Course Descriptions
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For additional information on **PC program competencies**, visit: https://curriculum.maricopa.edu

For additional information on **MCCCD course competencies**, visit: https://curriculum.maricopa.edu

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>Class Search>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 or 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: A grade of C or better in 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 or 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 or 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 or 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: A grade of C or better in ACC111 or ACC211 or permission of Department or Division.

ACC260
Certified Bookkeeper (CB) Preparation
3 credit(s) 3 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. 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: A grade of C or better in ACC111, or ACC211, or (bookkeeping experience and permission of Instructor).

ACC270AA
Accounting Internship
1 credit(s) 1 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: ACC270AA may be repeated for a total of four (4) credits.

ACC270AB
Accounting Internship
2 credit(s) 2 period(s) lab
Accounting work experience in a business or industry. Eighty hours of designated work per credit totaling 160 hours per semester. Prerequisites: Permission of Department or Division. Course Notes: ACC270AB may be repeated for a total of four (4) credits.

ACC270AC
Accounting Internship
3 credit(s) 3 period(s) lab
Accounting work experience in a business or industry. Eighty hours of designated work per credit totaling 240 hours per semester. Prerequisites: Permission of Department or Division. Course Notes: ACC270AC may be repeated for a total of six (6) credits.
Course Descriptions

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.

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, quality Air Force, and values. 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.

AHU245
Arabic Culture and Islam
3 credit(s) 3 period(s) lecture
A survey of Arab heritage in the Arab world (Middle East). Cultural and social institutions and their contribution to the development of the region and its heritage. Prerequisites: None.

AIS100
Navajo Government
3 credit(s) 3 period(s) lecture
Addresses and examines major historical developments of the Navajo People with a focus on government, law, society, livelihood, tradition, and culture. Includes the major components and operation of Navajo government and related tribal laws, such as Title II and Title VII of the Navajo Nation Code, as well as the significance of the Treaty of 1868. Federal Indian policies and their impact on Navajo society and government, the importance of federal and tribal citizenship and related federal and tribal laws, and the role of the Navajo clanship system and other relevant cultural concepts addressed. Prerequisites: None.

AIS/SOC112
American Indian Policy
3 credit(s) 3 period(s) lecture
Reviews United States government policies and their impact on American Indian sovereignty. Examines historic, legal, economic, and social issues regarding Indian policies and how they impact Indian Nations and individual Indians. Studies historical as well as contemporary policies created by the Federal Government that define the trust relationship between the United States government and Indian Nations. Prerequisites: None.

AIS/SOC140
American Indian History
3 credit(s) 3 period(s) lecture
Survey of American Indian history with emphasis on the last 200 years including developments in the 20th century. Focuses on selected groups such as the Cherokee, Iroquois Confederation, Navajo, Sioux and Indians of the Southwest in relation to cultural, economic, political and social continuity and changes. Topics include development and influence of federal policies, past and present issues confronting Native Americans and how Native American individuals and communities maintain their identities as they confront social changes. Prerequisites: None.

AHU – Arabic Humanities

AIS – American Indian Studies

AIS/SOC141
Sovereign Indian Nations
3 credit(s) 3 period(s) lecture
Explores the sovereign status of American Indians as it relates to social relationships, traditions and culture of American Indians. Reviews historic relations with non-Indian societies, the development of federal Indian law, tribal government, other current issues, and contemporary social problems. Prerequisites: None.

See pages 132-134 for Instructional Department details.
### AIS/SOC160
**American Indian Law**
3 credit(s) 3 period(s) lecture
Analyzes the legal system of the United States Government as it applies to American Indian Nations. Examines how United States legal institutions have impacted Indian sovereignty. Units of analysis include the development of Indian law, United States Supreme Court decisions, Congressional Acts, treaty rights and the development of tribal governments. Focuses on legal institutions that have abridged the property rights of Indian Nations.
**Prerequisites:** None.

### AIS/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.

### AIS213 / 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:** A grade of C or better in ENG101 or ENG107 or equivalent.

### AIS298AA-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 **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.

#### AJS113 **Criminal Justice Crime Control Policies and Practices**
3 credit(s) 3 period(s) lecture
Focus on changing the distribution of crime opportunities rather than offender motivation. Topics include application of situational crime prevention strategies, problem-oriented crime control approaches, hot spots policing, defensible space, and crime prevention through defensible space.
**Prerequisites:** None.

#### AJS119 **Computer Applications in Justice Studies**
3 credit(s) 4 period(s) lecture + lab
Provides literacy in microcomputer applications in major areas of the criminal justice system. Examines availability and uses of current software packages in criminal justice work. Provides hands-on experience with appropriate integrated software packages pertaining to justice studies.
**Prerequisites:** None.

#### 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. Explores issues of how media/social media shape ethics. 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.

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For additional information on PC program competencies, visit: https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation

For additional information on MCCCD course competencies, visit: https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation
AJS162
Domestic Violence
3 credit(s) 3 period(s) lecture
Explores domestic violence as a social problem within the United States from historical, cultural, political, legal, and law enforcement perspectives. Provides an overview of theories, definitions and causes of, and interventions for domestic violence involving spousal, elder and child abuse along with teen dating violence. Examines the dynamics and effects of domestic violence. Addresses research issues and contemporary domestic violence policy. 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.

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, recordings and electronic surveillance; corpus delicti; opinion evidence, circumstantial evidence, evidential privileges. Prerequisites: None.

AJS205
Effective Communication and Report Writing in Criminal Justice
3 credit(s) 3 period(s) lecture
Overview of effective communication for criminal justice agencies. Covers the communication process and flow. Written communication emphasized with report writing, including characteristics of reports and field notes, and the importance and uses of each. Form, style, and procedures for writing various reports, including elements of composition, required substance, proper and improper conclusions, and descriptions of persons and property. Prerequisites: None.

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.

AJS222
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: A grade of C or better in 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.

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.

AJS290AW
Narcotics and Dangerous Drugs
1 credit(s) 1 period(s) lecture
Pharmacological effects of the use and abuse of drugs, including a description of common abuse patterns and investigative techniques used in the enforcement of drug laws. Prerequisites: None.

AJS290AZ
Police Interrogation Techniques
1 credit(s) 1 period(s) lecture
Proper interview and interrogation techniques, including a discussion of the constitutional rights of the defendant and applicable court decisions. 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.

ARC – Architecture

ARC121
Introduction to Architectural Drafting: Manual
3 credit(s) 6 period(s) lecture and lab
Emphasis on basic techniques and principles of manual architectural drafting. Includes hand lettering, line work, dimensioning, multi-view projection, work in plan, section, and elevation views, design standards, wall details, office procedures, and portfolio development. Prerequisites: None.

ARH – Art Humanities

ARH100
Introduction to Art
3 credit(s) 3 period(s) lecture
Understanding and enjoyment of art and visual culture through study of two-dimensional and three-dimensional works of art, design elements, media and processes, and cultural contexts. 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 of and significant aspects of modern art since the mid-nineteenth century. Emphasis on modern art’s relationship to socio-political and aesthetic developments, new media and the rise of mass culture. 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.
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.

ART110
Experimental Chinese Painting
1 credit(s) 2 period(s) lecture + lab
Explores ancient Chinese techniques with rice paper and Chinese ink to create traditional and nontraditional designs.
Prerequisites: None.

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 the 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: A grade of C or better in 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: A grade of C or better in 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: None.

ART152
Sculpture II
3 credit(s) 6 period(s) lecture + lab
Continuation of ART151 with emphasis on control of sculptural media.
Prerequisites: A grade of C or better in 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:** A grade of C or better in 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:** A grade of C or better in ART161.

ART165  
Watercolor Painting I  
3 credit(s) 6 period(s) lecture + lab  
Transparent and Gouache watercolor painting. **Prerequisites:** A grade of C or better in (ART111 and ART112) or permission of Instructor.

ART166  
Watercolor Painting II  
3 credit(s) 6 period(s) lecture + lab  
Painting in water soluble media. Emphasis on individual techniques and design. **Prerequisites:** A grade of C or better in 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:** A grade of C or better in (ART111 and ART112) 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:** A grade of C or better in ART167 or permission of Instructor.

ART169  
Two-Dimensional Computer 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 technologies. Basic foundation in the use of electronic techniques including appropriate input and output production devices. **Prerequisites:** A grade of C or better in ART100 or permission of Instructor.

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:** A grade of C or better in ART100, 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:** None.

ART172  
Jewelry II  
3 credit(s) 6 period(s) lecture + lab  
Further refinement of personal expression using techniques and design concepts of ART171. **Prerequisites:** A grade of C or better in 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 computer techniques including color paint programs for the production of computer images. Use of electronic input and output devices. **Prerequisites:** A grade of C or better in ART100, or permission of Instructor.

ART175  
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 composition. **Prerequisites or Corequisites:** A grade of C or better in ART100 or permission of Instructor.

ART177  
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:** A grade of C or better in 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:** A grade of C or better in 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:** A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in ART100 or permission of Instructor.

ART/ADA/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, storyboard, cells, timing, editing, and surface rendering. Screening and discussion of selected animated short films and videos. Prerequisites: A grade of C or better in 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, nubs, and polygons. 3-D translation, shading, materials, and rendering. Prerequisites: A grade of C or better in ADA/ART/MMT184, or ART184AC, or permission of the Instructor.

ART/MMT190
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, digital text, and graphics. Prerequisites: A grade of C or better in 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, digital text, and graphics. Prerequisites: A grade of C or better in ART100 or permission of Instructor. ART180AS) and ART181, or permission of Instructor.

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: A grade of C or better in ART100 and ART190AA, or permission of Instructor. CIS133DA recommended.

ART190AC
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: A grade of C or better in ART100 and ART190AB, or permission of Instructor. CIS133DA recommended.

ART/MMT191
Storyboarding and Layout
2 credit(s) 4 period(s) lecture + lab
Introduction to storyboarding including film storytelling and scene presentation. Prerequisites: A grade of C or better in ART111 or ART187 or MMT188.

ART192
Advanced Web Presentation Design
3 credit(s) 5 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: A grade of C or better in ART190 or permission of Instructor. ART180AM and ART180AN suggested but not required.

ART210
Design Tools for Imagery, Production, and Publishing
3 credit(s) 6 period(s) lecture + lab
Industry standard development of image manipulation, digital production, digital negatives, typography, and desktop publishing. New techniques using integrated software with multiple platform applications. Emphasis on alternative processes including: technique, aesthetics and creative imagery. Prerequisites: A grade of C or better in ART100 and [ADA/ART169 or (ADA/ART180AD, ADA/ART180AE, and ART180AS)] and ART181, or permission of Instructor.

ART215
Advanced Electronic Publishing
3 credit(s) 6 period(s) lecture + lab
Advanced use of electronic page layout techniques including in-depth styles; typography; technical documents and digital publishing interactivity. Prerequisites: A grade of C or better in ADA/ART175.

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: A grade of C or better in 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.

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: A grade of C or better in 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: A grade of C or better in ART255.

ART273AC
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: A grade of C or better in ART275.

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: A grade of C or better in ART100 or ADA/ART109 or permission of Instructor.

ART287
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: A grade of C or better in ART100 or permission of Instructor.

ART289AC
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: ART289AC 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: A grade of C or better in ART100 or permission of Instructor.

ART297AB
Commercial Art Internship
2 credit(s) 2 period(s) lecture + lab
Digital design, development, and photographic imaging work experience in a business or industry. 160 hours of designated work. Prerequisites: Permission of Department or Division.

ART299AA-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: A grade of C or better in 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: A grade of C or better in ART132 or permission of Instructor.

ART134
Photography IV
3 credit(s) 6 period(s) lecture + lab
Emphasis on personal statement and style. Related graphic art forms explored. Development of portfolio. Prerequisites: A grade of C or better in ART133 or permission of Instructor.

ART135
Photojournalism I
3 credit(s) 6 period(s) lecture + lab
Basic technical knowledge of photographic process as applied by mass media. Prerequisites: A grade of C or better in 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: A grade of C or better in (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: A grade of C or better in ART138.

