivalent.  
Course Note: Student may receive credit for only one of the following: MAT230 or MAT231.  

MAT240  
Calculus with Analytic Geometry III  
5 credit(s) 5 period(s) lecture  
Multivariate calculus including vectors, vector-valued functions, partial differentiation, multiple integration, and an introduction to vector fields.  
Prerequisites: Grade of "C" or better in MAT230 or MAT231.  
Course Note: Student may receive credit for only one of the following: MAT240 or MAT241.
MAT256
Investigating Quantity: Number, Operations and Numeration Systems
4 credit(s) 4 period(s) lecture
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 (MAT150 or MAT151 or MAT152 or higher), or a grade of ‘C’ or better in [MAT120 or MAT121 or MAT122] and (MAT140 or MAT141 or MAT142 or higher), or [a grade of ‘C’ or better in (MAT140 or MAT141 or MAT142) and satisfactory score on District placement exam to permit enrollment in (MAT150 or MAT151 or MAT152 or higher)]. Course Notes: MAT256 is designed to meet requirements for prospective elementary education teachers.

MAT257
Investigating Geometry, Probability and Statistics
4 credit(s) 4 period(s) lecture
Explores geometry, measurement, probability and statistics. Uses visualization, technologies, problem solving, reasoning and proof to develop a conceptual understanding of these topics. Prerequisites: MAT256 or permission of Instructor. Course Notes: MAT257 is designed to meet the requirements for prospective elementary education teachers.

MAT276
Modern Differential Equations
4 credit(s) 4 period(s) lecture
Introduces differential equations, theoretical and practical solution techniques with applications. Problem solving using MATLAB. Prerequisites: Grade of ‘C’ or better in MAT230, or MAT231, or permission of Department or Division. Course Notes: Students may receive credit for only one of the following: MAT276 or MAT277.

MDL – Medical Laboratory Science

MDL190
Clinical Laboratory Operations
2 credit(s) 2 period(s) lecture
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, 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. Prerequisites: Acceptance into the Medical Laboratory Science program and permission of Program Director.

MDL240
Clinical Urinalysis and Body Fluid Analysis
3 credit(s) 5 period(s) lecture + lab
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 MDL240, acceptance into the Medical Laboratory Science program, and permission of the Program Director.

MDL241
Practicum: Clinical Urinalysis and Body Fluid Analysis
1 credit(s) 6 period(s) lab
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 control. Performance of body fluid analyses and chemical and microscopic analysis of urine. Prerequisites: A grade of ‘C’ or better in MDL240, acceptance into the Medical Laboratory Science program, and permission of the Program Director.

MDL242
Clinical Hematology and Hemostasis
6 credit(s) 9 period(s) lecture + lab
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.

MDL243
Practicum: Clinical Hematology and Hemostasis
1 credit(s) 6 period(s) lab
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.

For additional information on MCCCD course competencies, visit: http://www.maricopa.edu/academic/ccta/
**MDL244**

**Clinical Immunohematology and Immunology**

*6 credit(s) 9 period(s) lecture + lab*

Principles of immunity and immunologic testing. Causes of disorders of the immune system. Study of blood group antigens, antibodies, and genetics. Understanding 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 MDL242, acceptance into the Medical Laboratory Science program, and permission of the Program Director.

**MDL245**

**Practicum: Clinical Immunohematology and Immunology**

*1 credit(s) 6 period(s) lab*

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.

**MDL246**

**Clinical Microbiology**

*6 credit(s) 9 period(s) lecture + lab*

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 MDL246, acceptance into the Medical Laboratory Science program, and permission of the Program Director.

**MDL247**

**Practicum: Clinical Microbiology**

*1 credit(s) 9 period(s) lab*

Practicum experience in clinical microbiology based in healthcare facilities or reference laboratories. 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. **Prerequisites:** A grade of "C" or better in MDL247 and MDL249, acceptance into the Medical Laboratory Science program, and permission of Program Director.

**MDL248**

**Clinical Chemistry**

*6 credit(s) 9 period(s) lecture + lab*

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, 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.

**MDL249**

**Practicum: Clinical Chemistry**

*1 credit(s) 9 period(s) lab*

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 MDL247 and MDL249, acceptance into the Medical Laboratory Science program, and permission of Program Director.

**MDL290**

**Medical Laboratory Science Program Review**

*2 credit(s) 2 period(s) lecture*

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 a professional practice resume, personalized test taking strategies and examination study plan. Maintenance of professional competency and lifelong learning and enhancing professional practice. **Prerequisites:** A grade of "C" or better in MDL247 and MDL249, acceptance into the Medical Laboratory Science program, and permission of Program Director.

**MDL295AA**

**Special Topics: Medical Laboratory Science**

*1 credit(s) 2 period(s) lecture + lab*

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. **Course Note:** May be repeated for a total of three (3) credit hours.
MGT253
Own and Operating a Small Business
3 credit(s) 3 period(s) lecture
Starting, organizing, and operating a small business, including location, finance management processes, advertisement and promotion, credit, inventory control and ethics. Prerequisites: None.

MGT270AA
Management Internship
1 credit(s) 1 period(s) lecture + lab
Management work experience in a business or industry. 80 hours of designated work per credit. Prerequisites: Permission of Department or Division. Course Notes: MGT270AA may be repeated for a total of (3) credit hours.

MGT270AB
Management Internship
2 credit(s) 2 period(s) lecture + lab
Management work experience in a business or industry. 80 hours of designated work per credit. Prerequisites: Permission of Department or Division. Course Notes: MGT270AB may be repeated for a total of six (6) credit hours.

MGT270AC
Management Internship
3 credit(s) 3 period(s) lecture + lab
Management work experience in a business or industry. 80 hours of designated work per credit. Prerequisites: Permission of Department or Division. Course Notes: MGT270AC may be repeated for a total of six (6) credit hours.

MGT276
Personnel/Human Resources Management
3 credit(s) 3 period(s) lecture
Human resource planning, staffing, training, compensating, and appraising employees in labor-management relationships. Prerequisites: None, MGT101, or MGT175, or MGT229 suggested but not required.

MGT286
Human Resource Employment Management
3 credit(s) 3 period(s) lecture
Techniques and methodologies 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, employee selection and placement within a human resources division. Prerequisites: MGT276 or permission of department.

MGT229
Management and Leadership I
3 credit(s) 3 period(s) lecture
Covers management concepts and applications for business, industry, and government organizations. Prerequisites: None.

MGT230
Management and Leadership II
3 credit(s) 3 period(s) lecture
Includes practical applications of activities, issues and problems related to current managerial and supervisory skills and talents. Prerequisites: MGT229 or departmental approval.

MGL251
Human Relations in Business
3 credit(s) 3 period(s) lecture
Analysis of motivation, leadership, communications, and other human factors. Cultural differences that may create conflict and affect morale within organizations. Prerequisites: None, MGT101, or MGT175, or MGT229 suggested but not required.

MGT25
Human Relations in Business
3 credit(s) 3 period(s) lecture
Analysis of motivation, leadership, communications, and other human factors. Cultural differences that may create conflict and affect morale within organizations. Prerequisites: None, MGT101, or MGT175, or MGT229 suggested but not required.

MHA140
Survey of Music History
3 credit(s) 3 period(s) lecture
Study of composers, compositions, styles, and periods in music history. Prerequisites: None.

MHA143
Music in World Cultures
3 credit(s) 3 period(s) lecture
Non-European musical traditions including the study of music in rituals, musical instruments and the impact of cultures on musical styles. Prerequisites: None.

MHA145
American Jazz and Popular Music
3 credit(s) 3 period(s) lecture
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.

MHA146
Survey of Broadway Musicals
3 credit(s) 3 period(s) lecture
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.

MHA153
Rock Music and Culture
3 credit(s) 3 period(s) lecture
History of rock music and how cultural, social, political, and economic conditions have shaped its evolution. Prerequisites: None.

MHA155
Survey of American Music
3 credit(s) 3 period(s) lecture
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 have influenced our modern American musical sense. Prerequisites: None.

MHA241
Music History and Literature to 1750
3 credit(s) 3 period(s) lecture
In-depth study of music history from the primitive era through the Baroque period. Prerequisites or Corequisites: MTC155 and MTC156, or permission of Instructor.
MHL242
Music History and Literature 1750 to Present
3 credit(s) 3 period(s) lecture
In-depth study of music history from the Classical period through the Contemporary period. Prerequisites: MHL241 or permission of instructor.

MKT271
Marketing and Social Networking
3 credit(s) 3 period(s) lecture
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 social media campaigns. Prerequisites: None.

MKT/TEC151
Display and Visual Merchandising
3 credit(s) 4 period(s) lecture + lab
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.

MKT268
Merchandising
3 credit(s) 3 period(s) lecture
Surveys structure and operation of retail organizations. Emphasizes merchandising to include price, location, time promotion and quantity. Prerequisites: None. MKT271 suggested but not required.

MKT273
Marketing Research
3 credit(s) 3 period(s) lecture
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: MKT271 or permission of Instructor.

MKT/TEC109
Introduction to Fashion Merchandising
3 credit(s) 3 period(s) lecture
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.

MKT101
Introduction to Public Relations
3 credit(s) 3 period(s) lecture
Introduces problem-solving methods, critical thinking, decision-making, and group cohesion as applied in a military environment. Prerequisites: None.

MKT263
Advertising Principles
3 credit(s) 3 period(s) lecture
Introduces the advertising function within business, including media study, creative strategies, and advertising campaigns. Prerequisites: None. MKT271 suggested, but not required.

MKT267
Principles of Salesmanship
3 credit(s) 3 period(s) lecture
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.

MKT/TEC200
Retail Buying
3 credit(s) 3 period(s) lecture
Examines management/buyer role in investment, pricing, planning, controlling sales and inventories. Prerequisites: None. Any BPC/CIS spreadsheet course recommended.

MMT – Multimedia Technology

MMT/TEC109
Computer Animation
3 credit(s) 3 period(s) lecture
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: ART100, or ART111, or ART116, or permission of instructor.

MKT101
Introduction to Public Relations
3 credit(s) 3 period(s) lecture
Emphasizes public relations techniques used both within and outside the business organization, including operation of a PR counseling firm. Prerequisites: None.

MKT267
Principles of Salesmanship
3 credit(s) 3 period(s) lecture
Provides a basic understanding of the retail buying process used to define and develop a retail buying function. Prerequisites: None.
MMT/ART185
3-D Modeling for Animation
3 credit(s) 6 period(s) lecture + lab
Basic concepts of 3-D modeling. Anatomy of computer geometry; basic elements that make computer models-curves, surfaces, nurbs, and polygons. 3-D translation, shading, materials, and rendering. Prerequisites: ART/MMT184 or ART184AC or permission of the instructor.

MMT216
Multimedia Project Management
3 credit(s) 6 period(s) lecture + lab
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 RFP’s (Request For Proposal). Prerequisites: CIS/MMT140, or permission of Instructor.

MMT292
Multimedia Update
1 credit(s) 2 period(s) lecture + lab
Exploration and comparative analysis of the newest hardware and software products and packages on the market designed to enhance or replace existing multimedia technology. Prerequisites: CIS/MMT140 or permission of Instructor.

MTC – Music: Theory/Composition

MTC101
Introduction to Music Theory
3 credit(s) 3 period(s) lecture
Designed to develop written and aural skills necessary for advanced study of music theory and skills. Recommended for music majors. Prerequisites: None.

MTC103
Introduction to Aural Perception
1 credit(s) 2 period(s) lecture + lab
An introduction to the aural skills necessary to hear relationships of intervals, rhythms, melody, and harmony in music. May be repeated for a total of four (4) credit hours. Prerequisites: None. Course Notes: MTC103 may be repeated for a total of two (2) credit hours.

MTC105
Music Theory I
3 credit(s) 3 period(s) lecture
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: MTC100 or MTC101 or permission of instructor. Corequisite: MTC106.

MTC106
Aural Perception I
1 credit(s) 2 period(s) lecture + lab
The development of listening and performing skills through dictation, sight singing and keyboard harmony. Prerequisites: None. Corequisite: MTC105.

MTC/TCM120
Introduction to Sound Design for Film and Video
3 credit(s) 3 period(s) lecture
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: (TCM100 and TCM136) or permission of instructor.

MTC155
Music Theory II
3 credit(s) 3 period(s) lecture
A continuation of Music Theory I with emphasis on harmony and part-writing procedures. Prerequisites: MTC105. Corequisites: MTC156.

MTC156
Aural Perception II
1 credit(s) 2 period(s) lecture + lab
A continuation of Aural Perception I, including harmonic practices. Prerequisites: None. Corequisites: MTC155.

MTC191
Electronic Music I
3 credit(s) 4 period(s) lecture + lab
An introduction to producing music with Musical Instrument Digital Interface (MIDI) configuration consisting of computers, printers, synthesizers, and other compatible MIDI instruments. Prerequisites: None.

MTC192
Electronic Music II
3 credit(s) 4 period(s) lecture + lab
Continued study of the production of music with Musical Instrument Digital Interface (MIDI) configurations. Emphasis on more complex configurations and their applications in song arrangements. Prerequisites: MTC191.

MTC193
Computer-Based Sound Synthesis
3 credit(s) 4 period(s) lecture + lab
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: MTC191 or permission of instructor.

MTC205
SUN MUS 2222
Music Theory III
3 credit(s) 3 period(s) lecture
The study of chromatic harmony and melody, modulation techniques and expanded chords. The analysis of formal structure. Prerequisites: MTC155. Corequisites: MTC206.

MTC206
SUN MUS 2222
Aural Perception III
1 credit(s) 2 period(s) lecture + lab
A development of listening and performing skills, including an introduction of chromatic harmonic techniques and concepts of style. Prerequisites: None. Corequisites: MTC205.

MTC/TCM220
Advanced Sound Design for Film and Video
3 credit(s) 5 period(s) lecture and lab
Explores techniques and advanced applications used in designing sound using original student footage on a non-linear editing system. Prerequisites: MTC/TCM120 or permission of Instructor.

MTC240
Composition
3 credit(s) 0.6 period(s) lecture + lab
Introduction to the basics of music composition, stressing techniques and procedures for developing original ideas. May be repeated for total of twelve (12) credit hours. Prerequisites: (MTC106 and MTC105, or equivalent), and permission of Instructor.

MTC255
SUN MUS 2223
Music Theory IV
3 credit(s) 3 period(s) lecture
A continuation of Music Theory III, including 20th century theories and techniques. Prerequisites: MTC205. Corequisites: MTC256.

MTC256
SUN MUS 2223
Aural Perception IV
1 credit(s) 2 period(s) lecture + lab
A continuation of Aural Perception III, including extended chords. Prerequisites: None. Corequisites: MTC255.
MTC291
Electronic Music III
3 credit(s) 4 period(s) lecture + lab
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: MTC192.

MUC – Music: Commercial/ Business

MUC109
Music Business: Merchandising and the Law
3 credit(s) 3 period(s) lecture
Operation, scope, and career opportunities in the music business. Focuses on music in the marketplace, songwriting, publishing, copyright procedures, and business affairs, agents, artist management, and concert production. Prerequisites: None.

MUC110
Music Business: Recording and Mass Media
3 credit(s) 3 period(s) lecture
The operation, scope, and career opportunities in the music business. Focuses on the record industry; environmental music; uses of music in radio, telecommunications, and film; and career options. Prerequisites: None.

MUC111
Digital Audio Workstation I (DAW I)
3 credit(s) 5 period(s) lecture + lab
Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management. Prerequisites: MUC195, or MUC195AA, or TCM/VPT105, or permission of Instructor.

MUC112
Digital Audio Workstation II (DAW II)
3 credit(s) 5 period(s) lecture + lab
Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management. Prerequisites: MUC111, and (MUC195 or MUC195AA).

MUC122
Sound Design I
3 credit(s) 5 period(s) lecture + lab
Introduction to Sound Design and Audio Post-Production for Multimedia. Includes creating and editing Sound Effects, ADR, Foley, Music, and Ambience, for multiple mediums 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: MTC191 or TCM/VPT105. Prerequisites or Corequisites: MUC111 or permission of Instructor.

MUC195
Studio Music Recording I
3 credit(s) 5 period(s) lecture + lab
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.

MUC196
Studio Music Recording II
3 credit(s) 5 period(s) lecture + lab
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: MUC195 or MUC195AA.

MUC197
Live Sound Reinforcement I
3 credit(s) 3 period(s) lecture + lab
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.

MUC198
Live Sound Reinforcement II
3 credit(s) 3 period(s) lecture
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: MUC197.

MUC209
Music Industry Entrepreneurship
3 credit(s) 3 period(s) lecture
Operation, scope, and career opportunities in the music business. Focuses on music in the areas of entrepreneurship, visionary development and the collaboration process. Prerequisites: MUC109 and MUC110 or permission of Instructor.

MUC222
Sound Design II
3 credit(s) 5 period(s) lecture + lab
Intermediate level Sound Design and Audio Post-Production for Multimedia. Topics include: creating and editing Sound Effects, Automated Dialogue Replacement, Foley, Music, and Ambience for multiple mediums such as Film, TV, Video Gaming, Theatre, and Dance. Emphasis on computer assisted production using Digital Audio Workstations and acoustic forces. Prerequisites: MUC122 or MTC/TMC120, or permission of Instructor.

MUC290AA
Music Business Internship
1 credit(s) 1 period(s) lecture + lab
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. Course Notes: MUC290AA may be repeated for a total of twelve (12) credit hours.

MUC292
Sound Design III
3 credit(s) 6 period(s) lecture + lab
Sound Design Production for Multimedia: includes Sound Effects, Music Composition/Arranging, and Studio Recording Production for one or more mediums such as Film, TV, Gaming, Theatre, and Dance. Emphasis on computer assisted production using Digital Audio Workstations and acoustic forces. Structured 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: (MTC105, MTC106, MTC192, MTC/TMC120, MUC112, MUC196, and MUC222), or permission of Instructor.

MUC295
Studio Music Recording III
3 credit(s) 6 period(s) lecture + lab
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: MUC196.

MUC295AA
Self Promotion for Music
1 credit(s) 1 period(s) lecture
Career goal development. Includes self-presentation and communication skills, keeping files and records, and developing self-promotional materials. Prerequisites: None.

MUC297AA
Music Internship
1 credit(s) 1 period(s) lecture + lab
Music Internship work experience in a business or industry. Eighty (80) hours of designated work per credit. A maximum of 12 credits allowed. Prerequisites: Permission of department.

The Course Equivalency Guide (CEG) shows how courses transfer from community college to ASU, NAU and U of A.

Visit www.aztransfer.com
## MUE – Music: Education

### MUE240

**Introduction to Choral Methods**

2 credit(s) 3 period(s) lecture + lab

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.

### MUP – Music: Performance

#### MUP101, MUP151, MUP201, MUP251

**Private Instruction**

1 credit(s) 0.6 period(s) lecture + lab

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. May be repeated for credit. **Prerequisites:** None.

#### MUP102, MUP152, MUP202, MUP252

**Private Instruction**

2 credit(s) 1.2 period(s) lecture + lab

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. May be repeated for credit. **Prerequisites:** None.

#### MUP123AB

**Studio Class/Voice**

0.5 credit(s) 0.5 period(s) lecture + lab

Performance and laboratory class for students enrolled in private voice instruction. Emphasis on demonstration and discussion of specific vocal problems. **Prerequisites:** None. **Corequisites:** Private Voice Instruction. **Course Notes:** MUP123AB may be repeated for credit.

#### MUP123AD

**Studio Class: Instrumental**

0.5 credit(s) 0.5 period(s) lecture + lab

Performance and laboratory class for students enrolled in private instrumental instruction. Emphasis on demonstration and discussion of specific instrumental problems. **Prerequisites:** None. **Corequisites:** Private Instrumental Instruction. **Course Notes:** MUP123AD may be repeated for credit.

### MUP130

**Beginning Group Piano**

2 credit(s) 3 period(s) lecture + lab

Basic introduction to playing piano through music reading, chords, rhythmic, and written activities. Designed for those with little or no piano experience. **Prerequisites:** None.

### MUP131

**Class Piano I**

2 credit(s) 3 period(s) lecture + lab

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.

### MUP132

**Class Piano II**

2 credit(s) 3 period(s) lecture + lab

Continuation of Piano I with emphasis on elementary piano techniques including major and minor scales, transposition, improvisation, and sight reading. **Prerequisites:** MUP131 or permission of instructor.

### MUP133

**Class Voice I**

2 credit(s) 3 period(s) lecture + lab

Introduction to the fundamentals of vocal production. Emphasis on breathing techniques, tone production and performances in class of solo vocal literature. **Prerequisites:** None.

### MUP134

**Class Voice II**

2 credit(s) 3 period(s) lecture + lab

Continuation of Class Voice I including the elements of stage presence and diction. **Prerequisites:** MUP133 or permission of instructor.

### MUP150

**Community Chorus**

1 credit(s) 3 period(s) lecture + lab

A mixed chorus with emphasis on college/community participation and preparation of a variety of choral literature for public performance. Auditions may be required. May be repeated for credit. **Prerequisites:** None.

### MUP153

**Concert Choir**

2 credit(s) 5 period(s) lecture + lab

A mixed choir designed to emphasize choral techniques and performance of all styles of choral literature. Public performances are scheduled each semester. **Prerequisites:** None. **Course Notes:** Auditions may be required. MUP153 may be repeated for credit.

### MUP155

**Handbell Choir (Bell Canto)**

1 credit(s) 3 period(s) lecture + lab

Emphasis on practical and performing skills in bell ringing. Preparation of all styles of bell literature. Scheduled public performances during the year. **Prerequisites:** None. **Course Note:** May be repeated for credit.

### MUP159

**Community Orchestra**

1 credit(s) 3 period(s) lecture + lab

Emphasis on college/community participation and the preparation of orchestral literature for public performance. **Prerequisites:** None. **Course Notes:** MUP159 may be repeated for credit. Auditions may be required.

### MUP161

**Community Band**

1 credit(s) 3 period(s) lecture + lab

Emphasis on college/community participation and the preparation of wind literature for public performance. Auditions may be required. May be repeated for credit. **Prerequisites:** None.

### MUP162

**Band**

2 credit(s) 5 period(s) lecture + lab

A class designed to emphasize instrumental techniques and the preparation of all styles of band literature. Public performances are scheduled during the year. Auditions may be required. May be repeated for credit. **Prerequisites:** None.

### MUP163

**Jazz Ensemble**

1 credit(s) 3 period(s) lecture + lab

Practical and performance experience in various jazz styles. Open to all students on the basis of auditions. May be repeated for credit. **Prerequisites:** None.
MUP164
Jazz Improvisation I
2 credit(s) 2 period(s) lecture
Theoretical and performance skills in many styles of jazz improvisation. May be repeated for a total of six (6) credit hours. Prerequisites: None.

MUP165
Jazz Improvisation II
2 credit(s) 3 period(s) lecture
Intermediate theoretical and performance skills in many styles of jazz improvisation. May be repeated for a total of six (6) credit hours. Prerequisites: MUP164 or permission of instructor.

MUP181
Chamber Music Ensembles
1 credit(s) 2 period(s) lecture + lab
Practical and performance experience in instrumental, vocal, and mixed ensembles. May be repeated for credit. Prerequisites: None.

MUP182
Chamber Singers
1 credit(s) 3 period(s) lecture + lab
Practical and performance experience in various styles of vocal music. Open to all students on the basis of auditions. May be repeated for credit. Prerequisites: None.

MUP190
Percussion Ensemble
1 credit(s) 3 period(s) lecture + lab
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. Course Note: May be repeated for credit.

MUP209
Elements of Conducting
2 credit(s) 2 period(s) lecture
Essentials of conducting techniques used in choral and instrumental ensembles including terminology, interpretation, and styles. Prerequisites: None.

MUP225
Class Guitar I
2 credit(s) 3 period(s) lecture + lab
Emphasis on note-reading and folk-style harmonic accompaniment. Includes finger-style playing. Stresses development of efficient practicing techniques and proper sitting and hand positions. Prerequisites: None.

MUP226
Class Guitar II
2 credit(s) 3 period(s) lecture + lab
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: MUP225 or permission of instructor.

MUP227
Class Guitar III
2 credit(s) 3 period(s) lecture + lab
Additional fingerboard positions. Ensemble techniques and performance. Prerequisites: MUP226 or permission of instructor.

MUP228
Class Guitar IV
2 credit(s) 3 period(s) lecture + lab
Advanced fingerboard positions. Duet and trio performances. Advanced ensemble techniques. Prerequisites: MUP227 or permission of instructor. Course Notes: MUP228 may be repeated for credit.

MUP231
Class Piano III
2 credit(s) 3 period(s) lecture + lab
Development of intermediate piano techniques including selected solo literature, transposition of harmonic patterns, and secondary dominants. Prerequisites: MUP132 or permission of instructor.

MUP232
Class Piano IV
2 credit(s) 3 period(s) lecture + lab
Continuation of Piano III including modulation techniques, improvisation of piano accompaniments, advanced chromatic harmony, and sight reading of advanced literature. Prerequisites: MUP231 or permission of instructor.

MUP233
Class Voice III
2 credit(s) 3 period(s) lecture + lab
Interpretive singing through a closer examination of coloring, tone production, dynamics, and tempo indications. Prerequisites: MUP134.

MUP234
Class Voice IV
2 credit(s) 3 period(s) lecture + lab
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: MUP233 or permission of Instructor. Course Notes: MUP234 may be repeated for credit.

MUP250AB
Survey of Diction for Singers (Italian/Latin)
1 credit(s) 2 period(s) lecture + lab
Introduction to the use of phonetics in the study of Italian/Latin song literature. Prerequisites: None.

MUP250AC
Survey of Diction for Singers (German)
1 credit(s) 2 period(s) lecture + lab
Introduction to the use of phonetics in the study of German song literature. Prerequisites: None.

NAV – Navajo

NAV101
Elementary Navajo I
4 credit(s) 4 period(s) lecture
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.

NAV102
Elementary Navajo II
4 credit(s) 4 period(s) lecture
Continued study of grammar, pronunciation, and vocabulary of the Navajo language. Emphasis on listening, speaking, reading, and writing skills. Prerequisites: NAV101 or permission of department. Completion of prerequisites within the last three years is required. Course Note: Includes the study of the Navajo culture with participation in an off-campus Navajo cultural event.
NUR – Nursing Science: Basic

NUR151 Nursing Theory and Science I
10 credit(s) 20 period(s) lecture and lab
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, communication and physical, biological, and psycho-social sciences. Uses information technology in performing and evaluating client care. Prerequisites: Admission into the Nursing Program.

NUR171 Nursing Theory and Science II
8 credit(s) 16 period(s) lecture and lab
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: NUR151 or permission of Nursing Department Chairperson.

NUR191 Practical Nursing Transition
3 credit(s) 5 period(s) lecture + lab
Overview of the role of the practical nurse in care of clients. Includes nursing standards and scope of practice of the practical nurse. Emphasis on nursing care related to pediatric and care of the well childbearing client and childbearing family. Focus on the role of practical nurse in providing care through interventions consistent with established nursing care plans. Prerequisites: NUR171 or permission of Nursing Department Chair.