ART140
Portrait Photography
3 credit(s) 6 period(s) lecture + lab
Fundamentals of portrait photography. Basic techniques of lighting, posing, design, and digital workflows applicable to the industry. Theory and practices of a portrait photography business. Prerequisites: A grade of C or better in ART131 or ART142 or permission of Instructor. Course Note: Digital camera with manual settings required.

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: A grade of C or better in ART142 or permission of Instructor. Course Note: Digital camera required.

ART147
Computer-Photographic Imaging
3 credit(s) 6 period(s) lecture + lab
Intermediate and techniques of digital photography. Aesthetic awareness and personal expression from image capture through intermediate techniques in the digital darkroom. Introduction to high-resolution digital output. Prerequisites: A grade of C or better in ART142 or permission of Instructor. Course Note: Digital camera required.

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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in (ART131 or ART142) or permission of Instructor. Course Notes: ART237 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
Introduction to Cultural Anthropology
3 credit(s) 3 period(s) lecture
Principles of cultural 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/AFR/CCS202
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 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
Forensic Anthropology
4 credit(s) 5 period(s) lecture + lab
Survey of the role of forensic anthropologists, from the crime scene to the courtroom. Course focuses on how skeletal analysis can aid in medicolegal investigations, especially by identifying aspects of the life history of unknown individuals and by reconstructing events that took place at crime scenes. Covers both the legal aspects of forensic practice and the underlying biological basis for evidence obtained from skeletal remains. Examines applications of forensic anthropology in mass disasters, human rights investigations, and the deciphering of historic cases. Lab activities designed to illustrate techniques and principles central to the discipline. Prerequisites: None.

AST101
Survey of Astronomy
4 credit(s) 6 period(s) lecture and lab
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: A grade of C or better in AST101 and permission of Instructor or Department or Division. Course Notes: AST102 is a legacy course intended for those students who have previously completed the corresponding lecture course. Current MCCCD students should enroll in AST101 only.

AST/GLG106
Life in the Universe
4 credit(s) 6 period(s) lecture and lab
Introduction to the search for life in the universe for the non-science major. Earth’s location in space and time, nature of life, light and the spectrum, origin and history of the universe, origin of life on Earth and the possibility of life on other planets. Prerequisites: A grade of C or better in MAT090, MAT091, or MAT092, or completion of higher level mathematics course, or satisfactory score on placement exam.

AST/GLG107
Life in the Universe Laboratory
1 credit(s) 3 period(s) lab
Astronomy, Biology, and Planetary Science laboratory. Prerequisites: A grade of C or better in AST/GLG106 and permission of Instructor or Department or Division. Course Notes: AST107 is a legacy course intended for those students who have previously completed the corresponding lecture course. Current MCCCD students should enroll in AST106 only.

AST111
Introduction to Solar System Astronomy
4 credit(s) 6 period(s) lecture and lab
Introduction to astronomy for the non-science major. The scientific method, properties of light, astronomical instruments, our Solar System and solar systems around other stars. Includes hands-on astronomical observations and laboratory exercises. Prerequisites: A grade of C or better in MAT092 or higher, or satisfactory score on district placement exam.
AST112  
Introduction to Stars, Galaxies, and Cosmology  
4 credit(s) 6 period(s) lecture and lab  
Introduction to astronomy for the non-science major. Structure and evolution of stars; supernovae, black holes, and quasars; nebulae; star clusters; galaxies; cosmology, including the birth and death of the universe.  
**Prerequisites:** A grade of C or better in MAT092 or higher, or satisfactory score on district placement exam.  
**Course Notes:** Note that AST111 is not a prerequisite for this course.

AST113  
Introduction to Solar System  
Astronomy Laboratory  
1 credit(s) 3 period(s) lab  
Hands-on astronomical observations and exercises to supplement AST111.  
**Prerequisites:** A grade of C or better in AST111 and permission of Instructor or Department or Division.  
**Course Notes:** AST113 is a legacy course intended for those students who have previously completed the corresponding lecture course. Current MCCCD students should enroll in AST111 only.

AST114  
Introduction to Stars, Galaxies, and Cosmology Laboratory  
1 credit(s) 3 period(s) lab  
Hands-on astronomical observations and exercises to supplement AST112.  
**Prerequisites:** A grade of C or better in AST112 and permission of Instructor or Department or Division.  
**Course Notes:** AST114 is a legacy course intended for those students who have previously completed the corresponding lecture course. Current MCCCD students should enroll in AST112 only.

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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  
Introductory Biology for Allied Health  
4 credit(s) 6 period(s) lecture and lab  
An introductory biology course for allied health majors with an emphasis on humans; Topics include fundamental concepts of cell biology, histology, microbiology, and genetics.  
**Prerequisites:** A grade of "C" or better in RDG100 or higher or eligibility for CRE101. One year of high school or one-semester of college level chemistry is strongly recommended.

BIO160  
Introduction to Human Anatomy and Physiology  
4 credit(s) 6 period(s) lecture and lab  
Principles of scientific method. Structural organization, homeostasis and control mechanisms of the body. Specific chemistry concepts. Structure and function of the major systems of the body.  
**Prerequisites:** None.

BIO181  
Introduction to Biotechnology (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 RDG100 or higher or eligibility for CRE101. One year of high school or one semester of college-level biology and chemistry is strongly recommended.

BIO182  
Introduction to Biotechnology (Majors) II  
4 credit(s) 6 period(s) lecture and lab  
The study and principles of structure and function of living things at cellular, organismic, and higher levels of organization. A detailed exploration of the mechanisms of evolution, biological diversity, biology of organisms, and ecology.  
**Prerequisites:** A grade of "C" or better in BIO181 or BIO181XT.  
**Course Note:** BIO182 may require field trips.

BIO201  
Human Anatomy and Physiology I  
4 credit(s) 6 period(s) lecture and lab  
Study of structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system.  
**Prerequisites:** A grade of "C" or better in BIO156 or BIO156XT or BIO181 or BIO181XT or one year of high school biology) and a grade of "C" or better in RDG100 or higher or eligibility for CRE101. CHM130 or higher or one year of high school chemistry suggested but not required.

BIO202  
Human Anatomy and Physiology 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 BIO201 or BIO201XT.

BIO205  
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 BIO156 or BIO156XT or BIO181 or BIO181XT or one year of high school biology and a grade of "C" or better in RDG100 or higher or eligibility for CRE101. CHM130 or higher or one year of high school chemistry suggested but not required.
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: A grade of C or better in (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: A grade of C or better in BIO181.

BIO274
Introduction to Wildlife Management
4 credit(s) 6 period(s) lecture and lab
Introduction to the field of wildlife biology/management and the legal, cultural, ecological, and population dynamics of wildlife biology and management. Covers wildlife management objectives, management techniques, research techniques, and the organizational environment that wildlife biologists work in; provides an overview of careers in the field and guidance in planning a career. Prerequisites: High school biology with a grade of C or better, or a grade of C or better in BIO100, or BIO181, or permission of Instructor.

BIO286WA, WB, WC
Cooperative Education
1-3 credit(s) 5-15 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 (students present job may qualify) or permission of Instructor. Corequisites: Must be concurrent in at least one class which is related to student’s major or career interest or with permission of the Instructor.

BIO289AA, AB, 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.

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. 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.

CAD – Computer-Aided Drafting

CAD100
Fundamentals of 2D AutoCAD
3 credit(s) 6 period(s) lecture + lab
Utilize AutoCAD software to generate two-dimensional (2-D) drawings and components in a generic installation. Apply basic AutoCAD commands and properties to format, draw, edit, layer, dimension, import/export, and manage drawing files. Creation, manipulation, and hardcopy production of 2-D drawing files from major AutoCAD command and display environments and plot options. Prerequisites: None.

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: A grade of C or better in ENG101, or ENG107, or equivalent.

CCS/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.

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.
CFS – Child/Family Studies

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.

CFS106
Stress Management in the Family
1 credit(s) 1 period(s) lecture
(Not offered every semester)
Impact of stress factors on the family. Managing time and stress in the home. Options for coping with anxiety. 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.

CFS114
Working With the Hyperactive Child
1 credit(s) 1 period(s) lecture
(Not offered every semester)
Causes of hyperactivity in children; focus on the family’s role in identification, treatment and school/community support. Prerequisites: None.

CFS116
Discipline and Guidance
3 credit(s) 3 period(s) lecture
(Not offered every semester)
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.

CFS121AA
Single Parent Family-Adjustment
1 credit(s) 1 period(s) lecture
(Not offered every semester)
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.

CFS125
Safety in Early Childhood Settings
1 credit(s) 1 period(s) lecture
(Not offered every semester)
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.

CFS130
Demystifying Adolescence
1 credit(s) 1 period(s) lecture
(Not offered every semester)
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.

CFS157
Marriage and Family Life
3 credit(s) 3 period(s) lecture
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.

CFS/ECH176
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.

CFS177
Parent-Child Interaction
3 credit(s) 3 period(s) lecture
(Not offered every semester)
Positive methods to strengthen relationships and resolve conflicts with children. Focus on effective interpersonal skills and guidance techniques. Prerequisites: None.

CFS178
Survey of Early Childhood Education
3 credit(s) 3 period(s) lecture
(Not offered every semester)
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.

CFS182
Parenting the Early Adolescent: Ages Ten to Fourteen
1 credit(s) 1 period(s) lecture
(Not offered every semester)
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.

CFS183
Contemporary Issues in Adolescence
3 credit(s) 3 period(s) lecture
(Not offered every semester)
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.

CFS205
Human Development
3 credit(s) 3 period(s) lecture
(Not offered every semester)
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.

CFS242
Curriculum Planning for Diversity
3 credit(s) 3 period(s) lecture
(Not offered every semester)
Practical early childhood classroom applications for a diverse population, including integration of cultures, generations, genders, and races into the classroom, facilitation of second language acquisition, and practical teaching strategies which are also developmentally appropriate. Prerequisites: A grade of C or better in CFS/ECH176.
CFS256
Management in the Family
3 credit(s) 3 period(s) lecture
(Not offered every semester)
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.

CFS257
Working with Families with Diverse Needs
3 credit(s) 3 period(s) lecture
(Not offered every semester)
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.

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: A grade of C or better in CFS/ECH176.

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 SEM CHM 1130
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 MAT103AA and MAT103AB) or higher level mathematics course or satisfactory score on math placement exam] and [RDG100 or higher or eligibility for CRE101 as indicated by appropriate reading placement test score], or permission of the Instructor, or Department or Division Chair. LAB: Laboratory experience in support of CHM130.
Prerequisites or Corequisites: A grade of "C" or better in CHM130.

CHM138 and 138LL SEM CHM 1138
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 MAT090 or MAT091 or MAT092 (or MAT103AA and MAT103AB) or higher or satisfactory score on math placement exam], or one year of high school chemistry taken within the last five years with a grade of C or better, or permission of the Instructor, or Department or Division Chair. LAB: Laboratory experience in support of CHM138.
Prerequisites: None. Corequisites: CHM138.

CHM150 SEM CHM 1151
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 (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory score on placement exam), or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of all prerequisites within the last two years is recommended. Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM150AA, or CHM151 and CHM151LL, or CHM151AA.

CHM151 and 151LL SEM 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 with a grade of C or better taken within the last five years) and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory score on placement exam), or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of all prerequisites within the last two years is recommended. Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM150AA, or CHM151 and CHM151LL, or CHM151AA.

Course information is subject to change.
Visit https://curriculum.maricopa.edu for most current information.
CHM238 and 238LL
General Organic Chemistry II B and Lab
5 credit(s) 9 period(s) lecture and lab
LEC: Alternate to CHM236. Study of chemistry of carbon-containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized. Prerequisites: A grade of C or better in CHM235 and CHM235LL, or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of prerequisites within the last two years recommended. Recommended for chemistry, chemical engineering and mining engineering majors. LAB: Laboratory experience in support of CHM238. Prerequisites: A grade of C or better in CHM235LL or equivalent 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

CIS103
Introduction to Social Media
3 credit(s) 4 period(s) lecture + lab
Identify and explain social media and Web 2.0 technologies for personal, academic, professional, and business applications. Create and maintain accounts on various sites to socialize, write, and share multimedia, while understanding the related ethics, privacy and security issues. Prerequisites: None.