NUR251 Nursing Theory and Science III
8 credit(s) 16 period(s) lecture and lab
Application of critical thinking strategies related to holistic care of the newborn, pediatric, and 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. Prerequisites: (BIO202, BIO205, and NUR171) or permission of Nursing Department Chairperson.

NUR271 Nursing Theory and Science IV
7 credit(s) 13 period(s) lecture and lab
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 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. Prerequisites: NUR251 or permission of Nursing Department Chairperson.

PAD – Public Administration

PAD100 21st Century Public Policy and Service
3 credit(s) 3 period(s) lecture
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.

PAD200 Public Affairs Economics
3 credit(s) 3 period(s) lecture
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: PAD100 or permission of Instructor.

PED – Physical Education

PED101s Physical Activities: Basic
1 credit(s) 2 period(s) lecture + lab
Individual, dual, or team sports activities at the basic level. Prerequisites: None. Course Note: PED101 may be repeated for credit.

PED102s Physical Activities: Intermediate
1 credit(s) 2 period(s) lecture + lab
Individual, dual, or team sports activities at the intermediate level. Prerequisites: None. Prior experience recommended. Course Note: PED102 may be repeated for credit.

PED103s Physical Activities: Basic
0.5 credit(s) 1 period(s) lecture + lab
Individual, dual, or team sports activities at the basic level. Prerequisites: None. Course Note: PED103 may be repeated for credit.

PED105 Army Master Fitness
1 credit(s) 3 period(s) lecture + lab
Introduces the student to the Army Master Fitness Program. Designed to enhance the student’s level of individual fitness and wellness. Prerequisites: None. Course Note: The course is taught at the ASU Tempe Campus. Contact the Army ROTC Department.
**PED111 Aerobics**
1.5 credit(s) 3 period(s) lecture + lab
Aerobic 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 Fitness**
1.5 credit(s) 3 period(s) lecture + lab
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. **Course Note:** PED114 may be repeated for credit.

**PED115 Lifetime Fitness**
2 credit(s) 4 period(s) lecture + lab
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. **Course Note:** PED115 may be repeated for a total of eight (8) credit hours.

**PED116 Cardiovascular Fitness**
2 credit(s) 4 period(s) lecture + lab
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. **Course Note:** PED116 may be repeated for a total of eight (8) credits.

**PED117 Weight Training for Wellness**
2 credit(s) 4 period(s) lecture + lab
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 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. **Prerequisites:** None. **Course Note:** PED117 may be repeated for a maximum of eight (8) credits.

**PED201s Physical Activities: Advanced**
1 credit(s) 2 period(s) lecture + lab
Individual, dual, or team sports activities at the advanced level. **Prerequisites:** None. Prior experience at competitive level recommended. **Course Note:** PED201 may be repeated for credit.

### PHI – Philosophy

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| PHI101 | Introduction to Philosophy | PHI 1101 | 3 credit(s) 3 period(s) lecture
General consideration of human nature and the nature of the universe. Knowledge, perception, freedom and determinism, and the existence of God. **Prerequisites:** None. |
| PHI103 | Introduction to Logic | PHI 1103 | 3 credit(s) 3 period(s) lecture
Informal logic, logical fallacies, elementary symbolic logic, analysis of argument forms, and construction of proofs for validity. **Prerequisites:** ENG101 or ENG107 or equivalent. |
| PHI105 | Introduction to Ethics | PHI 1105 | 3 credit(s) 3 period(s) lecture
A survey of ethical theory in Western Philosophy, including the major normative theories and selected metaethical theories. **Prerequisites:** None. |
| PHI212 | Contemporary Moral Issues | PHI 1111 | 3 credit(s) 3 period(s) lecture
Philosophical consideration of such moral issues as civil disobedience, preferential treatment, abortion, privacy, sexual morality, and poverty and hunger. **Prerequisites:** None. |
| PHI213 | Medical and Bio-Ethics | PHI 1112 | 3 credit(s) 3 period(s) lecture
A philosophical consideration of moral problems that arise in relation to medicine and biology, e.g., death, patient rights and biological experimentation. **Prerequisites:** None. |
| PHI216 | Environmental Ethics | PHI 1113 | 3 credit(s) 3 period(s) lecture
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. |
| PHI218 | Philosophy of Sexuality | PHI 1114 | 3 credit(s) 3 period(s) lecture
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:** ENG101, or ENG107, or permission of Instructor. Student must be 18 years or older. |

### PHS – Physical Science

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| PHS10 | Fundamentals of Physical Science | | 4 credit(s) 6 period(s) lecture and lab
Survey of the principles of physics and chemistry. **Prerequisites:** Grade of “C” or better in MAT090, or MAT091, or MAT092, or MAT093, or equivalent, or satisfactory score on Math placement exam. |

### PHY – Physics

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| PHY101 | Introduction to Physics | | 4 credit(s) 6 period(s) lecture and lab
A survey of physics emphasizing applications of physics to modern life. **Prerequisites:** Grade of “C” or better in MAT090, or MAT091, or MAT092, or MAT093, or equivalent, or satisfactory score on Math placement exam. **Course Note:** Students may receive credit for only one of the following: PHY101 or PHY101AA. |
| PHY111 | General Physics I | | 4 credit(s) 6 period(s) lecture and lab
Includes motion, energy, and properties of matter. **Prerequisites:** MAT182, or MAT187, or one year high school Trigonometry with a grade of “C” or better, or permission of Department or Division. **Course Note:** PHY111 is recommended for preprofessional and suggested for certain other majors. Students may receive credit for only one of the following: PHY111 or PHY111AA. |
| PHY112 | General Physics II | | 4 credit(s) 6 period(s) lecture and lab
Includes electricity, electromagnetism, and modern physics. **Prerequisites:** PHY111. |
| PHY121 | University Physics I: Mechanics | | 4 credit(s) 6 period(s) lecture and lab
Kinematics, Newton's laws, work, energy, momentum, conservation laws, dynamics of particles, solids, fluids, mechanical waves, and sound. **Prerequisites:** MAT220, or MAT221, or permission of Department or Division. One year of High School physics or PHY111 and PHY112 suggested but not required. |
| PHY131 | University Physics II: Electricity and Magnetism | | 4 credit(s) 6 period(s) lecture and lab
Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. **Prerequisites:** MAT230, or MAT231, or permission of Department or Division, and PHY121. **Corequisites:** MAT241 or permission of Department or Division. |
PLB – Phlebotomy

PLB109
Phlebotomy: Basic Skills
2 credit(s) 4 period(s) lecture + lab
Theory and practice of basic phlebotomy including laboratory test codes, equipment, and procedures. Prerequisites: PLB109, submit to a drug screening and demonstrate negative results, and acceptance into the Medical Assisting or Phlebotomy program, or permission of Program Director. Course Notes: PLB110 may be repeated for credit.

PLB110
Practicum: Fundamental Phlebotomy Skills
0.5 credit(s) 3 period(s) lab
Application of fundamental phlebotomy techniques in a clinical laboratory setting or health care environment. Prerequisites: PLB109, submit to a drug screening and demonstrate negative results, and acceptance into the Medical Assisting or Phlebotomy program, or permission of Program Director. Course Notes: PLB110 may be repeated for credit.

PLB110AA
Practicum: Basic Phlebotomy: Training for Law Enforcement Officers
2.0 credit(s) 6.0 period(s) lab
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.

PLB111
Specimen Processing and Advanced Techniques in Phlebotomy Procedures
2 credit(s) 4 period(s) lecture + lab
Theory and practice of advanced techniques in phlebotomy and specimen processing including laboratory test codes, equipment, and procedures. Prerequisites: PLB109 and permission of Program Director.

PLB112
Practicum: Specialized Phlebotomy Techniques
0.5 credit(s) 3 period(s) lab
Application of specialized phlebotomy techniques in a clinical laboratory setting or health care environment. Prerequisites: PLB109 and PLB110. Corequisites: PLB111 and PLB121, or permission of Program Director.

PLB121
Practicum: Basic Specimen Processing
2 credit(s) 8 period(s) lab
Application of specimen processing techniques in a clinical laboratory setting or health care environment. Prerequisites: PLB109 and PLB110. Corequisites: PLB111 and PLB112 or permission of Program Director. Course Notes: PLB121 supports Medical Assisting program completers seeking the Certificate of Completion in Phlebotomy and requires formal acceptance into the program.

PLB122
Practicum: Phlebotomy and Specimen Processing
3 credit(s) 12 period(s) lab
Application of phlebotomy and specimen processing techniques in a clinical laboratory setting or health care environment. Prerequisites: PLB109 or permission of Program Director. Prerequisites or Corequisites: PLB111 or permission of Program Director.

POS – Political Science

POS110
American National Government
3 credit(s) 3 period(s) lecture
Study of the historical backgrounds, governing principles, and institutions, of the national government of the United States. Prerequisites: None.

POS115
Issues in American Politics
3 credit(s) 3 period(s) lecture
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: ENG101 or ENG107 or equivalent.

POS120
World Politics
3 credit(s) 3 period(s) lecture
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.

POS125
Issues in World Politics
3 credit(s) 3 period(s) lecture
Contemporary issues and factors in international relations. Stress conditions in civil order, trade and international institutions. May be repeated for a total of six (6) credit hours. Prerequisites: None.

POS130
State and Local Government
3 credit(s) 3 period(s) lecture
Survey of state and local government in the United States. Special attention on Arizona State Government. Prerequisites: None.

POS140
Comparative Government
3 credit(s) 3 period(s) lecture
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.

POS180
United Nations Studies
3 credit(s) 3 period(s) lecture + lab
Historical origins, structural makeup, political and operational characteristics, and legal activities of the United Nations. Analysis of the organization's ongoing utility, productivity and creativity. Prerequisites: None.

POS210
Political Ideologies
3 credit(s) 3 period(s) lecture
Survey of twentieth century nondemocratic ideologies and movements with emphasis on Marx, Lenin, Mussolini, Hitler, Stalin and Mao. Prerequisites: None.

POS220
U.S. and Arizona Constitution
3 credit(s) 3 period(s) lecture
Examination of the United States Constitution and the constitution and government of the State of Arizona. Prerequisites: None.

POS221
Arizona Constitution
1 credit(s) 1 period(s) lecture
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.

POS222
U.S. Constitution
2 credit(s) 2 period(s) lecture
Examination of the United States Constitution. Equivalent to the first part of POS220. May not enroll in POS220 and POS222 concurrently. Prerequisites: None.

POS223
Civil Rights
3 credit(s) 3 period(s) lecture
The historic background and current status of major civil rights issues in the United States. Prerequisites: None.
POS230
Public Policy and Civic Engagement:
César Chávez Legacy
3 credit(s) 3 period(s) lecture + lab
Exploration of democratic citizenship in a multicultural society. Focus on the role of the activist in public policy service, community organizing, and social change strategies such as communication, social movement theory perspectives, and how leaders maintain movement momentum. Interpretation of the vision, philosophy, and work of César E. Chávez; and accomplishments by citizens (individually and collectively) in social change and opposition. Special emphasis on community engagement participation. Prerequisites: None. Course Notes: POS230 requires a minimum of 16 hours of civic engagement participation with community partners.

POS281AB
Public Policy/Service Internship
3 credit(s) 3 period(s) lab
Field experience in community service, public policy or public service. May be repeated for a total of nine (9) POS281 credit hours; may not repeat specific internship assignment. Prerequisites: Minimum of 15 credit hours at college granting internship with minimum GPA of 3.0 and permission of instructor. Prerequisite or Corequisite: POS280.

POS282AA
Volunteerism for Political Science: A Service Learning Experience
1 credit(s) 1 period(s) lab
Service-learning field experience within government agencies, political organizations, citizen advocacy groups, and human service organizations/agency. 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. Prerequisites: Permission of instructor.

PSY – Psychology

PSY101
Introduction to Psychology
3 credit(s) 3 period(s) lecture
To acquaint the student with basic principles, methods and fields of Psychology such as learning, memory, emotion, perception, physiological, developmental, intelligence, social and abnormal. Prerequisites: None.

PSY122
Psychology and Culture
3 credit(s) 3 period(s) lecture
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.

PSY143
Lesbian, Gay, Bisexual and Transgendered Studies
3 credit(s) 3 period(s) lecture
Introduction to the study of lesbian, gay, bisexual, and transgendered individuals. Includes psychological, developmental, social, biological, historical and cultural aspects. Review of research literature regarding the etiology and assessment of sexual orientation, prejudice, and discrimination, and family issues. Current issues in lesbian/gay/bisexual/transgendered studies. Prerequisites: None.

PSY201AC
Selected Issues in Psychology
3 credit(s) 3 period(s) lecture
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 are 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: PSY101 or permission of Instructor. Course Notes: PSY201AC may be repeated with change of topic.

PSY218
Health Psychology
3 credit(s) 3 period(s) lecture
Behavioral and mental foundations of health, wellness, illness, and disease, and psychological dimensions of medical intervention. Prerequisites: PSY101 with a grade of ‘C’ or better, or permission of instructor.

PSY230
Introduction to Statistics
3 credit(s) 3 period(s) lecture
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: PSY101 with a grade of ‘C’ or better and MAT092 or equivalent, or permission of instructor.

PSY231
Laboratory for Statistics
1 credit(s) 2 period(s) lab
Applications of inferential and descriptive statistics to computers in the field of psychology. Corequisites: PSY230.

PSY240
Developmental Psychology
3 credit(s) 3 period(s) lecture
Human development from conception through adulthood. Includes: physical, cognitive, emotional and social capacities that develop at various ages. Recommended for students majoring in nursing, education, pre-med, and psychology. Prerequisites: PSY101 with a grade of ‘C’ or better or permission of instructor.

PSY250
Social Psychology
3 credit(s) 3 period(s) lecture
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: PSY101 with a grade of ‘C’ or better or permission of the instructor.

PSY266
Abnormal Psychology
3 credit(s) 3 period(s) lecture
Distinguishes between normal behavior and psychological disorders. Subjects may include stress disorders, problems with anxiety and depression, unusual and abnormal sexual behavior, schizophrenia and addictive behaviors. Causes and treatments of psychological problems and disorders are discussed. Prerequisites: PSY101 with a grade of ‘C’ or better, or permission of instructor.
PSY277
Psychology of Human Sexuality
3 credit(s) 3 period(s) lecture
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: PSY101 with a grade of "C" or better, or permission of instructor. Student must be 18 years or older.

PSY290AB
Research Methods
4 credit(s) 6 period(s) lecture and lab
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. Prerequisites: ENG101 or ENG107. Prerequisites or Corequisites: PSY230 with a grade of "C" or better, or permission of instructor.

PSY298
Special Projects
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of 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.

RDG – Reading
In college, most courses involve reading and studying. It's critical for students to know and apply appropriate skills that will enhance academic progress and success. The Reading Department offers a wide variety of reading/study-based courses at different levels. These courses have been designed to develop and improve students' skills so that they can attain personal and academic goals. Please Note: For CRE (Critical Reading) courses, see page 237.

RDG008
Phonics
3 credit(s) 3 period(s) lecture
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 and resulting pronunciation; and diacritical markings. Prerequisites: Reading placement score (CELSA).

RDG016
Reading English as a Second Language I
3 credit(s) 3 period(s) lecture
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.

RDG026
Reading English as a Second Language II
3 credit(s) 3 period(s) lecture
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 grade of "C" or better in ESL/RDG016, or permission of instructor.

RDG036
Reading English as a Second Language III
3 credit(s) 3 period(s) lecture
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 grade of "C" or better in ESL/RDG026, or permission of instructor.

RDG046
Reading English as a Second Language IV
3 credit(s) 3 period(s) lecture
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 grade of "C" or better in ESL/RDG036, or permission of instructor.

RDG071
Basic Reading
3 credit(s) 3 period(s) lecture
Provides opportunities for practice and application of basic reading skills. Includes phonemic analysis, word recognition, structural analysis, use of context clues, and use of dictionary, reinforced through practical application. Development of vocabulary required for success in content area courses. Emphasis on literal comprehension and development of inferential interpretation. Prerequisites: Appropriate reading placement test score, or grade of "C" or better in RDG046, or permission of Instructor. Course Note: RDG071 is recommended for all students with limited reading experiences.

RDG081
Reading Improvement
3 credit(s) 3 period(s) lecture
Designed to improve basic reading skills. Includes word recognition, interdisciplinary vocabulary development, recognizing patterns of organization, interpreting inference. Reviews interpreting graphic materials. Emphasis on identifying main ideas and related details. Prerequisites: Appropriate reading placement test score, or grade of "C" or better in RDG071, or permission of Instructor.

RDG091
College Preparatory Reading
3 credit(s) 3 period(s) lecture
Designed to improve basic reading and study skills, vocabulary and comprehension skills. Prerequisites: Appropriate reading placement test score, or grade of "C" or better in RDG081, or permission of Instructor. Course Note: RDG091 is recommended to all students whose placement test scores indicate a need for reading instruction.

RDG095
Intensive Foundations for College Reading
6 credit(s) 6 period(s) lecture
Accelerated format to improve basic reading skills, study skills, and information literacy skills including vocabulary development, main idea identification, patterns of organization recognition, and comprehension improvement. Prerequisites: Appropriate reading placement test score, or a grade of "B" or better in RDG071, or permission of Instructor. Course Notes: RDG095 is an accelerated and intensive learning program for students and meets the requirements for RDG081 and RDG091 in one semester.

RDG100
Successful College Reading
3 credit(s) 3 period(s) lecture
Emphasis on reading study strategies for any introductory class in any subject area. Introduction to Learning Management System (LMS), how to successfully read course textbooks and assessments, how to navigate information technology and development of academic vocabulary. Prerequisites: A grade of C or better in RDG081 or appropriate reading placement score or permission of Instructor. Corequisites: Any 100-level course in another content area or permission of Instructor. Course Notes: RDG100 satisfies RDG091 requirement. RDG100 may be repeated for a total of twelve (12) credit hours.
**REL – Religious Studies**

**REL100**  
World Religions  
3 credit(s) 3 period(s) lecture  
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.

**REL203/AIS213**  
American Indian Religions  
3 credit(s) 3 period(s) lecture  
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:** ENG101 or ENG107 or equivalent.

**REL205**  
Religion and the Modern World  
3 credit(s) 3 period(s) lecture  
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:** ENG101, or ENG107, or equivalent.

**REL212**  
Introduction to Islam  
3 credit(s) 3 period(s) lecture  
Introduction to history, scriptures, practices and impact of Islam. **Prerequisites:** None.

**REL270**  
Introduction to Christianity  
3 credit(s) 3 period(s) lecture  
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.

**SBS – Small Business Management**

**SBS213**  
Hiring and Managing Employees  
1 credit(s) 1 period(s) lecture  
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 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. **Prerequisites:** None.

**SBS214**  
Small Business Customer Relations  
1 credit(s) 1 period(s) lecture  
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.

**SBS216**  
Planning for a Small Business  
2 credit(s) 2 period(s) lecture  
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:** SBS200 and SBS204 or permission of instructor.

**SBS217**  
Starting/Managing a Home Business  
1 credit(s) 1 period(s) lecture  
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.

**SBS220**  
Internet Marketing for Small Business  
2 credit(s) 2 period(s) lecture  
Focuses on “e-Commerce”-doing business on the Internet and planning a website. 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 products/services appropriate for Internet marketing; budget constraints and on-going operations of the Internet site. **Prerequisites:** None.

**SBS230**  
Financial and Tax Management for Small Business  
2 credit(s) 2 period(s) lecture  
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.

**SBU – Society and Business**

**SBU200**  
Society and Business  
3 credit(s) 3 period(s) lecture  
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.
SLG – Sign Language

Also see Interpreter Preparation, IPP on page 265.

SLG090AA
Speedy Sign Language I
1 credit(s) 1 period(s) lecture

SLG090AB
Speedy Sign Language II
1 credit(s) 1 period(s) lecture
Use American Sign Language (A.S.L.) to converse about feelings, family members, other people, clothing, events according to proper tense, and to count to one hundred. Prerequisites: SLG090AA. Completion of prerequisites within the last three years is required.

SLG101
American Sign Language I
4 credit(s) 4 period(s) lecture

SLG102
American Sign Language II
4 credit(s) 4 period(s) lecture
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: SLG101 with a grade of ‘C’ or better, or permission of Department or Division. Completion of prerequisites within the last three years is required.

SLG103
Introduction to the Deaf Community
1 credit(s) 1 period(s) lecture
History and development of American Sign Language (A.S.L.) 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.

SLG110
Fingerspelling I
2 credit(s) 2 period(s) lecture
Introduction to basic fingerspelling techniques. Concentration on receptive and expressive skills including manual alphabet production and numbers. Focus on methods, theory, and applications. Prerequisites: SLG101, or permission of Department or Division. Completion of prerequisites within the last three years is required.

SLG120
Fingerspelling II
2 credit(s) 2 period(s) lecture
Continued skill development including speed, dexterity, clarity, and loan signs. Advanced use of numbers, prefixes, suffixes, and polysyllabic words. Prerequisites: SLG102 and SLG110 with a grade of ‘C’ or better or permission of Department or Division. Completion of prerequisites within the last three years is required.

SLG200
Issues and Resources
3 credit(s) 3 period(s) lecture
Implications of laws pertaining to educational choices and rights of deaf and hearing impaired individuals. Local, state, and national organizations, activities, and agencies affecting the deaf community. Prerequisites: SLG102 with a grade of ‘C’ or better, or permission of Department or Division. Completion of prerequisites within the last three years is required.

SLG201
American Sign Language III
4 credit(s) 4 period(s) lecture
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: SLG102 with a grade of ‘C’ or better, or permission of Department or Division. Suggested but not required: (ENG101 or ENG107), (CRE110, or CRE111, or exemption by score on the reading placement test (ASSET)). Completion of prerequisites within the last three years is required.

SLG204
Comparative Linguistics: ASL/English
3 credit(s) 3 period(s) lecture
A variety of topics about linguistics of American Sign Language 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: SLG202. Corequisites: SLG203. Completion of prerequisites within the last three years is required.

SLG202
American Sign Language IV
4 credit(s) 4 period(s) lecture
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: SLG201 with a grade of ‘C’ or better, or permission of Department or Division. Suggested but not required: (ENG101 or ENG107), SLG200, and (CRE101, or CRE111, or exemption by score on the reading placement test). Completion of prerequisites within the last three years is required.

SLG203
American Sign Language V
4 credit(s) 4 period(s) lecture
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: SLG202, with a grade of ‘C’ or better. Completion of prerequisites within the last three years is required.

SLG212
Deaf Culture
3 credit(s) 3 period(s) lecture
Linguistic, social, educational, and political issues in deaf culture. Value and group identity issues as related to heritage and literature. Special emphasis on the cultural and philosophical attitudes shared with other minority groups. Prerequisites: SLG202, or permission of Department or Division. Completion of prerequisites within the last three years is required.

Course information is subject to change. Visit http://www.maricopa.edu/academic/ccta/ for most current information.
### SOC – Sociology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SOC101</td>
<td>SOC 1101 Introduction to Sociology</td>
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<td>Lecture</td>
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<tr>
<td>SOC140</td>
<td>SOC 2215 Race and Ethnic Relations</td>
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<tr>
<td>SOC157</td>
<td>Sociology of Families and Relationships</td>
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<td>Lecture</td>
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<tr>
<td>SOC212</td>
<td>Gender and Society</td>
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<td>SOC245</td>
<td>Social Deviance</td>
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<tr>
<td>SOC251</td>
<td>SOC 2250 Social Problems</td>
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### SPA – Spanish

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<th>Course Title</th>
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<td>SPA102</td>
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<td>SPA103</td>
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<td>SPA115</td>
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<tr>
<td>SPA116</td>
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<td>SPA117</td>
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<tr>
<td>SPA118</td>
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<td>SPA119</td>
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<td>SPA201</td>
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### Course Descriptions

- **SPA101 (SOC 1101) 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.

- **SOC140 (SOC 2215) Race and Ethnic Relations**
  - Examines how the social construction of race shapes social interaction and social institutions. Explores the consequences of power, privilege and oppression among major ethnic and racial groups in the United States. Prerequisites: None.

- **SOC157 (SOC 2250) 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.

- **SOC212 (SOC 2250) Gender and Society**
  - A sociological analysis of the way culture shapes and defines the positions and roles of both men and women in society. Major emphasis on social conditions which may lead to a broadening of gender roles and a reduction of gender role stereotypes and the implications of these changes. Prerequisites: SOC101.

- **SOC245 (SOC 2250) 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: SOC101.

- **SOC251 (SOC 2250) Social Problems**
  - A sociological exploration of selected social problems and inequalities. Analyzes issues in health care, dependencies, crime/violence, inequalities in race/class/gender/region/age, family, education, work, the economy, population migration/immigration, the environment, war and global insecurity. Prerequisites: None.

- **SPA101 (SPA 1101) Elementary Spanish I**
  - Basic grammar, pronunciation and vocabulary of the Spanish language. Includes the study of Spanish-speaking cultures. Practice of listening, speaking, reading, and writing skills. Prerequisites: None.

- **SPA102 (SPA 1102) Elementary Spanish II**
  - Continued study of grammar and vocabulary of the Spanish language and study of Spanish-speaking cultures. Emphasis on speaking, reading, and writing skills. Prerequisites: (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.

- **SPA103 (SPA 1103) 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. Prerequisites: Spanish-speaking or permission of Department or Division.

- **SPA104 (SPA 1104) Elementary Spanish for Spanish Speakers II**
  - Continued review of grammatical problems in speaking and writing in Spanish. Prerequisites: SPA103 or equivalent or departmental approval. Completion of prerequisites within the last three years is required.

- **SPA115 (SPA 1115) Beginning Spanish Conversation I**
  - Basic pronunciation, vocabulary, sentence structures, and cultural awareness necessary to develop speaking and listening skills in Spanish. Prerequisites: None.

- **SPA116 (SPA 1116) 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: SPA115, or SPA115AA, or permission of Department or Division. Completion of prerequisites within the last three years is required.

- **SPA117 (SPA 1117) 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.

- **SPA118 (SPA 1118) 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: SPA117 or permission of Department or Division. Completion of prerequisites within the last three years is required.

- **SPA119 (SPA 1119) 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.

- **SPA201 (SPA 2201) Intermediate Spanish I**
  - Continued study of essential Spanish grammar and Spanish-speaking cultures. Continued practice and development of reading, writing, and speaking skills in Spanish. Emphasis on fluency and accuracy in spoken Spanish. Prerequisites: Grade of “C” or better in SPA102, or SPA111, or permission of Department or Division. Completion of prerequisites within the last three years is required.

- **SPA202 (SPA 2202) Intermediate Spanish II**
  - Review of grammar, continued development of Spanish language skills with continued study of the Spanish-speaking cultures. Prerequisites: A grade of “C” or better in SPA201, or permission of Department or Division. Completion of prerequisites within the last three years is required.