CIS111
Ethics in Information Technology
3 credit(s) 3 period(s) lecture
Ethical issues that arise as a result of increasing use of computers, and the responsibilities of those who work with computers, either as computer science professionals or end users. Critical inquiry and review of ethical challenges in information technology business, including professional and corporate responsibility, government regulation, fiduciary responsibilities of information, infringement of intellectual property, security risk assessment, Internet crime, identity theft, employee surveillance, privacy, compliance, social networking, and the ethics of IT corporations. Prerequisites: None.

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.

CIS114AE
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.

CIS114DE
Excel Spreadsheet
3 credit(s) 4 period(s) lecture + lab
Computer spreadsheet skills for solving business problems using Excel, including calculations, forecasting, projections, macro programming, database searching, extraction, linking, statistics, and matrix manipulation. Production of graphs and reports. Project design using multiple, integrated spreadsheets. Prerequisites: None. Course Notes: CIS114DE may be repeated for a total of nine (9) credit hours.

CIS117DM
Microsoft Access: Database Management
3 credit(s) 4 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 Notes: CIS117DM combines the contents of CIS117AM, CIS117BM and CIS117CM. CIS117DM may be repeated for a total of nine (9) credit hours.

CIS118AB
PowerPoint: Level I
1 credit(s) 2 period(s) lecture + lab
Use of PowerPoint software to produce professional-quality presentation visuals. Prerequisites: None.

CIS120DC
Adobe Animate: Digital Animation
3 credit(s) 4 period(s) lecture + lab
Focuses on entry-level skill expectations for digital animation using Adobe Animate. Covers basic animation techniques used in the creation, manipulation, and editing of animation graphics. Helps students prepare for the Adobe certifications related to Adobe Animate. Prerequisites: None.

CIS120DF
Adobe Photoshop Level I: Digital Imaging
3 credit(s) 4 period(s) lecture + lab
Focuses on entry-level skill expectations for digital imaging using Adobe Photoshop. Helps students prepare for the Adobe Certifications related to Photoshop. Prerequisites: None.

CIS121AE
Windows Operating System: Level I
1 credit(s) 2 period(s) lecture + lab
Specific topics include Windows basics, navigating and customizing the desktop, maintaining hardware and software, improving performance, configurations, securing your computer, taskbar, organizing, searching and managing folders and files, installing and uninstalling applications, Internet Explorer fine tuning, security, and searching, including advanced search techniques, keyboard shortcuts, and current topics. Prerequisites: None.

CIS121AI
Mac Operating System
1 credit(s) 2 period(s) lecture + lab
Specific topics include getting started with Mac OS; working with disks, folders, and files; installing and using applications; setting system preferences; printing, faxing, and scanning; getting and living online; using iLife; sharing a Mac with other users; creating a home network; and maintaining the Mac. Prerequisites: None.

CIS126DL
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. Learn basic command line and Graphical User Interface (GUI) desktop environment utilities and applications. Fundamental abilities to achieve the entry-level industry certification covered. Prerequisites: None.

CIS133AA
Internet/Web Development Level I-A
1 credit(s) 2 period(s) lecture + lab
Overview of the Internet and its resources. Hands-on experience with various Internet communication tools. Prerequisites: None.
CIS105
Programming Fundamentals
3 credit(s) 4 period(s) lecture + lab
Structured program design and logic tools. Use of computer problems to demonstrate and teach concepts using appropriate programming language. **Prerequisites:** A grade of C or better in CIS105, or permission of Instructor.

CIS150
Object-Oriented Programming Fundamentals
3 credit(s) 4 period(s) lecture + lab
Structured and Object-Oriented design and logic tools. Use of computer problems to demonstrate and teach concepts using an appropriate programming language. **Prerequisites:** A grade of C or better in CIS105 or permission of Instructor.

CIS156
Python Programming: Level I
3 credit(s) 4 period(s) lecture + lab
Use of the Python programming language to solve problems using suitable examples from business or other disciplines. **Prerequisites:** A grade of C or better in CIS105 or permission of Instructor.

CIS159
Visual Basic Programming I
3 credit(s) 4 period(s) lecture + lab
Use of the Visual Basic programming language to solve problems using suitable examples from business or other disciplines. **Prerequisites:** A grade of C or better in CIS105, or permission of Instructor.

CIS162AD
C#: Level I
3 credit(s) 4 period(s) lecture + lab
Introduction to C# programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming. **Prerequisites:** A grade of C or better in CIS105 or permission of Instructor.

CIS163AA
Java Programming: Level I
3 credit(s) 4 period(s) lecture + lab
Introduction to Java programming. Includes features needed to construct Java Applets, Java Applications, control structures, methods, arrays, character and string manipulation, graphics, and object-oriented programming. **Prerequisites:** A grade of C or better in CIS105 or permission of Instructor.

CIS165
Introduction to iOS Application Development
3 credit(s) 4 period(s) lecture + lab
Introduction to iOS device programming utilizing the XCode application, and the programming languages Objective-C and Swift, utilizing various iOS frameworks. Understand iOS hardware and feature basics. Go through entire design process from concept to final product delivery. **Prerequisites:** A grade of C or better in CIS150++, or CIS159, or CIS162++, or CIS163AA, or permission of Instructor.

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:** A grade of C or better in CIS133DA 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:** A grade of C or better in CIS133DA or permission of Instructor.

CIS190
Introduction to Networking
3 credit(s) 4 period(s) lecture + lab
Overview of networks. Emphasis on the elements of a network, current issues and products, and use of a network. Includes terminology, hardware and software components, connectivity, resource monitoring and sharing, electronic mail and messaging, and security issues. Helps prepare students for the CompTIA Network+ examination. **Prerequisites:** A grade of C or better in 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.

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:** A grade of C or better in 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:** A grade of C or better in 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:** A grade of C or better in CIS133DA, 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 CompTIA Linux+, the Red Hat Certified System Administrator (RHCSA), the Red Hat Certified Engineer (RHCE) and the Linux Professional Institute (LPIC-1).  
Prerequisites: A grade of C or better in CIS126DL or CIS126RH or permission of Instructor.

CIS250  
Management of Information Systems  
3 credit(s) 4 period(s) lecture + lab  
The study of business information systems and its management, communication, e-business strategies, emerging technologies, database concepts, and project management. Overview of systems analysis and design. Learn about the competitive and strategic uses of information systems and how they are transforming organizations and their management.  
Prerequisites: A grade of C or better in CIS105.

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: A grade of C or better in CIS159 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: A grade of C or better in CIS162AD, or permission of Instructor.

CIS263AA  
Java Programming: Level II  
3 credit(s) 4 period(s) lecture + lab  
Intermediate Java programming. Includes features needed to construct object-oriented programming, multithreading, multimedia, files, streams and data structure.  
Prerequisites: A grade of C or better in CIS163AA or permission of Instructor.

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 COM 1100  
Introduction to Human Communication  
3 credit(s) 3 period(s) lecture  
Introduces the theory and practice of human communication. Surveys communication topics related to interpersonal, small group, and public communication.  
Prerequisites: None.

COM110 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.

COM/MCM181  
Conflict Mediation  
3 credit(s) 3 period(s) lecture  
Develop communication skills necessary to conduct mediation in formal and informal settings. Applies principles and theories of message production and responding, listening, questioning, source and receiver factors, and emotion to conflict management communication. Emphasis on respecting diversity and empowering joint problem solving throughout.  
Prerequisites: None.

COM207  
Introduction to Communication Inquiry  
3 credit(s) 3 period(s) lecture  
Overview of theory and methodological practice in communication with particular attention to scholarly writing skills. Emphasis on development of critical thinking skills through active participation in the research process.  
Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent, and COM100 or equivalent, or permission of Instructor.  
Course Notes: COM207 is recommended for the communication major.

COM222  
Argumentation  
3 credit(s) 3 period(s) lecture  
Discussion and practice of the use of evidence, applied reasoning, recognition of fallacies, selection of arguments, and methods of analyzing issues.  
Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.

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: A grade of C or better in ENG101 or ENG107, or equivalent.

COM230 COM 2271  
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.

COM/THP241  
Oral Interpretation of Literature  
3 credit(s) 3 period(s) lecture  
The study, analysis, and preparation for performance of prose, poetry, and dramatic literature. Preparation of material for public audiences.  
Prerequisites: A grade of C or better in ENG101 or ENG107.

COM250  
Introduction to Organizational Communication  
3 credit(s) 3 period(s) lecture  
Introduction to the study of communication in organizations including identification of variables, roles and patterns influencing communication in organizations.  
Prerequisites: None.
COM259
Communication in Business and Professions
3 credit(s) 3 period(s) lecture
Interpersonal, organizational, intercultural, group, and public communication in business and professional organizations. Emphasis on oral communication and the effective use of technology and new media. Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.

COM263
Elements of Intercultural Communication
3 credit(s) 3 period(s) lecture
Diverse cultural contexts are explored through basic concepts, principles, and theories of intercultural communication. Discovering effective interaction and appropriate communication in a global community is emphasized. Prerequisites: None.

COM281AB
Communication Activities
3 credit(s) 5 period(s) lecture + lab
Designed to provide students with competence and confidence in a variety of speech situations beyond the classroom setting. May include presentations at speech competitions or at community organizations. Prerequisites: None. Course Notes: COM281AB may be repeated for a total of six (6) credit hours.

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 study and practice, 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.

CON – Construction

CON101
Construction and Culture
3 credit(s) 3 period(s) lecture
The cultural context of construction, emphasizing the evolution and expansion of constructed environments as expressions of ethical and historical value systems. Prerequisites: None.

CDP102A
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: CDP102A may be repeated for a total of six (6) credit hours.

CDP102B
Growth and Transformation Strategies
2 credit(s) 2 period(s) lecture
Designed to help students adopt a growth mindset within a holistic framework in order to transform patterns that prevent them from achieving their goals. Prerequisites: None.

CDP102C
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.

CDP102D
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.

CDP102E
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.

CDP102F
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.

CDP102G
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.
Course Descriptions

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 holistic process of career/life planning through self-awareness and understanding of the world of work. Exploration and application of behavioral, social, and cultural factors leading to college, career, and personal success with emphasis on self-assessment, applied behavior management, motivation, self-care, and career development. 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.

CPD109
Creating College Success
2 credit(s) 2 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/AAA115
Awareness
1 credit(s) 1 period(s) lecture
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: A grade of C or better in ENG101, or ENG107, or permission of Instructor.

CRW – Creative Writing

CRW120
Introduction to Writing
Children’s Literature
3 credit(s) 3 period(s) lecture
Overview of writing children’s literature. Emphasis on genres and standards for quality. Development of techniques in reading, evaluating, writing, revising, and editing literature written for children. Prerequisites: None. ENH291 suggested but not required.

CRW150
Introduction to Creative Writing
3 credit(s) 3 period(s) lecture
Introduction to the basic aesthetics and techniques in contemporary creative writing within a variety of genres. Introduction to the analytical concepts and terminology necessary to understand, interpret, and enact contemporary creative writing. Facilitation of writing practices and evaluation. Introduction to literature’s role in society. Prerequisites: None.

CRW160
Introduction to Writing Poetry
3 credit(s) 3 period(s) lecture
Prewriting (invention and discovery); writing; analyzing and evaluating (in workshop); and revising to practice manipulating various elements of poetry, critique one’s own and the poetry of others, and produce a portfolio of finished, marketable poems. Prerequisites: None. CRW150 recommended but not required.

CRW170
Introduction to Writing Fiction
3 credit(s) 3 period(s) lecture
Practice in writing fiction through a process of prewriting (invention and discovery), writing, analysis and evaluation (in workshop), and revision; practice in manipulating various elements and forms of fiction. Prerequisites: None. CRW150 recommended but not required.