- **SPA203 (SPA 2203) 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.
SPA204
Spanish for Spanish-Speaking
Students II
4 credit(s) 4 period(s) lecture
Designed for Spanish-speaking students. Advanced study of Spanish grammar, composition, literature, and conversation. May be taken in lieu of SPA202. Prerequisites: SPA203, or SPA201, or permission of Department or Division. Completion of prerequisites within the last three years is required. Course Notes: SPA204 may be taken in lieu of SPA202.

SPA206
Spanish for Medical Interpretation II
3 credit(s) 3 period(s) lecture
Continuation of Spanish interpretation for medical interpreters. Medical vocabulary relating to human anatomy and physiology emphasized. Prerequisites: SPA205 or permission of Department or Division. Completion of prerequisites within the last three years is required.

SPH – Spanish Humanities

SPH245
Hispanic Heritage in the Southwest
3 credit(s) 3 period(s) lecture
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.

SWU – Social Work

SWU102
Introduction to Social Work
3 credit(s) 3 period(s) lecture
An introduction to the fields within the area of social work through a study of the disciplines of social case work, social group work, and community organization. Opportunities to experience the various techniques of practice within each discipline. Required for students enrolled in the associate degree program of the social work curriculum. Prerequisites: Eligibility for ENG101 and CRE101.

SWU225
Statistics for Social Research/Justice and Government
3 credit(s) 3 period(s) lecture
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: MAT092 or completion of higher level mathematics course.

SWU275AA
Case Report Writing I
1 credit(s) 1 period(s) lecture
Documentation skills for human service helpers. Includes privacy and legal issues. Prerequisites: None.

SWU282AA-AC
Volunteerism for Social Work: A Service Learning Experience
1-3 credit(s) and 1-3 period(s) lab
Service-learning field experience within private/public agencies, and citizen volunteer groups. May be repeated for a total of six (6) SWU282 credit hours; may not repeat specific assignment for more than three (3) credit hours. Standard grading available according to procedures outlined in catalog. Prerequisites: Permission of instructor.

SWU285
Social Services Seminar
1 credit(s) 1 period(s) lecture
Special topics in social services with an emphasis on current issues not covered in other Social Work courses. Prerequisites: None. Course Note: May be repeated for a total of four (4) credit hours.

SWU291
Social Service Delivery Systems
3 credit(s) 3 period(s) lecture
Purposes, structures, and delivery systems of human service agencies. Includes 40 hours of volunteer experience in local human service agencies. Prerequisites or Corequisites: SWU102, or SWU171, or permission of the department.

SWU292
Effective Helping in a Diverse World
3 credit(s) 3 period(s) lecture
Introduction to professional helper communication skills with respect to cross-cultural practice and diversity issues, in a social work setting. Prerequisites: None. (SOC101 and SWU102) or SWU171 suggested but not required.

TCM – Telecommunications

TCM100
Digital Multimedia
3 credit(s) 3 period(s) lecture + lab
Introduction to the major components of a multimedia project. Prerequisites: None.

TCM2120
Introduction to Sound Design for Film and Video
3 credit(s) 3 period(s) lecture
Basic principles of recording and mixing sound for film and video. Includes voice over, automatic dialog replacement (ADR), Foley, ambiance, special effects and music. Emphasis on analog and digital recording techniques in the field as well as in a controlled environment. Prerequisites: (TCM100 and TCM136) or permission of Instructor.

TCM220
Advanced Sound Design for Film and Video
3 credit(s) 5 period(s) lecture and lab
Explores techniques and advanced applications used in designing sound using original student footage on a non-linear editing system. Prerequisites: MTC/TCM120 or permission of Instructor.

TCM242
Professional Portfolio in Film and Television
2 credit(s) 4 period(s) lecture + lab
Explores techniques and applications used in editing an individual project on an editing system. Prerequisites: (TCM241 and independent footage) or permission of Instructor. Course Note: TCM242 may be repeated for a total of six (6) credits.

TCM282
Advanced Non-Linear Editing Techniques
4 credit(s) 6 period(s) lecture + lab
Explores techniques and advanced applications used in creating and editing an advanced project on a non-linear editing system. Prerequisites: TCM241 or permission of Instructor.

TCM290
Professional Media Marketing
3 credit(s) 3 period(s) lecture + lab
Designed to equip media students with marketing tools for career development and promotion. Prerequisites: TCM136 or permission of Instructor.

TEC – Textiles and Clothing

TEC105
Cultural Aspects of Clothing
3 credit(s) 3 period(s) lecture
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.
TEC106  History of Fashion
3 credit(s)  3 period(s) lecture
Consideration of historic factors influencing fashion and fashion change with special emphasis on historic costume.  
Prerequisites: None.

TEC110  Basic Sewing Skills
3 credit(s)  4 period(s) lecture + lab
Basic clothing construction techniques. Use of commercial patterns and sewing machine in the construction of basic garments.  
Prerequisites: None.

TEC111  Clothing Construction
3 credit(s)  5 period(s) lecture + lab
Construction of garments applying basic construction principles and techniques using patterns suitable for the individuals and their capabilities.  Prerequisites: None.  Course Note: If student has no previous sewing experience, TEC110 Basic Sewing Skills should be taken prior to and not during this course. May be repeated for a total of 12 credit hours with permission of instructor.

TEC112AQ  Pattern Alteration and Fit
2 credit(s)  2 period(s) lecture
Structural features of patterns and altering patterns to achieve proper fit. Includes figure irregularities, pattern style variations, fashion, and individual figure problems. Experience using a sewing machine assumed. Prerequisites: None.  Course Notes: TEC112AQ may be repeated for a total of six (6) credit hours with Instructor permission.

TEC112AU  Sewing Clothing Accessories
1 credit(s)  1 period(s) lecture  
(Not offered every semester)
Construction of clothing accessories for personal or professional use. Selection of accessories and coordination of accessories with apparel. Experience using a sewing machine assumed. Prerequisites: None.

TEC113  Textiles: Dyeing
1 credit(s)  1.5 period(s) lecture + lab  
(Not offered every semester)
Demonstrations and projects emphasizing skills and techniques in creating decorative textiles for the home and apparel; tie dye and batik.  Prerequisites: None.

TEC114  Textiles: Block Printing/Silk Screening
1 credit(s)  2 period(s) lecture + lab  
(Not offered every semester)
Skills and techniques in creating decorative textiles for the home and apparel; block printing and silk screening.  Prerequisites: None.  Course Note: May be repeated for a total of three (3) credits.

TEC115  Textiles: Hand Painting
1 credit(s)  1.5 period(s) lecture + lab  
(Not offered every semester)
Materials and techniques used to hand paint designs on textiles. Includes color theory and design development.  Prerequisites: None.  Course Notes: Course may be repeated for a total of three (3) credits.

TEC116  Textiles: Stitchery and Embellishment
1 credit(s)  1.5 period(s) lecture + lab  
(Not offered every semester)
Materials and techniques used for stitchery and embellishment on textiles. Includes color schemes and design development.  Prerequisites: None.  Course Note: May be repeated for a total of three (3) credits.

TEC117  Home Upholstery
2 credit(s)  2 period(s) lecture + lab  
(Not offered every semester)
Operation of a home serger. Use in constructing, finishing, and decorating garments and home decorations. Home serger required. Prerequisites: None.

TEC118  Fashion Design
3 credit(s)  5 period(s) lecture + lab
In depth study of illustrative styles, silhouettes, and interpretations. Advanced work with fabric textures and patterns; concentration on garment details. Continued development of a fashion design portfolio.  Prerequisites: TEC134, or permission of instructor.

TEC119  Computer-Assisted Fashion Design
3 credit(s)  5 period(s) lecture + lab  
(Not offered every semester)
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: TEC125 or permission of instructor.
TEC222
Textiles
3 credit(s) 3 period(s) lecture
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.

TEC223
Tailoring
3 credit(s) 6 period(s) lecture + lab
Principles of tailoring as applied in the construction of a coat or suit. Alteration of patterns and fitting techniques.
Prerequisites: TEC124 or permission of instructor. Course Note: TEC223 may be repeated for a total of 12 credit hours with permission of instructor.

TEC224
Pattern Drafting
2 credit(s) 3 period(s) lecture + lab
(Not offered every semester)
Draft patterns with measurements of dress forms and human figures. Development of slopers, blocks, and garment patterns. Design and produce an original garment using pattern drafting techniques.
Prerequisites: TEC111, or permission of instructor.

TEC225
Pattern Design I
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
Creative expression through flat pattern in applying principles of art to clothing design. Various resources for design inspiration.
Prerequisites: (TEC110 or TEC111) or permission of instructor. Course Note: May be repeated for a total of twelve (12) credits.

TEC226
Draping for Fashion Design
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
Manipulation of fabrics on a dress form and/or live figure to create designs and patterns. Use of a variety of woven/knit fabrics and an exploration of the many possibilities of draping to allow a creative and accurate expression of ideas. Prerequisites: (TEC110 or TEC111) or permission of instructor.

TEC227
Couture Sewing
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
Prerequisites: TEC111 or permission of instructor. Course Note: May be repeated for a total of 12 credit hours with permission of instructor.

TEC228
Advanced Draping for Fashion Design
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
Advanced draping techniques for fashion design. Includes draping jackets, coats, slacks, and trousers in woven fabrics and draping a variety of garments in knit fabrics. Drape and construct an original design.
Prerequisites: TEC226 or permission of instructor. Corequisites: TEC225, TEC226 or permission of instructor.

TEC230
Pattern Design II
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
Practical application in designing clothing/patterns using flat pattern method. Principles of flat pattern and use of sloper reviewed. Includes pattern grading, sizing for figure differences, and creation of an original design. Prerequisites: TEC225 or permission of instructor. Course Note: May be repeated for a total of twelve (12) credits.

TEC231
Pattern Grading
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
Grading patterns to change sizes. Includes grading terminology, grading methods, types of grade, uneven grade, figure types, grading charts, blending, and grading basic and intermediate designs. Prerequisites: TEC111, or permission of instructor.

TEC232
Costume Construction
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
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: TEC111 and (TEC224, or TEC225, or TEC226, or permission of Instructor). Course Notes: TEC232 may be repeated for a total of twelve (12) credit hours with permission of Instructor.

TEC233
Computer-Assisted Pattern Making
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
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: TEC225 or permission of Instructor. Course Notes: TEC233 may be repeated for a total of twelve (12) credit hours with permission of Instructor.

TEC236
Portfolio Development
1 credit(s) 1.5 period(s) lab
(Not offered every semester)
Design, produce, and present a professional portfolio. Includes material selection and techniques, customer focus, contents and organization, presentation formats, flat sketching techniques, presentation boards, and writing a resume and cover letter for potential employers. Prerequisites: (TEC135 and TEC221), or permission of instructor.

TEC241
Advanced Computer-Assisted Fashion Design
3 credit(s) 5 period(s) lecture + lab
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 hardware and software in the fashion design industry. Create and illustrate fashion designs using multiple computer applications.
Prerequisites: (TEC135 and TEC221), or permission of instructor.

TEC271AA
Fashion Design Internship
1 credit(s) 5 period(s) lab
(Not offered every semester)
Work experience in fashion design business or industry. Five hours of work weekly. Supervision and evaluation by an internship coordinator. May be repeated for a total of three (3) credits. Prerequisites: Departmental approval.

TEC278AA
Costume Design and Production Internship
1 credit(s) 1 period(s) lab
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 student’s academic or career goals (student’s present job may qualify); or permission of Instructor.
THE – Theatre

THE111
Introduction to Theatre
3 credit(s) 3 period(s) lecture
A survey of theatre, including basic elements and principles of production, styles, and/or historical perspectives of theatre, dramatic literature, and criticism. Prerequisites: None.

THE118
Playwriting
3 credit(s) 3 period(s) lecture + lab
Practice and study of theories and techniques of writing for the stage; creating characters, dialogue, and plot for monodramas, scenes, and plays. Prerequisites: None.

THE220
Modern Drama
3 credit(s) 3 period(s) lecture
(Spring only)
Analysis of dramatic literature studied within political, historical, and cultural contexts and examined from the perspective of the playwright's structure and style. Prerequisites: ENG101 or ENG107 or equivalent.

THE274AC
Theatre Study Tour
3 credit(s) 15 period(s) lab
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: Department approval.

THE288AA-AC
Special Projects
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of 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.

THF – Theatre and Film

THF115
Makeup for Stage and Screen
3 credit(s) 4 period(s) lecture + lab
Practices, materials, and techniques of makeup for stage and screen. Prerequisites: None.

THF/HUM205
Introduction to Cinema
3 credit(s) 3 period(s) lecture
Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. Prerequisites: None.

THF209
Acting for the Camera
3 credit(s) 4 period(s) lecture + lab
Special technical aspects of acting before a camera. Prerequisites: THP112 or permission of Instructor.

THF/HUM210
Contemporary Cinema
3 credit(s) 3 period(s) lecture
A study of contemporary films, directors and critics with emphasis on evaluating film as an art form. Prerequisites: None.

THF215
Advanced Makeup Techniques for Stage and Screen
3 credit(s) 4 period(s) lecture + lab
Advanced character analysis and makeup design for stage and screen. Technical application of makeup for stage and screen. Prerequisites: THF115.

THF260
Theatrical Design: Rendering
2 credit(s) 4 period(s) lecture + lab
Provides experience and explores multiple illustration techniques used to communicate ideas in entertainment production. Provides basic skills including pictorial drawing and sketching. Prerequisites: None.

THP – Theatre

Performance/ Production

THP112
Acting I
3 credit(s) 4 period(s) lecture + lab
Fundamental techniques and terminology of acting through physical and vocal expression, improvisation, and monologue and scene work. Emphasis on characterization. Prerequisites: None.

THP130
Stage Combat
3 credit(s) 4 period(s) lecture + lab
Analysis and practice of physical movement, including basic techniques in staged personal combat with and without weapons. Emphasis on stunt fighting and fencing. Prerequisites: None.

THP201AB
Theatre Production II
2 credit(s) 4 period(s) lab
Designed to give college credit to the cast and technical production crews of college theatre productions. May be repeated for up to a maximum of four (4) credits. Prerequisites: None.

THP203
Technical Theatre Production
3 credit(s) 6 period(s) lab
Designed to give college credit to the technical production crews of college theatre productions. Prerequisites: None. Course Note: THP203 may be repeated for up to a maximum of nine (9) credits.

THP211
Creative Drama
3 credit(s) 3 period(s) lecture
Theory and practice of creative drama, including improvisation, storytelling, puppetry, and script and program development in drama, and their application to elementary and secondary school levels. Prerequisites: None.

THP212
Acting II
3 credit(s) 4 period(s) lecture + lab
Fundamental techniques of acting through script analysis, rehearsal, and performance. Prerequisites: THP112 or departmental approval.

THP213
Introduction to Technical Theatre
3 credit(s) 5 period(s) lecture + lab
Procedures of technical theatre production and demonstration. Topics include design and construction of scenery; lighting and properties. Prerequisites: None.

THP214
Directing Techniques
3 credit(s) 4 period(s) lecture + lab
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: THP112 or THE220, or permission of instructor.

THP216
Beginning Stage Lighting
3 credit(s) 4 period(s) lecture + lab
Basic theories 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: THP213 or permission of instructor.

THP217
Introduction to Design Scenography
3 credit(s) 4 period(s) lecture + lab
The role of the theatre designer in creating scenic, lighting, costume, sound, and multimedia effects for stage productions. Elements of the design process and communication of dramatic themes and visions to the audience. Prerequisites: None.
THP250  
Stage Properties  
3 credit(s)  4 period(s) lecture + lab  
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.

THP261  
Previsualizaton Modeling  
2 credit(s)  4 period(s) lecture + lab  
Provides experience and explores basic previsualization methods used to communicate ideas in entertainment preproduction. Provides basic models skills. Prerequisites: None.

THP263  
Entertainment Industry Design I: 2D CAD  
3 credit(s)  6 period(s) lecture + lab  
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.

THP264  
Entertainment Industry Design II: 3D CAD  
3 credit(s)  6 period(s) lecture + lab  
Introduction to construction, manipulating, and rendering three-dimensional (3D) objects and theatrical stage spaces using CAD software and post-production software. Prerequisites: THP263.

THP265  
Introduction to Stage Management  
3 credit(s)  6 period(s) lecture + lab  
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.

THP266  
Production Careers in Technical Theatre  
1 credit(s)  2 period(s) lecture + lab  
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. Development of a professional resume and vita. Prerequisites: None.

THP267  
Painting Techniques for Film, TV and Theatre  
3 credit(s)  4 period(s) lecture + lab  
Theory and skills in scenic artistry. Techniques of painting two-dimensional and three-dimensional scenery, tools, and the use of color. Prerequisites: THP213.

THP269  
Technical Theatre Portfolio Development  
1 credit(s)  1 period(s) lab  
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.

THP296WC  
Cooperative Education  
3 credit(s)  15 period(s) lab  
Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. 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.

VPT114  
Audio Production  
3 credit(s)  5 period(s) lecture and lab  
Audio in media production including location, studio and Sound Room for corporate, cable and broadcast applications. Microphones and audio recording equipment: audio production techniques using a Shot Gun Boom microphone while in the field; audio recording in the sound room; multi-track recording and layback; audio editing using a non-linear computer program: music libraries: sound effects: video tape editing in audio post-production. Prerequisites: (TCM100 or TCM/VPT105) and TCM/VPT108.

WED125  
Reiki: Healing and Symbols  
2 credit(s)  2 period(s) lecture + lab  
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 applications to personal health and everyday life. Prerequisites: None. Course Notes: WED125 may be repeated for a total of ten (10) credits.

WED151  
Introduction to Alternative Medicine  
3 credit(s)  3 period(s) lecture  
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.

WED160  
Ethics of Touch Massage  
0.5 credit(s)  0.5 period(s) lecture  
Basic ethical principles used in the practice of massage. Major emphasis on personal and professional boundaries, the role of dual relationships, effective communication, and special considerations in massage. Prerequisites: None.

WED162  
Meditation and Wellness  
1 credit(s)  1 period(s) lecture  
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.
WED165
Overview of Massage Therapy
2 credit(s) 2 period(s) lecture
History of massage; overview of bodywork systems; benefits and indications of massage; legal requirements for practice in Arizona. Prerequisites: None.

WED170
Principles of Homeopathy
1 credit(s) 1 period(s) lecture
Origins of homeopathy; key concepts; perceptions of disease; schools of homeopathy; scientific studies; preparation of remedies; case taking. Prerequisites: None.

WED172
Overview of Herbal Remedies
1 credit(s) 1 period(s) lecture
History and evolution of herbs for healing applications. Preparation, usage, and effects of certain herbs used for healing purposes. Basic literature review skills in the area of herbal medicine. Prerequisites: None.

WED176
Flower Essences
1 credit(s) 1 period(s) lecture
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.

WED182
Health Conditions and Popular Herbs
2 credit(s) 2 period(s) lecture
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.

WED183
Introduction to Ayurvedic Principles
2 credit(s) 2 period(s) lecture + lab
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 activities, environmental influences to promote health and well-being. Prerequisites: None. Course Notes: WED183 may be repeated for a total of six (6) credits.

WED204
Establishing a Massage Practice
3 credit(s) 3 period(s) lecture
Explore career options in therapeutic massage, including state licensing requirements, and determine how to lay the groundwork for a successful massage practice. Prerequisites: None.

WED205
Sports Massage
2 credit(s) 3 period(s) lecture + lab
Purpose, benefits, and contraindications of sports massage; principles of sports physiology; massage techniques, applications, and procedures; treatment of injuries. Prerequisites: WED165 and WED230, or permission of Program Director.

WED215
Self-Care for Health Care Professionals
2 credit(s) 5 period(s) lecture + lab
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.

WED218
Aromatherapy
1 credit(s) 1 period(s) lecture
Physiology of aromatherapy; methods of use; preparation of oils; uses in sports, beauty care, massage, child care, healthcare, at work, and in the home. Prerequisites: None.

WED228
Aromatherapy: Therapeutic Applications
2 credit(s) 2 period(s) lecture + lab
Continued study of the physiology of essential oils and effects on major body systems. Plant families, chemistry, therapeutic applications and contraindications regarding the use of essential oils; case studies and creation of personal blends. Prerequisites: None. Course Notes: WED228 may be repeated for a total of ten (10.0) credit hours.

WED230
Therapeutic Massage Practices I
6 credit(s) 9 period(s) lecture + lab
Continued 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: WED230.

WED232
Therapeutic Massage Practices III
6 credit(s) 10 period(s) lecture + lab
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: WED230. Corequisite: WED250, or permission of Program Director.

WED250
Clinical Practicum
3 credit(s) 6 period(s) lab
Application of fundamental massage techniques. Prerequisites: WED231. Corequisites: WED222, and permission of Program Director.

WED250AA
Clinical Practicum: Part I
1.5 credit(s) 3 period(s) lab
Application of fundamental massage techniques. Prerequisites: WED231. Corequisites: WED222 and permission of Program Director.

WED250AB
Clinical Practicum: Part II
1.5 credit(s) 3 period(s) lab
Continued application of fundamental massage techniques. Prerequisites: WED231. Corequisites: WED222 and permission of Program Director.

WED262
Acupressure/Shiatsu I
2 credit(s) 3 period(s) lecture + lab
Overview of the principles of Traditional Chinese Medicine and the Meridian System; history, purpose, benefits, indications, and contraindications of Acupressure/Shiatsu. Therapeutic techniques and applications of Acupressure/Shiatsu; pre and post evaluations of intervention procedures. Prerequisites: None.
WED297AA-AC 
Special Topics: Therapeutic Massage 
1-3 credit(s) 1-3 period(s) lecture + lab 
Explores a special topic related to therapeutic massage. Topics vary and include concepts relevant to those pursuing careers in therapeutic massage. **Prerequisites:** None.

**WST – Women’s Studies**

WST100 
Introduction to Women’s and Gender Studies 
3 credit(s) 3 period(s) lecture 
Introduction to critical issues in women’s studies. **Prerequisites:** None.

WST120 
Gender, Class, and Race 
3 credit(s) 3 period(s) lecture 
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.

WST128 
Law and Violence Against Women 
3 credit(s) 3 period(s) lecture 
Covers cases and materials on systems of oppression particularly as related to women in our society. 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. **Prerequisites:** None.

WST160 
Women and the Early American Experience 
3 credit(s) 3 period(s) lecture 
Introduction to American women's history, from the colonial period to suffrage in 1920, based on a feminist perspective. **Prerequisites:** None.

WST161 
American Women Since 1920 
3 credit(s) 3 period(s) lecture 
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.

WST206 
La Mujer 
3 credit(s) 3 period(s) lecture 
Analysis and discussion of critical issues for Latinas in America today. **Prerequisites:** None.

WST/AFR207 
Black Women 
3 credit(s) 3 period(s) lecture 
Analysis and discussion of critical issues for Black women in America today. **Prerequisites:** None.

WST/HUM209 
Women and Films 
3 credit(s) 3 period(s) lecture 
Analysis of images of women in films from both historical and contemporary perspectives. **Prerequisites:** None.

WST/ENH285 
Contemporary Women Writers 
3 credit(s) 3 period(s) lecture 
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.

WST/REL290 
Women and World Religions 
3 credit(s) 3 period(s) lecture 
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.

**Types and Levels of Courses**

Courses offered by Maricopa colleges are of two general types depending on the kind of competencies they cover and the student goals they serve. Academic Courses are designed to provide general education and knowledge; Occupational Courses are designed to provide workforce readiness and to develop occupational or paraprofessional skills. Additionally, Maricopa courses provide content at different levels of knowledge and skill. Developmental courses generally cover pre-college-level competencies and prepare students to take college-level courses; First-year courses generally cover competencies that do not require previous experience or knowledge of the subject and are often introductory and survey courses; and Second-year courses generally cover competencies for which some previous experience or knowledge may be desirable, sometimes including prerequisite courses.

**Questions:**
Career Services

Career Services Staff
Ryan K. Jefferson, Manager
Julie Plombon, Career Service Assistant

Career Services
Career Services helps you build your success by careful selection of a meaningful major and/or career that is a good fit based upon your unique personality, skills, interests, abilities, work values, and goals. Services also include expert assistance in building attention-getting resumes, cover letters and development of excellent personal presentation to prepare you for entry into the job market. We also assist with developing opportunities that will enhance your educational experiences in preparation for your career.

Our personal guidance and vast array of tools and resources will support your goals:

Choose a Major / Career
- Learn all about you—take self-discovery inventories
  - How to Choose a Major, Phoenix College brochure that provides a shortened career assessment test based on John Holland’s RIASEC codes.
  - Maricopa Career Planning System, a free comprehensive and intuitive online program that helps college students and other adults plan a career by assessing your unique self, narrowing choices, and identification of options, research results, and saving your research.
  - O-NET Online, helps you identify and explore your interests and how they relate to the world of work, exploration of various career options.
  - Jung Typology Test, discover careers and occupations most suitable for your personality type
  - Many more!
- Explore your options
  - What Can I Do with a Major in..., Maricopa Community College District comprehensive online resource listed by major. Look at the possibilities and where our degree will take you.
  - My Next Move has tasks, skills, salary information, and more than 900 different careers. Find careers through keyword search. Browse industries that employ different types of workers.
  - Research labor market information, occupations, wages, trends, in-demand careers, companies
- Develop a plan of action
  - Learn what it will take to complete your chosen degree and career goals
  - Develop a plan that is specific in nature, manageable, action-focused, and realistic.
  - Make a timeline, evaluate your progress and make necessary adjustments.
  - Be accountable to your plan and work diligently to complete your goals
  - Conduct informational interviews, shadow employees, participate in internships to develop knowledge of your chosen occupation and develop networking relationships

Job Search
Develop a strategic, efficient job search plan
- Job openings, on-and off-campus
- Federal Work Study jobs
- On-campus employer recruitments
- Maricopa Career Network (www.maricopa.edu/careers, free on-line job board) and a variety of resources to locate job openings

Marketing You—Stand out from the crowd! Develop top-notch personal presentation skills.
- Write a winning resume
- Create an enthusiastic cover letter
- Get the most out of job fairs
- Tap the hidden job market—networking and using social media
- Conduct a successful interview
- Send resumes online and by FAX

Hours:
Fall and Spring semesters:
Monday - Thursday: 8:00 a.m. - 6:00 p.m.
Friday: 8:00 a.m. - 4:30 p.m.

Summer semesters: Monday - Thursday: 8:00 a.m. - 6:00 p.m.
Closed Fridays

The Career Services Center is located in the Hannelly Center, Room 113
http://www.phoenixcollege.edu/careerservices
Phone: 602.285.7420 • Fax: 602.285.7951
Residential Faculty
(First Year of Service to MCCCD)


AMBROSICH, KORY (1997) Mathematics
–B.A., Evergreen State College; M.A.T., Northern Arizona University.

BAILEY, TIFFANY (2014) Fine and Performing Arts

–B.S.N., University of Arizona; M.S.N., University of Phoenix.

BELL, AMY (2013) Biosciences

BERGE, ERIC D. (2011) English
–B.S.Ed., Northern Arizona University; M.F.A., Lesley University.

–B.S., Pennsylvania State University; J.D., Villanova School of Law.

BROMLEY, RAYMOND (1991) Liberal Arts
–B.A., M.A., Ph.D., University of California at Los Angeles.