CRW172
Introduction to Comic Book Writing
3 credit(s) 3 period(s) lecture
Introduction to elements and techniques of comic book writing in its specific form; teaches terminology and concepts needed for the successful participation in writing workshops; focuses on proposal outline, planning, structure facilitates writing practice (including character study) and evaluation; offers individual suggestions in the student’s development in this genre. Prerequisites: None.

CRE – Critical Reading

Please Note: For additional Reading courses, see RDG, starting on page 294.

CRE101
College Critical Reading and Critical Thinking
3 credit(s) 3 period(s) lecture
Develop and apply critical thinking skills through critically reading varied and challenging materials. Includes analysis, evaluation, interpretation, and synthesis through at least two substantial writing and/or speaking tasks. Prerequisites: A grade of “C” or better in ENG101 or ENG107 and (appropriate reading placement test score or a grade of “C” or better in RDG100 or RDG111 or RDG112 or RDG113 or permission of Instructor).
CRW180  
Introduction to Writing Nonfiction  
3 credit(s)  3 period(s) lecture  
Practice in writing creative nonfiction, including autobiography and biography, the essay, reviews, and humor using a process of invention and discovery, writing, analysis, evaluation, and revision. Combines lecture, discussion, and workshop, leading to the production of marketable quality creative nonfiction. Prerequisites: None. CRW150 recommended but not required.

CRW190  
Introduction to Screenwriting  
3 credit(s)  3 period(s) lecture  
Overview of screenwriting elements; introduction to screenwriting techniques. Prerequisites: None. CRW150 recommended but not required.

CRW200  
Readings for Writers  
1 credit(s)  1 period(s) lab  
Close analysis and interpretation of selected literary texts designed to strengthen the students’ own writing by extending their familiarity with the genre in which they write and their knowledge of selected literary elements. One-on-one meetings between student and Instructor. Prerequisites: A grade of C or better in CRW150 or permission of Instructor. Course Notes: CRW200 may be repeated for a total of six (6) credits.

CRW201  
Portfolio  
1 credit(s)  1 period(s) lab  
Close analysis of the creative writing portfolio culminating in selection, revision, editing, and compiling of the student’s own literary work in a portfolio. Students meet individually with Instructor to choose, prepare, and compile their work. Prerequisites: (Acceptance into Creative Writing Certificate Program and completion of at least nine (9) credit hours in creative writing (CRWII), or permission of Program Director. Course Notes: CRW201 may be repeated for a total of two (2) credit hours.

CRW202  
The Writer As Witness  
3 credit(s)  3 period(s) lecture  
Studio course focusing on writing with the writer as witness of the world: prewriting, writing, analysis, evaluation, and writing of monologue and dialogue in various formats. Prerequisites: A grade of C or better in CRW150, or permission of Instructor.

CRW203  
Dialogue  
3 credit(s)  3 period(s) lecture  
Studio course focusing on writing dialogue in a variety of genres; prewriting, writing, analysis, evaluation, and revision of monologue and dialogue in various formats. Prerequisites: A grade of C or better in CRW150 or permission of Instructor.

CRW220  
Intermediate Writing  
Children’s Literature  
3 credit(s)  3 period(s) lecture  
Application of techniques in writing literature for children. Emphasis on independent writing, self-evaluation, and revision. Includes completion of a major writing project of marketable quality. Prerequisites: A grade of C or better in CRW120, or permission of Instructor.

CRW242AH  
Writing Studio Workshop I: Musical Elements of Poetry  
3 credit(s)  3 period(s) lecture  
Studio course focusing on the musical elements of poetry, including sounds and rhythms, rhyme, traditional rhetorical devices, line and stanza; examines relationship between the written and spoken poem; prewriting, writing, analysis, evaluation, and revision of poetry. Prerequisites: None.

CRW250  
Intermediate Poetry Writing  
3 credit(s)  3 period(s) lecture  
Emphasis on writing a series of original poems; analysis and evaluation of the functions and effects of established works of poetry; concentration on evaluation and revising students’ poetry through intensive workshopping. Prerequisites: A grade of C or better in CRW160 or permission of Instructor.

CRW260  
Topics in Writing: Poetry  
3 credit(s)  3 period(s) lecture  
Analysis, writing, and revision of genre or element within poetry. Prerequisites: A grade of C or better in CRW150 or permission of Instructor.

CRW270  
Intermediate Fiction Writing  
3 credit(s)  3 period(s) lecture  
Writing original short stories; analysis of works of fiction; concentration on revising students’ fiction through intensive workshopping. Prerequisites: A grade of C or better in CRW170 or permission of Instructor.

CRW271  
Topics in Writing: Fiction  
3 credit(s)  3 period(s) lecture  
Analysis, writing, and revision of genre or element within fiction. Prerequisites: A grade of C or better in CRW150 or permission of Instructor.

CRW272  
Planning and Structuring the Novel  
3 credit(s)  3 period(s) lecture  
Focus on planning, structuring, and beginning a novel; prewriting, writing, analysis, evaluation, and revision of novel plans and excerpts. Prerequisites: A grade of C or better in CRW150 or permission of Instructor.

CRW273  
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: A grade of C or better in 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: A grade of C or better in CRW273 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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in CRW150 or permission of Instructor.

CWE – Career Work Experience  

CWE198AC  
Career/Work Experience  
3 credit(s)  3 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.
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.

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:** A grade of C or better in DAE112 or 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:** A grade of C or better in DAE112 or 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:** A grade of C or better in DAE156 or permission of Program Director. **Corequisites:** (DAE224, DAE225, DAE226, DAE227, and DAE228) or permission of Program Director.

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:** A grade of C or better in DAE112 or permission of Program Director.

DAE162
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, prosthodontics, and oral and maxillofacial surgery. Additional emphasis will be on expanded functions procedures performed by the dental assistant, as well as patient records management and pharmacology related to dental treatment procedures. **Prerequisites:** A grade of C or better in DAE156 or permission of Program Director.

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:** A grade of C or better in 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:** A grade of C or better in 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:** A grade of C or better in 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:** A grade of C or better in 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:** A grade of C or better in 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:** A grade of C or better in DAE212 or permission of Program Director.

DAE298AA-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.

DAH – Dance Humanities

DAH100
Introduction to Dance
3 credit(s) 3 period(s) lecture
Overview of the field of dance focusing on origins, historical development, and cultural characteristics of the various styles of dance. **Prerequisites:** None.
DAN – Dance

DAN129
Musical Theatre Dance I
3 credit(s) 3 period(s) lecture + lab
Introduction to the theory and practice of musical theatre dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN129 may be repeated for credit.

DAN132
Modern Dance I
3 credit(s) 3 period(s) lecture + lab
Introduction to the theory and practice of modern dance at the beginning level. Development of movement quality and performance skills. Prerequisites: None. Course Notes: DAN132 may be repeated for credit.

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, vascular supply, lymph and glandular tissue, cranial nerves and routes of infection. Course activities include use of skulls, models and multimedia resources. Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.

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 to preventive aids, agents, and coaching to help patients achieve optimum oral health, reduce incidence of disease, and minimize risk of oral injury. Instills critical thinking in etiologic agents, cariology, fluorides, sealants, nutrition, and their oral and systemic implications. Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.

DHE132
Dental Hygiene Theory I
3 credit(s) 5 period(s) lecture + lab
Study of the dental hygiene process of care with emphasis on assessment, planning and implementation. Topics include instrumentation, adjunct dental hygiene services, instrument sharpening, computer technology, dental specialties and professional accountability. Prerequisites: A grade of C or better in DHE120 and admission to the Dental Hygiene Program or permission of Instructor. Corequisites: DHE133.

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: A grade of C or better in DHE120 and admission to the Dental Hygiene Program. Corequisites: DHE132 and current CPR card.

DHE201
Dental Materials
2 credit(s) 2 period(s) lecture

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: A grade of C or better in 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: A grade of C or better in 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) 5 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, electronic recordkeeping, patient management, and hands-on experience administering local anesthetics and nitrous oxide in a clinical setting. Prerequisites: A grade of C or better in DHE119.

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: A grade of C or better in (DHE212 and DHE213), and admission to the Dental Hygiene Program. Corequisites: DHE233.

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: A grade of C or better in (DHE212 and DHE213), and admission to the Dental Hygiene Program. Corequisites: DHE232.

DPR – Disaster Preparedness and Emergency Response

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.

DPR/AJS/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.

ECE – Engineering Science

ECE102
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: A grade of C or better is required in all Prerequisites. Prerequisites or Corequisites: MAT182, or higher level mathematics course, or permission of Instructor or Department or Division Chair.
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: A grade of C or better in ECE102 or permission of instructor. Course Notes: Student may receive credit for only one if the following: ECE103 or ECE103EP.

ECE105
MATLAB Programming
1 credit(s) 2 period(s) lecture + lab
Use MATLAB to solve engineering problems. An overview of programming, including matrices, structures, strings, functions, control flow, file management, data analysis, graphing capabilities, and mathematical calculations. Prerequisites: (IMAT150 or MAT151 or MAT152) and MAT182 or MAT187 or higher level mathematics course.

ECE111
Bioengineering Systems
3 credit(s) 3 period(s) lecture
Introduction to biological concepts and application of engineering to biological and earth systems. Analysis of materials, structures, fluid mechanics, bioelectricity, and dynamics as applied to biological and environmental systems. Prerequisites: None.

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: A grade of C or better in PHY115 or PHY121 or permission of instructor. Corequisites: MAT230 or MAT231.

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: A grade of C or better required in all Prerequisites. Prerequisites or Corequisites: ECE211 and (PHY115 or PHY121). Prerequisites or Corequisites: MAT240 or MAT241.

ECE215
Mechanics of Materials
3 credit(s) 5 period(s) lecture and lab
Designed to provide students with a strong fundamental foundation in the mechanics of solids. Includes the concepts of stress and strain applied to the analysis and design of members subjected to axial and torsional loads and members subjected to shear and bending, applications and transformation of plane stress and plane strain, deformation of beams, and elastic buckling of columns. Prerequisites: A grade of C or better in ECE211 or ECE214.

ECE220
Introduction to the Chemical Engineering Process
3 credit(s) 5 period(s) lecture + lab
Introduces fundamental skills and principles needed to analyze the industrial processes of importance to the chemical engineering profession. Prerequisites: A grade of C or better in CHM152 and MAT231. Course Notes: ECE220 course is designed for chemical engineering students.

ECE231
Introduction to Fluid Transport Phenomena
3 credit(s) 5 period(s) lecture + lab
Fundamental skills and principles of fluid transport on both macroscopic and microscopic scales using mass balances, momentum balances and energy balances to analyze and/or design fluid systems of interest in the chemical engineering profession. Prerequisites: A grade of C or better in MAT261 and PHY121.

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.

ECH226
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.

ECH236
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 ECN2201
Macroeconomic 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 ECN2202
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: A grade of C or better in ECN100, or ECN211, or ECN212.

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/Dual Language Immersion (DLI). Includes SEI, ESL, and bilingual/DLI strategies. Prerequisites: None. Course Notes: Approved school-based practicum is required. EDU220 incorporates the 45-clock hour curricular framework for 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 with emphasis on factors relating to current practices, identification, characteristics, and educational adaptations. Issues related to mild disabilities, severe disabilities, emotional and behavioral disorders, intellectual disabilities, and students who are gifted.
Prerequisites: None. 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.

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.

EEE – Electrical Engineering

EEE202
Circuits and Devices
5 credit(s) 7 period(s) lecture and lab
Introduction to circuits and devices. Component models, transient analysis, steady state analysis, Laplace transform, and active and passive filter networks.
Prerequisites: A grade of C or better in PHY116 or PHY131. Corequisites: MAT276 or permission of Instructor.
ELE – Electronic

ELE111 Circuit Analysis I
4 credit(s) 6 period(s) lecture + lab
Direct current (DC) and Alternating current (AC) electric circuits. 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: A grade of C or better in EMT101 or a current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer and an 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. EMT/FSC104 may be repeated for credit.