BRYAN, TIMOTHY M. (1990) Mathematics
–B.S., California State University, San Bernardino; M.A., California State University, Long Beach.

CARNAHAN, DARRELL (1998) Business
–A.A.S., Salt Lake City Community College; B.A., University of Utah; M.S., Arizona State University.

CELOZA, ALBERT (1988) Liberal Arts
–B.A., M.P.A., University of the Philippines; M.A., University of San Francisco; M.A., Ph.D., Claremont Graduate University.

CHAPMAN, AMANDA S. (2011) Biosciences
–B.S., M.P.H., University of Arizona.

CHAVEZ, ENRIQUETA (1984) Counseling
–B.A., Arizona State University; M.A., Northern Arizona University.

CLARK, LOMAN B. (1994) Counseling
–B.S., M.Div., M.C., Arizona State University.

–A.A., Glendale Community College; B.S., M.B.A., Arizona State University.

COOK-TIDWELL, NANCY (2010) Nursing
–A.S.N., Miami Dade College; A.A., Hillsborough Community College; B.S.N., University of Arizona; M.S.N., Northern Arizona University.

CORKINS, JAMES A. (2011) Physical Sciences
–B.S., M.S., Ph.D., Arizona State University.


CORONEL, ADRIANNA (2011) Dental

COTTER, ROBIN L. (2005) Biosciences
–B.A., DePauw University; Ph.D., University of Nebraska Medical Center.

–A.B., M.P.A., Indiana University; J.D., George Mason School of Law; A.R.M., American Institute for Chartered Property Casualty Underwriters.


DARROW, LaQUERA (2014) Dental
–B.S., University of Minnesota-St. Paul.

–B.S.N., Arizona State University; M.S., University of California, Los Angeles.

DOMINO, TRACY L. (2011) Health Professions, Fitness, and Wellness
–A.A.S., Belleville Area College; B.S., Stephens College; M.Ed., Northern Arizona University.

DOPP, GEORGE DAWSON (2010) Business
–B.S., Arizona State University; M.Ed., Northern Arizona University.

DOUBLEDAY, DALE (2003) Fine and Performing Arts

–B.A., Oakland University; M.S., Wayne State University.

ELDOT, JEFF (2005) English
–B.A., University of Wisconsin; M.A., Northern Arizona University.

ENCISO, MARIA D. (1991) Liberal Arts

ERMOIAN, DEBORAH (1999) Mathematics
–B.S., Grand Canyon University; M.Ed., Ph.D., Arizona State University.

EROE, GEOFFREY M. (1976) Fine and Performing Arts
–B.A., M.A., University of Northern Colorado; Ph.D., Stanford University.

ESCALANTE, DELIA P. (1976) Liberal Arts
–B.A., M.A., University of Arizona.

ETCHART, MARTIN (1995) English

FINKENSTADT, PATRICIA M. (2005) Biosciences
–B.S., Southeast Missouri State University; Ph.D., Johns Hopkins University School of Medicine.
GALLOWAY, LAURA (1987) Communication, Reading, ASL, and Education
– A.A., Lake Forest College; B.A., M.A., M.C., Arizona State University.

GEDDIS, DIANNE (2002) Health Professions, Fitness and Wellness
– A.A., Phoenix College; B.A., M.S., Arizona State University.

GEDDIS, SCOTT (1984) Health Professions, Fitness and Wellness
– A.A.S., Phoenix College; B.A.S., Arizona State University;
  M. Adm., Northern Arizona University.

GENNA, IGNAZIO E. (2006) Liberal Arts
– B.A., Arizona State University; M.A., M.C., Arizona State University.

GEDDIS, SCOTT (1984) Health Professions, Fitness and Wellness
– A.A.S., Phoenix College; B.A.S., Arizona State University;
  M. Adm., Northern Arizona University.

GENNA, IGNAZIO E. (2006) Liberal Arts
– B.A., Arizona State University; M.A., M.C., Arizona State University.

GIBNEY, MARIAN (1983) Behavioral Sciences
– B.A., Queens College; M.A., Fordham University; Ed.D., Nova Southeastern University.

GIBNEY, ROBERT M. (2012) English
– B.A., University of Arizona; M.A., Northern Arizona University;
  Ph.D., University of Nebraska-Lincoln.

GRAY, KAREN (2010) Nursing
– B.S., Martin Luther College; B.S.N., University of Wisconsin-Milwaukee;
  M.S.N., University of Phoenix.

HAAG, AUDREY (2011) Nursing
– B.S.N., University of Toledo; M.S.N., Grand Valley State University;
  R.N.

– B.S., Embry-Riddle University; M.B.A., University of New Mexico;
  J.D., University of Dayton.

HELaminski, ROCHELLE T. (2005) Health Professions, Fitness and Wellness
– B.S., Arizona State University; M.S., University of Alabama,
  Birmingham.

HEMMILA, LINDA A. (2014) Nursing
– B.S.N., Carlow University; M.S.N., Capital University.

HERRERA, VERONICA (2006) Mathematics
– B.S., M.A., University of Texas at El Paso.


HILDER, KAY (1999) Communication, Reading, ASL, and Education
– B.S., University of Nebraska; M.S., Western Maryland College;
  M.A., Arizona State University; CI/CT, Registry of Interpreters for the Deaf.

HODGKINS, ANNE V. (1994) Mathematics
– B.S., University of North Texas; M.S., Ed.D., Texas A & M University at Commerce.

HOLDER, DANIEL (2012) Mathematics
– B.S.E.E., M.S.E.E., M.S. (Mathematics), Texas Tech University.

JENKINS, BEVERLY (2001) Business

JOHN, HERSHMAN R. (1999) Liberal Arts

KIMBUENDE, JOSEPH (2000) English
– B.A., National University of Zaire; M.A., M.Ed., Ed.D.,
  Northern Arizona University.

KING, DOLORES (2005) Business
– B.S., M.B.A., Lindenwood University.

KLECKA, DAWN (2012) Nursing
– A.A.S., GateWay Community College; B.S.N., M.S.N.
  M.B.A., Grand Canyon University.

LAFFOON, JENNIFER (2006) Fine and Performing Arts
– B.F.A., The Museum School of Fine Arts, Boston/Tufts University;
  M.F.A., University of Arizona.

Levoy, kathleen (2013) Dental
– B.H.A., University of St. Francis; M.Ed., Northern Arizona University;

Leal, Sandra (2004) Behavioral Sciences
– B.A., Howard Payne University; M.S.S.A., Case Western Reserve University.

Lee, seung-joO (1997) Physical Sciences
– B.S., M.S., Kyung-Hee University; Ph.D., Arizona State University.


– B.S., Weber State University.

LOGAN, elizabeth (1998) Health Professions, Fitness and Wellness
– B.S., Northern Arizona University; B.S.N., Grand Canyon University;
  M.A., University of Santa Monica; M.S., Arizona State University.

Logvinenko, Dmitri (2006) Mathematics
– B.S., Moscow State University; M.A., Arizona State University.

LOPEZ, JOEL (2013) Counseling
– A.A.S., Pima Community College; B.A., Prescott College;
  M.A., Chapman University.

– A.A.S., Macomb County Community College; B.S.N.,
  M.S.N., Oakland University.

MarFA, Frank (2013) Mathematics
– B.A., Occidental College; M.A., California State University;
  Ph.D., Arizona State University.

Marin, Amy J. (1995) Behavioral Sciences
– B.A., University of California, Irvine; M.A., Ph.D., Arizona State University.

Martí-SUBIRANA, ANA (2001) Biosciences
– B.S., Ministry of Education and Science, Spain; M.S., Ph.D.,
  Universitat Autonoma de Barcelona, Spain.

Martin, Jamie (2011) English
– B.S., University of Texas; M.Ed., Texas State University.

Martinez, CleopatRia (1985) Mathematics
– B.A., University of Denver; M.A., Ph.D., University of Colorado.
MAYNARD, BRENDA (2006) Business
  – A.A.S., Alpena Community College; B.S., Ferris State
  University; M.A., Washington University.

MCKEE, SHARON (2010) Nursing
  – A.A.S., Phoenix College; B.S.N., M.S.N., D.H.A.,
  University of Phoenix.

MCKENZIE, ALVERTA (2005) Applied Technology, Family and
Consumer Sciences
  – A.A.S., Phoenix College; B.A., University of Phoenix; M.A.,
  Prescott College.

MIHALJIEV, JANA (2014) Health Professions, Fitness,
and Wellness
  – A.A.S., Cuyahoga Community College.

MILLER, DIANNE L. (2005) Communication, Reading, ASL, and
Education
  – B.A., Arizona State University; M.Ed., Northern Arizona
  University.

MILLER, JR., KENNETH (2011) Fine and Performing Arts

MILLER, LISA (1981) English
  – B.A., M.A., Ph.D., University of Missouri.

MILLER, PAMELA (2001) Mathematics
  – B.A., University of California at Santa Cruz; M.A., Ed.D.,
  Northern Arizona University.

MIRAMONTES, MERCEDES M. (2012) Library
  – B.A., Indiana University; M.L.S., Wayne State University.

MONAHAN, MICHELLE J. (1999) Communication, Reading, ASL,
and Education
  – M.L.S., Arizona State University.

MOORE, CHRISTINE (2002) Library
  – B.A., Claremont McKenna College; M.A., University of
  Arizona.

MORENO, HEATHER (2012) Dental
  – B.S., Arizona State University; R.D.A., Cypress College;
  M.B.A., Colorado State University.

NAVARRETE, NANCY (1987) Counseling
  – A.A.S., Mesa Community College; B.A., M.Ed., Northern
  Arizona University.

NELSON, LEXA J. (2010) Nursing
  – B.S.N., Arizona State University; M.S.N., Walden University.

O'BRIEN, ELIZABETH (1990) Communication, Reading, ASL, and
Education
  – B.A., University of Arizona; M.A., University of Maryland.

  – B.S., Ph.D., Arizona State University.

ORTIZ, ELENA (2005) Biosciences
  – B.A., University of California, Santa Cruz; M.S., Universidad
  de Puerto Rico, Rio Piedras; Ph.D., Arizona State University.


PARKER, CYNTHIA J. (2005) Applied Technology, Family and
Consumer Sciences
  – B.S., Arizona State University; M.A., California State
  University, Dominguez Hills; Ph.D., Northern Arizona
  University.

PARKER, VERONIQUE M. (2004) Health Professions, Fitness and
Wellness
  – A.A., Clovis Community College; B.A., Eastern New
  Mexico University; M.B.A., University of Phoenix.

PERRY, RITA H. (2001) Dental
  – A.A.S., Phoenix College; B.S., M.P.A., Arizona State
  University; R.D.H., C.D.A.

PHILLIPS, SYLVIA A. (1975) Applied Technology, Family and
Consumer Sciences

PINEDA, DAVID (1995) English
  – B.A., M.F.A., Arizona State University; Ph.D., The Union
  Institute.

POWERS, CONSTANCE (2014) Nursing
  – A.S., Mesa-Boswell Community College; B.S.N., M.S.N.,
  Grand Canyon University.

RANDON, RODY (2002) Communication, Reading, ASL, and
Education
  – B.S., M.A., University of Colorado.

RASSAS, SARA LEYVA (2003) English
  – B.G.S., M.Ed., and M.Ed., Bilingual/Multicultural Education,
  Northern Arizona University.

REDENDO, ANTHONY P. (2001) Applied Technology, Family and
Consumer Sciences
  – A.O.S., Culinary Institute of America, B.S., University of
  Phoenix.

REED, PAMELA (1996) Fine and Performing Arts
  – A.A., Glendale Community College; B.A., M.A., Arizona State
  University.

RICHARDSON, DONALD J. (1971) English
  – B.A., M.A., Fort Hays State University.

Sciences
  – B.S., University of Minnesota; M.A., Washington State
  University.

ROE, CRISTIE E. (1990) English
  – B.A., Arizona State University; M.A., Monterey Institute of
  International Studies; Ph.D., University of Arizona.

ROSATI, MARK A. (1993) Biosciences
  – B.S., M.S., Eastern Michigan University.

ROSELLE, ANN M. (2001) Library
  – B.A., University of Vermont; M.A., Northwestern University;
  M.L.S., University of Illinois.

ROUSE, NICOLAS (1997) Business
  – B.S., Arizona State University; M.Ed., Northern Arizona
  University.

SANCHEZ, DAVID (2000) Criminal Justice, Emergency Response,
and Legal Studies
  – B.S., Charter Oak State College; C.E.P.
SANDOVAL, TRINO (1996) Liberal Arts
–B.A., California State University at Chico; M.A., Ph.D., Arizona State University.

SCHAMPEL, JOHN (2006) Biosciences
–B.S., University of Wisconsin; M.S., University of Minnesota.

–B.M., M.M., University of North Texas; D.M.A., Arizona State University.

–B.S., University of Maryland; M.A., Webster University.

SINNER, JAMES E. (2012) Biosciences
–A.P.-M., Olney Community College; B.L.S., University of Missouri-Rolla; B.S., National University of Health Sciences; D.C., National College of Chiropractic.

–B.S., Austin Peay State University; M.L.S., George Peabody College for Teachers.

SOUSA, JAMES (2002) Mathematics
–B.A., Sonoma State University; M.S., California State University at Hayward.

SPEED, DON (1985) Physical Sciences
–B.A., Bard College; M.S., University of Arizona.

STARK, DIANE (1997) Business

SUEYOSHI, JOE (1991) Mathematics
–B.A., University of California at Berkeley; M.S., University of Minnesota.

SUMPTER, RASHEL M. (2012) Physical Sciences
–Ph.D., University of North Dakota.