ELE112 Circuit Analysis II
4 credit(s) 6 period(s) lecture + lab
Alternating current (AC) and direct current (DC) circuits containing resistance and reactance. Detailed coverage of AC/DC circuit parameters, including theorems, impedance matching, and resonance. Prerequisites: A grade of C or better in ELE111.

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.

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: A grade of C or better in EMT101, or any current American Red Cross, or CPR for the Professional Rescuer, or American Heart Association Basic Life Support Health Care Provider validation.

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: A grade of C or better in EMT101 or a current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer and an 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. EMT/FSC104 may be repeated for credit.

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: A grade of C or better in 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. Course Notes: EMT200 may be repeated for credit.

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 proof of current registry with the National Registry of Emergency Medical Technicians (NREMT).
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 US Department of Transportation (DOT) EMT-Basic National Curriculum and the Arizona Basic EMT Refresher Curriculum Guidelines. Enhances the knowledge base of the EMT. Updates a wide variety of subjects including respiratory and cardiac emergencies, and interaction with advanced life support providers. Prerequisites: Current EMT Basic certification in the state of Arizona or proof of current registry with the National Registry of Emergency Medical Technicians (NREMT) and validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer.

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 and pharmacologic agents to formulate a 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 a grade of C or better in (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 a grade of C or better in (EMT235 and EMT236, or permission of Instructor).

Courses may be repeated for credit.

Course Descriptions

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 a grade of C or better in EMT225 and EMT226 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: A grade of C or better in EMT242, or permission of Instructor. Course Notes: EMT243 may be repeated for credit.

Course information is subject to change.

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: A grade of C or better in EMT235, or permission of Instructor.

EMT255AA
Instructional Strategies for EMT Occupations
2 credit(s) 2 period(s) lecture
Teaching skill preparation for entry-level Emergency Medical Services (EMS) educators and EMT Instructor candidates to teach EMT courses or enhancement of teaching skills for experienced EMS Instructors according to the Arizona Department of Health Services (A-DHS) Bureau of Emergency Medical Services (BEMS) and national guidelines. Includes Instructor roles and responsibilities; administrative, legal, and ethical issues; learning environments and styles; domains of learning, including goals, objectives, and lesson planning; techniques for facilitation, presentations, evaluation, and discipline; principles of communication and feedback; student motivation, critical thinking, and remediation; cultural awareness; teaching resources; and research in EMS education. Prerequisites: (Arizona Department of Health Services certification as a Basic EMT, or Intermediate EMT, or Advanced EMT (Paramedic), or Arizona registered nurse with two-years experience in emergency nursing, or licensed physician or physician assistant), 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, classroom discipline, counseling, and student/Instructor evaluation methods. Successful completion qualifies individual to teach Advanced Cardiac Life Support Classes. Prerequisites: Current certification as a Basic 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.

EMT255AC
Pediatric Advanced Life Support Instructional Strategies
1 credit(s) 1 period(s) lecture + lab
A participative course to prepare advanced EMTs (Paramedics), physicians, and/or nurses as Instructors in Pediatric Advanced Life Support courses. Includes American Heart Association Standards and guidelines, teaching and testing skills, preparing class and course schedules, preparing for lectures, developing and using audio visual (AV) aids; processing assignments and exams, classroom discipline, counseling, and student/Instructor evaluation methods. Successful completion qualifies individual to teach Pediatric Advanced Life Support classes. Prerequisites: Current certification as Pediatric Advanced Life Support Provider and (State of Arizona Advanced EMT [Paramedic] certification or Arizona Registered Nurse or licensed physician).

EMT255AD
Basic Cardiac Life Support Instructional Strategies
0.5 credit(s) 0.5 period(s) lecture + lab
A participative course to prepare Instructors in Basic Life Support (CPR) courses. Includes American Heart Association Standards and guidelines, teaching and testing skills, classroom discipline, counseling, and student/Instructor evaluation methods. Successful completion qualifies individual to teach Basic Life Support (CPR) classes according to American Heart Association Standards. Prerequisites: Current certification as a Basic Life Support Health Care Provider level, a grade of C or better in EMT101, or equivalent.

EMT255AE
Basic and Advanced Level Skills for the Emergency Medical Services Instructor/Examiner
1 credit(s) 1 period(s) lecture + lab
Designed to provide an overview of the roles and responsibilities of the Emergency Medical Services (EMS) Instructor and examiner in basic and advanced level psychomotor skills instruction and evaluation. Includes instructional strategies and methodologies, benchmarks for psychomotor skill evaluation, and management of basic and advanced level psychomotor skills settings. Prerequisites: (Arizona Department of Health Services [A-DHS] certification as an EMT or Paramedic, or Arizona registered nurse, 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
EMT260
Advanced Airway Management for EMTs
2 credit(s) 2 period(s) lecture + lab

Designed to instruct emergency care personnel in the critical skills necessary to establish and maintain an airway of the traumatized or medically compromised patient. Airway skills include oxygen therapy with all adjuncts, administration of pharmaceuticals via the endotracheal (ET)/pharyngeal tracheal lumen airway (PTLA), management of the airway as a route for medications, and invasive airway procedures. Content concurrent with Department of Transportation Guidelines and the American College of Surgeons Division on Trauma Standards of Care.

Prerequisites: Certified EMT, or licensed registered nurse with emergency department experience; EMT or emergency department licensed registered nurse with Medical Control physician supervision according to Arizona Department of Health Services (A-DHS) Bureau of Emergency Medical Services (B-EMS).

EMT264
Vascular Access for EMTs
1 credit(s) 1 period(s) lecture + lab

Includes review of anatomy of circulatory system. Skills include peripheral intravenous cannulation techniques, fluid resuscitation, obtaining venous blood samples for laboratory analysis, infection control techniques for the safety of self and victim, and complications of intravenous cannulation; each and all with medical control. Content concurrent with American College of Surgeons Division of Trauma Standards of Care.

Prerequisites: (EMT-Basic or registered nurse with emergency department experience or licensed physician or physician assistant) or permission of Instructor.

EMT265
Pediatric Education for Prehospital Providers: Advanced
1 credit(s) 1.43 period(s) lecture + lab

An interactive, scenario based course designed for Advanced EMTs who practice in the field. Enables providers to perform a rapid assessment of sick and injured children in variety of circumstances. Includes scene management, use of pediatric assessment triangle, developmental differences, injury prevention, airway management techniques, intravenous and intraosseous access and monitoring, ECG arrhythmia recognition, synchronized and unsynchronized cardioversion, pediatric trauma and mechanism of injury, submersion events, children with special health care needs, child abuse and neglect, child and family interactions, use of specialized equipment, documentation of signs, symptoms, care and transportation, special issues in pediatric transportation. Treatment to children is in accordance with recommendations of the American Academy of Pediatrics.

Prerequisites: Advanced cardiac life support course or emergency cardiac care course, and EMT-Paramedic certification, and current employment as an EMT Paramedic, or permission of Instructor.

EMT272AA
Advanced Emergency Medical Technology
12.5 credit(s) 17.37 period(s) lecture

Designed to provide the emergency medical technician with advanced knowledge about the acute critical differences in physiology, pathophysiology, and clinical symptoms, as they pertain to prehospital emergency care. Emphasis on developing diagnostic and advanced emergency treatment skills necessary to care for the acutely ill and seriously injured.

Prerequisites: Valid Arizona EMT certification and a grade of C or better in EMT272AA. Comprehensive written, oral and practical evaluation on EMT272AA.

Course Notes: EMT272AB may be repeated for credit.

EMT272AB
Advanced Emergency Medical Technology Practicum Part I
3.75 credit(s) 5.12 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: A grade of C or better in EMT272AA. Course Notes: EMT272AB may be repeated for credit.

EMT272LB
Advanced Emergency Medical Technology Practicum Part II
3.75 credit(s) 5.12 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: A grade of C or better in EMT272AA and EMT272LA. Prerequisites or Corequisites: EMT272AB. Course Notes: EMT272LB may be repeated for credit.

EMT272LL
Advanced Emergency Medical Technology Practicum
7.5 credit(s) 10.5 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: A grade of C or better in EMT272AA and EMT272AB. Course Notes: EMT272LL may be repeated for credit.
A variety of Open Educational Resources (OER) may be used in your class. Visit the English Department in Room B-156 for details.

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

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.

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: A grade of C or better in ENG102.

ENG215
Strategies of Academic Writing
3 credit(s) 3 period(s) lecture
Incorporates the writing process, its use as a medium for learning, and academic writing as a source and inspiration for public writing. 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: A grade of C or better in ENG102 or ENG111, or permission of Instructor.

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: A grade of C or better in ENG101 or ENG107 or equivalent.
ENG219  
**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:** A grade of C or better in 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.  
**Course Notes:** ENG235 may be repeated for a total of six (6) credit hours.

**ENH – English Humanities**

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.

ENH112  
**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.

ENH114  
**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.

ENH117  
**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 genres 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:** A grade of C or better in (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:** A grade of C or better in (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*  
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:** A grade of C or better in ENG101.

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*  
Deals with major features of literature and their film versions and analyzes the techniques of each medium.  
**Prerequisites:** A grade of C or better in ENG101, or ENG107, or equivalent.

ENH256  
**Shakespeare on Film**  
*3 credit(s) 3 period(s) lecture*  
PresentsoncinematicversionsofShakespeare’splaysandexplainshowthe 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*  
**Prerequisites:** None.

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See pages 132-134 for Instructional Department details.
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: A grade of C or better in (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

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 a grade of C or better in 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
Explores 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 ESL100. 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.

ESL013
Vocabulary for ESL II
1 credit(s) 1 period(s) lecture + lab
Explores advanced vocabulary related primarily to academic environment, asking questions, working in small groups, using college resources, informal oral presentation. Prerequisites: Appropriate ESL placement test score or a grade of P or C or better in ESL010. ESL013 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 a grade of C or better in ESL010 or ESL011 or ESL012 or RDG/ESL010. 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.

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. 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 a grade of C or better in 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. Course Notes: ESL040 may be repeated for a maximum of six (6) credits. Credit (P) or no credit (D). 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 a grade of C or better in 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 ESL040, or permission of Instructor.

ESL050AA
Basic Review Grammar For ESL
1 credit(s) 1 period(s) lecture + lab
Review of the use of English verbs and word placement in sentences for ESL (English as a Second Language) students who have some previous experience in reading and writing English. Appropriate for students who want to practice sentence skills in English. Prerequisites: Appropriate ESL placement test score, or a grade of “C” or better in ESL010, or permission of Instructor. Course Notes: ESL050AA may be repeated for a total of two (2) credit hours.

ESL050AB
Intermediate Review Grammar For ESL
1 credit(s) 1 period(s) lecture + lab
Review of auxiliary verbs and the comparative and superlative for ESL (English as a Second Language) students who have some previous experience in reading and writing English. Appropriate for students who want to practice sentence skills in English. Prerequisites: Appropriate ESL placement test score, or a grade of “C” or better in ESL020, or permission of Instructor. Course Notes: ESL050AB may be repeated for a total of two (2) credit hours.

ESL050AC
Advanced Review Grammar For ESL
1 credit(s) 1 period(s) lecture + lab
Review of verbs and gerunds for ESL (English as a Second Language) students who have some previous experience in reading and writing English. Appropriate for students who want to practice sentence skills in English. Prerequisites: Appropriate ESL placement test score, or a grade of “C” or better in ESL030, or permission of Instructor. Course Notes: ESL050AC may be repeated for a total of two (2) credit hours.

ESL051
Pronunciation Improvement for ESL
3 credit(s) 3 period(s) lecture
Individualized pronunciation practice and drills for English as a Second Language (ESL) speakers. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in (ESL020 or ESL021 or ESL022 or RDG/ESL026), 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 placement test score, or a grade of “C” or better in ESL040 or RDG/ESL046 or permission of Instructor. Course Notes: ESL054 may be repeated for a total of six (6) credit hours.

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 RDG/ESL046 or permission of Instructor. Course Notes: ESL054AA may be repeated for a total of two (2) credit hours.

ESL054AB
American Culture: Institutions and Customs
1 credit(s) 1 period(s) lecture + lab
Reading and writing about American cultural institutions and customs. Prerequisites: Appropriate ESL placement test score or a grade of “C” or better in ESL040 or RDG/ESL046, or permission of Instructor. Course Notes: ESL054AB may be repeated for a total of two (2) credit hours.

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 RDG/ESL046, or permission of Instructor. Course Notes: ESL054AC may be repeated for a total of two (2) credit hours.

ESL071
Advanced Pronunciation and Oral Reading for ESL
3 credit(s) 3 period(s) lecture
Pronunciation practice and review, spelling of English sounds, and oral reading for stress and intonation patterns in English. Prerequisites: A grade of C or better in ESL051, or permission of Instructor. Course Notes: May be repeated for a total of six (6) credit hours.

ESL087
Preparatory Academic Writing II for ESL
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 ESL077 or ENG071, or permission of Department or Division.

ESL097
Preparatory Academic Writing III for ESL
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 ESL087 or ENG081, 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. Focuses 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  
Science of Food  
3 credit(s) 5 period(s) lecture + lab  
Exploration and Application of Scientific Principles of Food; experiences with ingredient functionality and application in cooking techniques.  
Prerequisites: None.

FON241  
Principles of Human Nutrition  
3 credit(s) 3 period(s) lecture  
Scientific principles of human nutrition. Emphasis on scientific literacy and the study of nutrients for disease prevention. Includes micro and macro nutrients, human nutrient metabolism and nutrition’s role in the health of the human body throughout the life cycle. Addresses nutrition principles for prevention of nutrition-related health conditions.  
Prerequisites: None.

FON241LL  
Principles of Human Nutrition Laboratory  
1 credit(s) 3 period(s) lab  
Self-evaluative laboratory experience to complement FON241, Principles of Human Nutrition using anthropometric, biochemical, clinical, dietary analysis, and ecological/ economical assessments. Includes the use of qualitative and quantitative methodology to determine nutritional status and evaluate methodological applications.  
Prerequisites: A grade of C or better in FON241 or Corequisites: FON241.

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: A grade of C or better in FRE101, or FRE101AA, or permission of Department or Division. Completion of prerequisites within the last three years is required.

FSC – Fire Science Technology

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: A grade of C or better in (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 traumatically compromised patients, special hazards, and medical operations, IV monitoring, patient-assisted medication administration, automated external defibrillators (AEDs), and blood-glucose monitoring.  
Prerequisites: A grade of C or better in 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. FSC/EMT104 may be repeated for credit.

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.

FSC113  
Introduction to Fire Suppression  
3 credit(s) 3 period(s) lecture  
Characteristics and behavior of fire, fire hazard properties of ordinary materials, extinguishing agents, fire suppression organization and equipment, basic firefighting tactics, and public relations as affected by fire suppression. Prerequisites: None.

FSC114  
Hazardous Materials First on the Scene/ Awareness Level  
0.5 credit(s) 0.5 period(s) lecture  
Designed to assist first responders involved in potential hazardous materials incident. Provides an overview of capabilities and limitations of first responders in the recognition and detection of hazardous materials, safety considerations, and pre-emergency planning. Prerequisites: None.

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 pumpers. 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: A grade of C or better in FSC134 or permission of Instructor.

FSC/JS/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/JS/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/JS/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/JS/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/JS/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: A grade of C or better in FSC202 or four years in the fire service.

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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in FSC202 or four years in the fire service.

FSC215 Customer Service in the Public Sector  
3 credit(s) 3 period(s) lecture  
Examines the personal and practical skills needed to enhance customer service in the public sector with an emphasis on application, basic management requirements, and training.  
Prerequisites: None.

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.

GBS120 Workplace Communication Skills  
3 credit(s) 3 period(s) lecture + lab  
Reviews planning, organization, development, and evaluation of written and oral communication in business settings, including informative and persuasive messages.  
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.
GSB207
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.

GSB220
Quantitative Methods in Business
3 credit(s) 3 period(s) lecture
Business applications of quantitative optimization methods in operations management decisions. Prerequisites: (A grade of "C" or better in MAT150 or MAT151 or MAT152) or satisfactory score on the District math placement test.

GSB221 GNOC BUS 2201
Business Statistics
3 credit(s) 3 period(s) lecture
Business applications of descriptive and inferential statistics, measurement of relationships, and statistical process management. Includes the use of spreadsheet software for business statistical analysis. Prerequisites: A grade of C or better in GSB220 or MAT217 or MAT218.

GSB233
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.

GSB261
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.

GSB270AC
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: GSB270AC may be repeated for a total of six (6) credits.

GSB294
Consumer Credit
3 credit(s) 3 period(s) lecture
Consumer lending by financial institutions. Prerequisites: None.

GSB298AA-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.

GCU/POS113
United States and Arizona Social Studies
3 credit(s) 3 period(s) lecture
Overview of government, history, and geography of the United States and Arizona. Includes the relationship of government to the United States economic system as well as the influences and developments of governments that shaped U.S. and Arizona history. Also covers geographical systems, regions, and study techniques. Prerequisites: None.

GCU122
World Geography II: Western Hemisphere
3 credit(s) 3 period(s) lecture
Description and analysis of variations in social, economic, and political phenomena in major world regions. Emphasis on Sub-Saharan Africa, Latin America, and Anglo America. Prerequisites: None.

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.

GIS – Geographic Information Science

GIS205
Geographic Information Technologies
3 credit(s) 3 period(s) lecture
Introduces modern geographic information technologies, including cartography, Geographic Information System (GIS), remote sensing, global positioning systems, and statistical analyses. Prerequisites: None.

GIS211
Geographic Information Science I
4 credit(s) 4 period(s) lecture
Introduces students to digital map creation including vector and raster data, map elements, and design, symbology, and the geo database using Esri (Environmental Systems Research Institute) desktop and online mapping environments. Prerequisites: A grade of C or better in CIS105, or CSC180, or permission of Instructor.

GLG – Geology

GLG101
Intro to Geology I - Physical Lecture
3 credit(s) 3 period(s) lecture
Introduction to Earth’s materials, surface and internal geologic processes, plate tectonics and geologic time. Prerequisites: None.

GLG102
Intro to Geology II - Historical Lecture
3 credit(s) 3 period(s) lecture
The origin and history of the Earth, its dynamic geographic and climatic changes. Evolution and sequence of life recorded in the fossil record; tectonic evolution of major continents through time. Prerequisites: None.
GLG103 GLG 1101
Intro to Geology I - Physical Lab
1 credit(s) 3 period(s) lab
Includes practical experience in rock and mineral identification, topographic maps, and applied problems in geology. Prerequisites: None. Course Notes: May accompany GLG101.

GLG104
Intro to Geology II - Historical Lab
1 credit(s) 3 period(s) lab
The study of minerals, rocks, fossils, geologic maps and structures. Prerequisites: None. Course Notes: May accompany GLG102.

GLG105
Introduction to Planetary Science
4 credit(s) 6 period(s) lecture and lab
A survey of solar system objects and their geologic evolution, surfaces, interiors, and atmospheres, and the methods used to study them; weekly laboratory for data analysis and experiments; possible weekend field trip. Prerequisites: None.

GLG/AST106
Life in the Universe
4 credit(s) 6 period(s) lecture and lab
Introduction to the search for life in the universe for the non-science major. Earth's location in space and time, nature of life, light and the spectrum, origin and history of the universe, origin of life on Earth and the possibility of life on other planets. Prerequisites: A grade of C or better in MAT090, MAT091, or MAT092, or completion of higher level mathematics course, or satisfactory score on placement exam.

GLG/AST107
Life in the Universe Laboratory
1 credit(s) 3 period(s) lab
Astronomy, Biology, and Planetary Science laboratory. Prerequisites: A grade of C or better in GLG/AST106 and permission of Instructor or Department or Division. Course Notes: GLG107 is a legacy course intended for those students who have previously completed the corresponding lecture course. Current MCCCD students should enroll in GLG106 only.

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 earthquakes, volcanoes, floods and landslides. Examines environmental impact and use of mineral and energy resources. Prerequisites: None.

GLG111
Geological Disasters and the Environment Lab
1 credit(s) 3 period(s) lab
Introduction to geological processes and concepts. Application of basic geologic knowledge to evaluate, interpret and propose solutions for a variety of current and past geology-related environmental disasters and hazards. Prerequisites: None. Course Notes: May accompany GLG110.

GLG121
Geology of the Grand Canyon
1 credit(s) 2 period(s) lab
Introduction to the physiography and geology of the Grand Canyon. Includes a hiking field trip to the Grand Canyon. Prerequisites: None. GLG103 suggested but not required.

GLG140
Introduction to Oceanography
3 credit(s) 3 period(s) lecture
Investigates the marine environment in terms of basic scientific concepts. Emphasizes the impact of ocean pollutants, climate fluctuations, and resources from the sea. Prerequisites: None.

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 land forms 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 Lecture
3 credit(s) 3 period(s) lecture
Earth’s physical processes and impacts on human environments via the atmosphere, biosphere, lithosphere and hydrosphere. Topics include severe weather, climate change, biomes and ecosystems, landform processes; mountain building and erosion by rivers, glaciers, waves and wind. Prerequisites: None.

GPH112
Introduction to Physical Geography Lab
1 credit(s) 3 period(s) lab
Earth’s physical processes and impacts on the human environment via the atmosphere, biosphere, lithosphere and hydrosphere. Practical experiences include earth-sun relationships, weather, climate, biomes, landform processes; mountain building and erosion by rivers, glaciers, waves and wind, topographic maps. Prerequisites: A grade of C or better in GPH111 or Corequisites: GPH111.

GPH113
Introduction to Physical Geography
4 credit(s) 6 period(s) lecture + lab
Earth’s physical processes and impacts on human environments via the atmosphere, biosphere, lithosphere and hydrosphere. Topics and practical experiences include severe weather, climate change, biomes and ecosystems, landform processes; mountain building and erosion by rivers, glaciers, waves and wind. Prerequisites: None.

GPH211
Landscape Processes
4 credit(s) 6 period(s) lecture + lab
Geographic characteristics of landforms and earth surface processes emphasizing erosion, transportation, deposition and implications for human management of the environment. Prerequisites: A grade of C or better in ENG101 or ENG107 or equivalent.

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
Climate and Weather
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
Climate and Weather Laboratory
1 credit(s) 3 period(s) lab
A mathematical, statistical, and spatial analysis of climatological phenomena. Prerequisites: None. Corequisites: GPH213.
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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: A grade of C or better in CIS105 or CSC180 or permission of Instructor.

HCC – Health Core Curriculum

HCC130
Fundamentals in Health Care Delivery
3 credit(s) 3 period(s) lecture
Overview of current and recent development of health care professions, including career and labor market information, health care delivery systems, third party payers, and facility ownership. Health organization structure, patient rights and quality care. Health care and life values. Definition and importance of values, ethics, and essential behaviors in the workplace. Worker rights and responsibilities. Healthful living practices to include nutrition, stress management and exercise. Occupational Safety and Health Administration (OSHA) standard precautions and facility safety. Use of principles of body mechanics in daily living activities. Basic communication skills which facilitate interprofessional 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 Professionals
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 Professionals 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 selected terms using basic word parts. Selected medical abbreviations and symbols and term spelling. Prerequisites: None.

HCC146
Common Medical Terminology for Health Care Professionals
2 credit(s) 2 period(s) lecture
Common medical terms used in health care. Body systems approach to common terms related to structures, functions, diseases, procedures, and diagnostic tests. Building and analyzing common terms using word parts. Common medical abbreviations and symbols and term spelling. Prerequisites: None.

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: A grade of C or better in HCC130 or (HCC130AA, HCC130AB, HCC130AC, HCC130AD, HCC130AE and HCC130AF), or equivalent course education as evaluated by the Health Core Curriculum Coordinator.