THORPE, STEVE G. (2001) Liberal Arts
–B.A., M.A., Ph.D., University of Colorado, Boulder.

TINIUS, JEFFREY (2012) Behavioral Sciences
–M.S., Capella University.

–B.S., Grand Canyon University.

VALDIVIA, KATHERINE (2013) Communication, Reading, ASL, and Education
–B.A., Arizona State University; M.Ed., Northern Arizona University.

VASQUEZ, KARA (2010) Communication, Reading, ASL, and Education
–M.A., Whitworth University.

VAZQUEZ, JULIAN (1999) Liberal Arts

VIERA, CYNTHIA L. (1991) Behavioral Sciences
–B.S., M.A., Ph.D., Arizona State University.

–B.S., M.S., Oregon State University.

VILLEGAS, AMALIA (1990) Counseling
–B.A., Arizona State University; M.Ed., Texas Technical University; Ph.D., Arizona State University.

WALKER, ROLAND McALLEN (1999) Liberal Arts

WEBSTER, DEBORAH A. (2012) Behavioral Sciences

WEINGART, CARMELO ANN (2007) Dental
–R.D.H.; B.S., Loyola University; M.Ed., Northern Arizona University.

WELTER, MARTIN (2006) Health Professions, Fitness and Wellness
–B.S., M.A., University of Iowa.

WHITE, JAMES J. (2004) Physical Sciences
–B.A., Idaho State University; M.S., Ph.D., University of Arizona.

WILBURN, JANET (1995) Dental
–A.S., San Diego Mesa College; B.S., Texas Woman’s University; C.D.A.

–A.A.S., Phoenix College.

WILSON, MICHAEL (1997) Liberal Arts
–A.A., San Jacinto College; B.A., M.A., Ph.D., University of Houston.

–A.A.S., Phoenix College; B.G.S., M.Ed., Northern Arizona University.

–B.S., M.A., B.A., University of Wisconsin; Ph.D., Grand Canyon University.

ZAHAROPOULOS, DOULA (2005) Business
–B.S.B.A., M.B.A., University of Wisconsin; Ph.D., Grand Canyon University.

Emeritus Faculty
(Years of Service to MCCCD)


ANDERSON, KRISTIN (1981-2008) Dental Hygiene


AWE, FLORETTA S. (1960-1983) District Director, Allied Health & Nursing

BAILEY, LOWELL, JR. (1965-1989) Physical Education

BENHAM, MILFORD J. (1946-1983) Physics, Geology
BLAKE, WILBERT (1970-1998) Social Science
BOGUE, JAMES W. (1960-1982) Library
BRATT, MARION (1976-1989) English
BRUNDAGE, JOE R. (1946-1973) Engineering Technology
CAÑEZ, OFELIA (2001-2007) Education
CARPENTER, AFTON J. (1963-1983) Reading
CLIFTON, LORAYNE (1961-1983) Nursing
COFFEEN, CLIFF G. (1962-1987) Social Science
COLE, DALE L. (1961-1989) Physics, Engineering
CUPS, RICHARD (1982-2014) Physical Sciences
DANIELSEN, THOMAS L. (1968-2001) Biology
DECKER, JESSE SMITH (1946-1973) Chemistry
DILLARD, GEORGIA (1973-1999) Library
DIMAS, PETE (1990-2007) History
DRISCOLL, JOHN EDWARD (1970-1990) English
EVANS, SETH PARKER (1958-1989) Business
FIELDEN, JOHN R. (1961-1986) Social Science
FOSTER, VIRGINIA R. (1968-2006) Foreign Language
GOLDBERG, RICHARD B. (1964) Social Science
HUARD, DONALD V. (1963-1989) Psychology
JAMESON, BRENT L. (1972-2006) Foreign Language
JOHNSON, ANN (retired 1972) Psychology
KACZUR, PAUL (1971-1997) Mathematics
KASS, EMIL L. (1965-1989) Counseling
MACIAS, MARGARET (1993-2008) Counseling
MARICH, MARTIN (1960-1983) Physical Education
MARKS, JOYCE LYNN (1976-2008) Library
MARSHALL, PAUL E. (1951-1978) Business
McLAIN, JOYCE D. (1966-1989) Physical Education
MILLER, RICHARD B. (1966-1986) English
MILLS, GILBERT (1947-1983) Physics, Geology, Engineering
MONROE, MARSHALL (1940-1966) Foreign Languages
NAPLES, DOROTHY J. (1963-1984) Physical Education
NAUMOFF, HAROLD (1966-1995) Psychology
NICHOL, JOHN S. (1967-2000) Counseling
OEHMKE, ANN (1962-1986) Physical Education
ORMAN, ARTHUR (1965-1987) English
PFEFFERBAUM, ROSE L. (1972-2012) Liberal Arts

POLICHINO, LOUIS M. (1956-1977) Speech


REPP, ANN (1972-1992) Physical Education

REYES, ROY (1978-2006) Art

ROE, WILLIAM (1984-2014) Behavioral Sciences

ROWE, RICHARD F. (1964-1997) Geography, Geology

SHARPE, CHARLES K. (1948-1977) Audiovisual Services


SHEEHAN, DENNIS (1995-2014) Business


TADANO, MARIAN Y. (1973-2004) Clinical Laboratory Sciences, Chemistry

TANKERSLEY, CATHERINE M. (1985-2006) Phlebotomy

TATE, PHILIP (1984-2008) Biology


VERONDA, CARLO (1971-1997) Music


WEISS, ELMA STECK (1961-1983) Physical Education

WESLER, WARREN (1963-1983) Social Science

WESTENBERG, CAMILLA (1986-2013) English

WILF, SELMA (1975-1996) Reading

Retired Faculty
(Years of Service to MCCCD)

ADAMSON, THOMAS (1990-2013) Mathematics

AGIN, AVIS (1966-1981) Reading


ARLE, JOHN F. (1993-2006) Biology

ARNOLD, CATHERINE L. (1965-1973) Home Economics

ARQUETTE, JEANNE (1994-2014) Physical Sciences


BANKHEAD, HUGH L., JR. (1965-1983) Technology

BATTLE, AL (2004-2014) Business

BOLTON, CAROL J. (1991-2014) Communication, Reading, ASL, and Education

BOND, MINYON L. (1984-2011) Biosciences


BROWN, ALMA (1977-1987) Home Economics

BRUNER, BEVERLY (2005-2014) Communication, Reading, ASL, and Education


BURGESS, GERALD (1999-2014) Fine and Performing Arts


CIPRIANO, CHERYL (2010-2014) Nursing

CRANDALL, JEWELL (retired 1979) Home Economics


DOLPHIN, HARRIET (1977-1989) Art


DRUDING, C. EDWIN (1965-1983) Psychology

EWALD, BONNIE (2001-2009) Nursing

EYGENDAAL, JAN (1978-2001) Dental Assisting

FARRINGTON, ROSEMARIE (1968-1986) Dental Assisting

FAWCETT, IRENE M. (1998-2013) Nursing


Emeritus Administration
(Years of Service to MCCCD)


WALLACE, WILLIAM B. (1961-1989) Dean of Administrative Services
GARCIA, LINDA (1991-2007) Dental Hygiene
HABERMAN, JUDITH G. (1990-2006) English
HACKLEMAN, RANDOLPH (1963-1976) Technology
HATHY, SANDRA (2001-2011) Business
HAUGEN, VIVIAN K. (1973-1983) Medical Records Technology
HOLMES, LUCILLE (retired 1966) Communications, English
HOPKINS, MARSHA ANN (1973-2011) Behavioral Sciences
HOUSER, HELEN J. (2001-2010) Health Care Education
JAMISON, JUANITA (1955-1973) English
JENNINGS, VIOLET MAY (1956-1973) Mathematics
JOFFE, IRWIN L. (1965-1983) Reading
KAPPES, DEBORAH (1998-2014) Dental
KETCHAM, SHARYN (2006-2015) Health Professions, Fitness and Wellness
LOWE, MONICA (1984-2013) Counseling
MACKLIN, LAURA (1961-1973) English
MAHER, MARY S. (1965-1978) English
MARLETT, ROBERT (1978-1983) Technology
McGIRR, CLARENCE (1980-1986) Research & Development
MEYERS, NANCY (2002-2012) English
OSBORN, APRIL (1977-1997) Dental Hygiene
PETTERSON, BONNIE J. (1993-2011) Health Professions, Fitness and Wellness
PHILLIPS, VIVIAN (1965-1975) Business
PRATHER, MARIANNE (1991-2004) Reading
RUSSELL, R. KEITH (1961-1980) Physics, Engineering
SALIBA, ELIZABETH (1998-2013) Library
SAMSON, PATRICK (1983-1993) Medical Records Technology
SANDOVAL, RALPH (2000-2014) Communication, Reading, ASL, and Education
SOLLER, SARA THORNHILL (1990-2008) Communication and Theatre
SUNG, HSIAO-HUA (1986-2012) Mathematics
TRAMEL, LINDA (1990-2001) Applied Arts and Human Sciences
VANDE PUTTE, SUZANNE (1990-2013) Nursing
VELLENGA, DOROTHY (1963-1975) English
WEAVER, LETA (retired 1971) Library
WELLS, SANDRA (1995-2011) Center for Teaching, Learning, and Technology (CCTL)
WESTCOT, MABEL (retired 1968) Home Economics
WICH, SARAH J. (1968-1986) Nursing
WITHINGTON, HENRY (retired 1979) Social Science
ZACCARDO, PATRICIA (2000-2011) English

Retired Administration
(Years of Service to MCCCD)
ARCHIBALD, EILEEN (2002-2015) Director, Institutional Advancement
HARRISON, MYRNA (1988-1993) President
JOHNSON III, MORRIS F. (1987-2005) Vice President, Student Affairs
MOORE, JAMES D. (1994-2007) Vice President, Administrative Services
Phoenix College

Administration
President, Acting......................... Chris Haines, M.Ed.
Vice President, Academic Affairs........Casandra Kakar, Ed.D.
Vice President, Administrative Services......Paul DeRose, M.Ed.
Vice President, Student Affairs............Chris Haines, M.Ed.
Dean, Student Affairs........................Heather Kruse, Ed.D.
Dean, Information Technology...............R. Mark Koan, Ed.D.
Dean of Arts and Sciences..................Wilbert Nelson, M.S.W.
Dean of Industry and Public Service.......Sharon Halford, Ph.D.
Manager, College Fiscal Services..........Angela Genna, B.I.S.
Director, Institutional Advancement.........Michelle Klinger, B.A.
Director, Planning, Research, and
Institutional Effectiveness..................Jan Binder, Ph.D.

Maricopa County Community Colleges

District Governing Board
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Ms. Johanna Haver, Secretary ........term expires 12/2018
Mr. Doyle W. Burke ......................term expires 12/2016
Mr. Alfredo Gutierrez ..................term expires 12/2016
Mr. John Heep ..........................term expires 12/2016
Ms. Jean McGrath .......................term expires 12/2018
Mr. Dana G. Saar .......................term expires 12/2016

District

Administration
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Executive Vice Chancellor and Provost ...Maria Harper-Marinick, Ph.D.
Vice Chancellor, Human Resources ....LaCoya Shelton-Johnson, M.A., SPHR
Chief Information Officer, Information Technology Services...Edward Kelty, M.Ed.
Vice Chancellor, Business Services ......Debra Thompson, M.P.A.
Vice Chancellor, Resource Development and
Community Relations ........................Steven Helfgot, Ed.D.
President, Chandler-Gilbert
Community College .......................Linda Lujan, Ph.D.
President, Estrella Mountain
Community College .......................Ernie Lara, Ph.D.
President, Gateway
Community College ......................Steven R. Gonzales, Ed.D.
President, Glendale
Community College ......................Irene Kovala, Ed.D.
President, Mesa
Community College .......................Shouan Pan, Ph.D.
President, Paradise Valley
Community College .......................Paul Dale, Ed.D.
President, Acting, Phoenix College.......Chris Haines, M.Ed.
President, Rio Salado College ..........Chris A. Bustamante, Ed.D.
President, Scottsdale
Community College ........................Jan L. Gehler, Ed.D.
President, South Mountain
Community College .......................Shari L. Olson, Ph.D.
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Mathematics Flowchart

This flowchart is an information tool and is not intended to replace consultation with an advisor. Begin at the math level indicated by math placement score and/or prior math experience. Refer to the Placement Scores and Course Recommendations.

For many AAS and AGS degree programs. For specific programs see an Academic Advisor.

- MAT082
- MAT09x
- MAT112

MAT082 → MAT09x → MAT14x

MAT09x → MAT14x
MAT12x → MAT15x

MAT108 Tutored Math for MAT082 to MAT15x

MAT082 → MAT09x → MAT12x
MAT12x → MAT15x

MAT217/218 See Advisor

MAT09x → MAT112
MAT12x → MAT15x

MAT256
MAT257

MAT206 Elements of Statistics: Required for many professions.

For Business majors (ABUS-GR, ABUS-SR)

MAT082 → MAT09x → MAT12x → MAT15x → MAT212/213

MAT217/218 See Advisor

For Elementary Education (AAEE)

- MAT082
- MAT09x
- MAT12x

MAT14x* or MAT15x
MAT256
MAT257

*If the student starts at MAT14x then a placement test score sufficient to place into MAT15x is required (or completion of MAT12x)

For Math, Science, Engineering, and Computer Science
MAT225 is strongly recommended and now required for some majors.

MAT09x → MAT12x → MAT15x → MAT182 → MAT220/221 → MAT230
MAT240
MAT276

MAT187 See Advisor

MAT225 See Advisor

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Evening Coordinators, Tim Bryan 602.285.7671 and Pam Miller 602.285.7158

SUN#