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: A grade of C or better in HCC130 or (HCC130AA, 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: A grade of C or better in HCC130 or (HCC130AA, 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: A grade of C or better in ENG102 or ENG108 or permission of Instructor.

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: A grade of "C" or better in ENG102 or ENG108 or permission of Instructor.

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: A grade of C or better in BIO202 or BIO205, 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. Examines how culture influences health and 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: A grade of C or better in 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 to care for athletic injuries. Prerequisites: A grade of C or better in HES271 or permission of Instructor.

HES275
Clinical Practicum in Patient Management
1 credit(s) 1 period(s) lecture
Benefits of internship placed with health care agencies including the development of skills that relate to the management of patients and families in a variety of health care settings. Prerequisites: A grade of C or better in HES271 or permission of Program Director.

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: Acceptance into the Health Information Technology program and (a grade of C or better in HIM106AA or permission of Program Director).

HIM104
Health Information Systems
2 credit(s) 3 period(s) lecture + lab
A comprehensive review of acute care hospital health records. Study of the origination, 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: A grade of C or better in HIM104AA 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: (Acceptance into either the (CCL/5092) Medical Coding: Hospital-Based or the (CCL/5014) Medical Billing and Coding: Physician-Based program) and a grade of C or better in 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. Types of patient authorizations and procedures for access and release of protected health information. Prerequisites: A grade of C or better in HCC130 or permission of Program Director. Prerequisites or Corequisites: HIM101 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: A grade of C or better in 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: A grade of C or better in 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 origination, 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: A grade of C or better in HIM104AA 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: A grade of C or better in HIM140 or (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: A grade of C or better in 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: A grade of C or better in [BPC110, HIM180, and HIM204], 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: A grade of C or better in [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: A grade of C or better in [BIO160 and HCC146] or permission of Program Director. Prerequisites or Corequisites: HIM182 or permission of Program Director.

HIM201
Health Information Statistics and Research
2 credit(s) 4 period(s) lecture + lab
Compilation and usage of various types of administrative and health care statistics including vital records. Introduction to the health information research process and institutional review board functions. Use of computers for computation and data display. Prerequisites: A grade of C or better in [BPC110 or CIS105], HIM140, and MAT112) 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: A grade of C or better in 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: A grade of C or better in HIM101 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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in HIM150 or permission of Program Director. Prerequisites or Corequisites: HIM206 or permission of Program Director.

HIM208
ICD-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. Introduction of references to assist in code assignment. Prerequisites: A grade of C or better in all Prerequisites: Prerequisites: HIM208, HIM210, and (BIO160 or BIO202) or permission of Program Director. Prerequisites or Corequisites: HIM180 or permission of Program Director.

HIM210
ICD-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: A grade of C or better in BIO202 and HCC204. Prerequisites: A grade of C or better in HIM208 or Corequisites: HIM208 or permission of Program Director.

Course information is subject to change.

Visit https://curriculum.maricopa.edu for most current information.
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:** A grade of C or better in BIO202, HCC204, HIM208, and HIM210, or permission of Program Director.

HIM212
CPT Coding I
2 credit(s) 4 period(s) lecture + lab
Introduction to Current Procedural Terminology (CPT) from both facility and physician perspectives. General content, coding guidelines, and the role in healthcare reimbursement. Coding of basic medical and surgical services including use of modifiers. Ethical coding and compliance issues. **Prerequisites:** A grade of C or better in [HCC145, HCC164, HCC204 and (BIO160 or BIO202)], or permission of Program Director. **Prerequisites or Corequisites:** HIM180.

HIM214
CPT Coding II
2 credit(s) 4 period(s) lecture + lab
Introduction to Current Procedural Terminology (CPT) from both facility and physician perspectives. General content, coding guidelines, and the role in healthcare reimbursement. Coding of basic medical and surgical services including use of modifiers. Ethical coding and compliance issues. **Prerequisites:** A grade of C or better in (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:** A grade of C or better in [HCC204, HIM208 and HIM212], or permission of Program Director. **Corequisites:** HIM216 or permission of Program Director. **Prerequisites:** A grade of C or better in HIM214 or **Corequisites:** HIM214 or permission of Program Director.

HIM216
Professional Practice in Physician-Based Billing and Coding
1 credit(s) 5 period(s) lab
Practical application of billing and coding guidelines for the physician-based setting. Use of the International Classification of Diseases and Current Procedural Terminology systems to code ambulatory patient diagnoses and treatment. Process medical claims for patient care services. **Requisites:** A grade of "C" or better required in all Prerequisites. **Prerequisites:** HCC204, HIM208, HIM212, and permission of Program Director. **Corequisites:** HIM215, or permission of Program Director. **Prerequisites 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:** A grade of C or better in (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:** A grade of C or better in (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:** A grade of C or better in 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:** A grade of C or better in (HIM207, HIM217, HIM218, and HIM219), or permission of Program Director. **Corequisites:** HIM224 or permission of Program Director.

HIM221
Medical Coding Seminar
1 credit(s) 1 period(s) lecture
Content and development of coding compliance programs. Forum for discussion of classroom, laboratory, and professional practice experience. **Requisites:** A grade of "C" or better required in all Prerequisites. **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. **Requisites:** A grade of "C" or better required in all Prerequisites. **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:** A grade of C or better in (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: A grade of C or better in (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.

HIS – History

HIS100
History of Western Civilization to Middle Ages
3 credit(s) 3 period(s) lecture
Survey of the origin and development of Western civilization and its institutions from prehistory through the Ancient World and the Middle Ages. Prerequisites: None.

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 the French Revolution through the present. 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.

HIS107
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.

HIS108
United States History to 1865
3 credit(s) 3 period(s) lecture
Survey of the political, economic, and social forces which molded Latin American civilization in the period of the development of Mexico from Pre-Columbian times to the present. 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 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.

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

HIS110
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.

HIS190
Environmental History
3 credit(s) 3 period(s) lecture
Survey of the environmental history of the world from hunter-gatherer societies to the present including but not limited to social groups, natural resources, and physical environments and impacts on the Earth. 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.

HIS204
African-American History 1865 to Present
3 credit(s) 3 period(s) lecture
Multifaceted experiences of African-American people from the post-Civil War period (1865) to the present, including the collective struggle for freedom, equality, and self-determination in the United States. 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.

HIS242
Latin American Civilization in the Post-Colonial Period
3 credit(s) 3 period(s) lecture
A survey of the political, economic, and social forces which molded Latin American civilization in the period of the development of Republics. Prerequisites: None.
HST – Histologic Technology

HST180
Overview of Histology (Anatomic) Laboratory
2 credit(s) 2 period(s) lab
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.

HST181
Chemistry of Fixation
3 credit(s) 3 period(s) lecture + lab
Principles of fixation and fixative solutions. Anatomic laboratory instrumentation and specimen handling, identification, and tracking protocols. Emphasis on gross examination processes, tissue processing protocols, and specialized processing techniques. Prerequisites: Admission to Histologic Technology Program or permission of Program Director, and a grade of C or better in HST180.

HST182
Microtomy
5 credit(s) 4 period(s) lecture + lab
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: A grade of C or better in HST181.

HST183
Practicum: Chemistry of Fixation
1 credit(s) 4.5 period(s) lab
Practicum in histology techniques performed in an anatomic laboratory. Application of clinical skills for specimen handling, identification, and tracking protocols. Use of anatomic laboratory instrumentation. Study of gross examination protocols. Demonstration of fixation techniques, paraffin processing protocols, and specialized processing techniques. Performance of clerical and computer functions using medico-legal guidelines for documentation. Use of professional and ethical conduct in all interpersonal communications. Prerequisites: A grade of C or better in HST181 or permission of Program Director.

HST184
Practicum: Microtomy
1 credit(s) 4.5 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: A grade of C or better in HST182.

HST185
Cellular Biological Staining
5 credit(s) 4 period(s) lecture + lab
Recognition of basic cellular structure. Identification of carbohydrates classification, pigments, minerals, and lipids in tissues and connective tissue structures. Explanation of chemical staining theory. Stain principles and procedures for nuclear and cytoplasmic structures, carbohydrates and lipids, connective tissue, and tissue pigments and minerals stains. Prerequisites: A grade of C or better in HST182. Corequisites: HST187.

HST186
Cellular Biological and Immunohistochemical Staining
5 credit(s) 4 period(s) lecture + lab

HST187
Practicum: Cellular Biological and Immunohistochemical Staining
1 credit(s) 4.5 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: A grade of C or better in HST185.

HUM – Humanities

HUM108
Contemporary Humanities
3 credit(s) 3 period(s) lecture
An exploration of human expression in contemporary arts and sciences. Prerequisites: None.

HUM120
Cultural Viewpoints in the Arts
3 credit(s) 3 period(s) lecture
Introduces to the influence of culture and ethnicity on the artist, including factors such as race, religion, gender, class, sexual preference, age, and region. Lecture and discussion on various art forms, including literature, visual arts, music, dance, film, and theater. Prerequisites: None.

HUM190AA-AI
Honors Forum
1 credit(s) 1 period(s) lecture
Interdisciplinary studies of selected issues confronting the individual and society. Formal lectures followed by informal discussions with outstanding scholars and social leaders. Supplemented by readings and pre- and post-forum discussion and critique. Varied content from module to module due to changing forum themes and issues. Prerequisites: Admission to the College Honors Program or permission of Instructor.
HUM202
Humanities: Universal Themes
3 credit(s) 3 period(s) lecture
The hero/heroine; fool; the social world, and the future as themes in the humanities.
Prerequisites: None.

HUM/THF205
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.

HUM/WST209
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.

HUM/THF210
Contemporary Cinema
3 credit(s) 3 period(s) lecture
A study of contemporary films, directors, and critics with emphasis on evaluating films as an art form. Prerequisites: None.

HUM212
Documentary Film
3 credit(s) 3 period(s) lecture
Survey of documentary (non-fiction) film with an emphasis on international issues. Focus on primary types of documentary film, including direct address, direct cinema, interviews, etc. Prerequisites: None.

HUM213
Hispanic Film
3 credit(s) 3 period(s) lecture
Analysis of Hispanic film as art form and as social commentary. Prerequisites: None.

HUM250
Ideas and Values in the Humanities
3 credit(s) 3 period(s) lecture
An historical analysis of the interrelationships of art, architecture, literature, music, and philosophy from the early civilizations to the Renaissance, including Western and non-Western cultures. Prerequisites: A grade of C or better in ENG101.

HUM251
Ideas and Values in the Humanities
3 credit(s) 3 period(s) lecture
An historical analysis of the interrelationships of art, architecture, literature, music, and philosophy from the Renaissance to modern period, including Western and non-Western cultures. Prerequisites: A grade of C or better in ENG101.

HUM260
Intercultural Perspectives
3 credit(s) 3 period(s) lecture
Cultural, literary, and artistic expressions of Native, Hispanic, and African Americans. Includes traditional and modern work and contribution to American civilization. Prerequisites: None.

HUM/EDU/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.

IBS – International Business

IBS101
Introduction to International Business
3 credit(s) 3 period(s) lecture
A basic overview of international business to introduce students to international trade concepts. Focus of the course is on international business environment issues that influence global business practices, decisions and applications. Prerequisites: None.

INT – Interior Design

INT100
Interior Design Drafting
3 credit(s) 6 period(s) lecture + lab
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 drafting types, including floor plans, elevations, sections, details, multi-view projection, and paraline. Brief exploration of hand sketching and Computer-Aided Design (CAD) techniques as they relate to manual drafting. Prerequisites: None.

INT105
Introduction to Interior Design
3 credit(s) 3 period(s) lecture
Introduction to the profession of interior design, including design process, elements and principles of design, and basic concepts of space planning and furniture layout. Development of design vocabulary relative to architectural details, furnishings, and finishes. Prerequisites: None.

INT115
Historical Architecture and Furniture
3 credit(s) 3 period(s) lecture
Historical survey of the development of furniture, interiors, and architecture from antiquity to the 19th Century. Prerequisites: None.

INT120
Modern Architecture and Furniture
3 credit(s) 3 period(s) lecture
Survey of the development of furniture, interiors, and architecture from the 19th Century to the present. Emphasis is on modern architects and designers. Prerequisites: None.

INT/TEC126
Sewing for the Home
3 credit(s) 3 period(s) lecture
Provides students systemic skills and knowledge to plan and construct draperies, shades, pillows, bedding and other home furnishings through instructional projects. Emphasizes techniques used in producing textile goods for the home. Prerequisites: None. Course Notes: Basic sewing skills recommended. INT/TEC126 may be repeated for a total of nine (9) credit hours.

INT140
Introduction to CAD for Interior Design
3 credit(s) 6 period(s) lecture + lab
This class focuses on the development of two-dimensional and three-dimensional spatial development through the use of Computer-Aided Design (CAD), computer-aided design for interior design following American Institute of Architects (AIA) guidelines. Prerequisites: None.

INT145
Drawing and Rendering
3 credit(s) 6 period(s) lecture + lab
Development of basic freehand sketching and perspective drawing skills. Explores styles and techniques with emphasis on quick sketch and presentation type drawings as used by design professionals. Prerequisites: None.

INT150
Color and Design
3 credit(s) 6 period(s) lecture + lab
Introduction to the theory and application of color as related to the elements and principles of design. Light and its effect on color. Emphasis on the development of presentation skills for the field of interior design. Prerequisites: None.

INT156
Furniture Upholstery I
3 credit(s) 5 period(s) lecture + lab
Techniques of general furniture upholstery, operations of webbing, springing, stuffing, trimming, sewing and cushion making on approved student-selected projects. Prerequisites: None. Course Notes: INT156 may be repeated for a total of nine (9) credit hours. Students must provide the furniture piece.
INT157  
Furniture Upholstery II  
3 credit(s) 5 period(s) lecture + lab  
Application and use of modern materials and tools, button tufting, channel construction, and special trim effects.  
Prerequisites: A grade of C or better in INT156 or permission of Department or Division.  
Course Notes: INT157 may be repeated for a total of nine (9) credit hours. Students must provide the furniture piece.

INT158  
Furniture Upholstery III  
3 credit(s) 5 period(s) lecture + lab  
Advanced techniques in upholstering of furniture and other needle-trade items; time and money saving shortcuts in layout; fabric cutting and sewing. Prerequisites: A grade of C or better in INT157 or permission of Department or Division.  
Course Notes: INT158 may be repeated for a total of nine (9) credit hours. Students must provide the furniture piece.

INT159  
Furniture Upholstery IV  
3 credit(s) 5 period(s) lecture + lab  
Advanced techniques of furniture upholstery for students interested in entering the upholstery trade; modern production techniques for sewing; stuffing; and finishing; job estimating; equipment selection and maintenance. Prerequisites: A grade of C or better in INT158.  
Course Notes: INT159 may be repeated for credit. Students must provide the furniture piece.

INT160  
Fabrics for Interiors  
3 credit(s) 3 period(s) lecture  
Study of the properties, design, and performance characteristics of interior fabrics. Psychological and cultural impact of textiles on the built environment. Role of the interior designer in working with textiles. Introduction to regulations and codes within the textile industry. Prerequisites: None.

INT170  
Interior Materials  
3 credit(s) 6 period(s) lecture + lab  
Properties, performance, maintenance, sustainability and general characteristic of interior finishes, furnishings, and equipment. Emphasis on building a resource file of interior finishes, furnishings, and equipment sources. Prerequisites: A grade of C or better in INT105 or permission of Instructor.

INT175  
Custom Design  
3 credit(s) 6 period(s) lecture + lab  
Custom design for interiors. Creative problem solving using design theory and process. Visualization of concepts through sketching. Prerequisites: A grade of C or better in INT105 and (ARC121 or INT100).

INT190  
Space Planning  
3 credit(s) 6 period(s) lecture + lab  
Study of creative, critical, analytical and strategic thinking as it relates to human behavior and the built environment. Emphasis on design theory, process, and application. Stresses creative expression through the utilization of design elements and principles. A grade of C or better required in all Prerequisites. Prerequisites: INT105.  
Prerequisites or Corequisites: ARC141 or INT140.

INT200  
Digital Rendering for Design  
3 credit(s) 6 period(s) lecture + lab  
Introduction to raster based rendering techniques utilizing interior design and landscape drawings. Comparison of raster based rendering to vector based rendering and presentation techniques utilizing leading industry software such as Adobe Photoshop and Adobe Illustrator. Prerequisites: None.

INT215  
Professional Practices  
3 credit(s) 5 period(s) lecture + lab  
Marketing and business processes used in interior design studios. Ethical issues facing interior design studios. Development of business plan. Prerequisites: None.

INT220  
Presentation Techniques  
3 credit(s) 6 period(s) lecture + lab  
Advanced freehand sketching and perspective drawing skills. Explores a variety of styles and techniques with emphasis on presentation type drawings and portfolio development techniques used by design professionals. A grade of C or better required in all Prerequisites. Prerequisites: INT145 and (INT140 or ARC141).  
Prerequisites or Corequisites: INT220 or ARC142.

INT240  
Kitchen and Bath Design  
3 credit(s) 6 period(s) lecture + lab  
Exploration into the specific requirements associated with kitchen and bath design. Emphasis on the design process and computer-based tools for interior design. Prerequisites: A grade of C or better in INT190 and (ARC141 or INT140).

INT268  
Lighting Design  
3 credit(s) 6 period(s) lecture + lab  
Study of interior lighting design and its impact on the health, safety and welfare of the public. Prerequisites: AAS Degree in Interior Design or permission of Department or Division.

INT271AA  
Interior Design Internship  
1 credit(s) 5 period(s) lab  
Interior design work experience in the interiors industry. Required to work 80 hours. Supervised and evaluated by a faculty coordinator. Prerequisites: Permission of Department or Division.  
Course Note: May be repeated for a total of four (4) credits with department permission.

INT271AB  
Interior Design Internship  
2 credit(s) 10 period(s) lab  
Interior design work experience in the interiors industry. Required to work 160 hours. Supervised and evaluated by a faculty coordinator. Prerequisites: Permission of Department or Division.  
Course Note: May be repeated for a total of four (4) credits with department permission.

INT271AC  
Interior Design Internship  
3 credit(s) 15 period(s) lab  
Interior design work experience in the interiors industry. Required to work 240 hours. Supervised and evaluated by a faculty coordinator. Prerequisites: Permission of Department or Division.

INT271AA  
Interior Design Study Tour  
1 credit(s) 5 period(s) lab  
A tour of the interior design industry outside of the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance knowledge about this multi-faceted career. Prerequisites: Permission of Department or Division.

INT271AB  
Interior Design Study Tour  
2 credit(s) 10 period(s) lab  
A tour of the interior design industry outside of the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance knowledge about this multi-faceted career. Prerequisites: Permission of Department or Division.

INT271AC  
Interior Design Study Tour  
3 credit(s) 15 period(s) lab  
A tour of the interior design industry outside of the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance knowledge about this multi-faceted career. Prerequisites: Permission of Department or Division.
# IPP – Interpreter Preparation Program

*Also see Sign Language, SLG on page 296.*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPP198</td>
<td>Careers in Deaf Studies: Observation</td>
<td>1</td>
<td>Provides experience through observation to the world of work of a professional interpreter. Observation of professional interpreters in a variety of work settings, including but not limited to professional principles, standards and ethics applied to everyday interpreting settings.</td>
<td>A grade of C or better in IPP205 or permission of Department or Division. Completion of prerequisites within the last three years is required. <strong>Course Notes:</strong> IPP198 may be repeated for a total of three (3) credits.</td>
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<tr>
<td>IPP205</td>
<td>Introduction to Interpreting</td>
<td>3</td>
<td>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.</td>
<td>A grade of C or better in SLG201 within the last three years is required. <strong>Course Notes:</strong> IPP205 may be repeated for a total of nine (9) credit hours.</td>
<td></td>
</tr>
<tr>
<td>IPP208</td>
<td>Advanced American Sign Language Discourse</td>
<td>4</td>
<td>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).</td>
<td>A grade of B or better in SLG203. Completion of prerequisites within the last three years is required.</td>
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</tr>
<tr>
<td>IPP215</td>
<td>ASL to English Consecutive Interpreting</td>
<td>2</td>
<td>Sequential development of consecutive interpreting skills from American Sign Language (ASL) to English. Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of naturally occurring monologues, guidance for discovering personal filters, practice of skills, techniques for self and peer evaluations, and application of theoretical models.</td>
<td>(Acceptance into the Interpreter Preparation Program or permission of Department or Division) and IPP211 with a grade of “B” or better. IPP215 suggested but not required.</td>
<td></td>
</tr>
<tr>
<td>IPP216</td>
<td>ASL to English Simultaneous Interpreting</td>
<td>3</td>
<td>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.</td>
<td>“B” or better in IPP215, or permission of department/division.</td>
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</tr>
<tr>
<td>IPP218</td>
<td>English to ASL Consecutive Interpreting</td>
<td>2</td>
<td>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.</td>
<td>A grade of “B” or better in IPP218, or permission of Department or Division. Completion of prerequisites within the last three years is required.</td>
<td></td>
</tr>
<tr>
<td>IPP219</td>
<td>English to ASL Simultaneous Interpreting</td>
<td>3</td>
<td>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.</td>
<td>A grade of “B” or better in IPP219, or permission of Department or Division. Completion of prerequisites within the last three years is required.</td>
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<tr>
<td>IPP220</td>
<td>Interactive Interpreting I</td>
<td>4</td>
<td>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.</td>
<td>A grade of “B” or better in IPP220, or permission of Department or Division. Completion of prerequisites within the last three years is required.</td>
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</tbody>
</table>
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.

IPP229
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: IPP230AA or IPP230AB. Course Notes: IPP229 may be repeated for a total of four (4) credit hours.

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: A grade of C or better in (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).
LAS109
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 deposits; organization of files; preparation of trial notebooks; and participation in a mock trial. Prerequisites: A grade of C or better in LAS109 and (BPC110 or CIS105 or permission of Program Director).

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: A grade of C or better in 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: A grade of C or better required in all Prerequisites. 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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in 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. Memorizing results of factual investigations. Prerequisites: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better required in all Prerequisites. Prerequisites: LAS110, LAS203, LAS204, LAS214 and (BPC110 or CIS105 or permission of Program Director). Prerequisites or Corequisites: (LAS225, LAS229, and LAS237) or permission of Program Director.

LBA – Laboratory Assisting

LBA155
Laboratory Assisting: Principles and Procedures
5 credit(s) 5 period(s) lecture + lab
Overview of laboratory services, laboratory professionals, and the role of a laboratory assistant. Principles and procedures for pre-analytical processing of laboratory specimens. Performance of specimen processing, pre-analytical processes, and point-of-care testing. Application of quality assurance, quality control, quality management principles, infection control, and laboratory safety. Use of laboratory supplies, instrumentation, and information systems. Performing clerical and computer functions using medico-legal guidelines for documentation. Prerequisites: (Acceptance into the Laboratory Assisting program), a grade of C or better in HCC130, HCC145AA, PLB109, PLB111, and PLB122), 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, 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.

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

Visit www.aztransfer.com
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.

MAS201  
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 MAS126, MAS127, 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, and MAS210, acceptance into the Medical Assisting program, and permission of Program Director.

MAS230  
Emergencies 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.

MAS250  
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 of drug administration. Prerequisites: (Acceptance into the Medical Assisting program and permission of Program Director) and (a grade of "C" or better in MAS126, MAS127, MAS128, MAS129, MAS130, MAS210, MAS220, MAS230, MAS240, MAS260 and SPA117). Corequisites: PLB109 and permission of Program Director.

MAS274  
Administrative Medical Assisting Externship  
1 credit(s) 6 period(s) lab  
Practicum in administrative medical assisting. Application of administrative duties, procedures, and knowledge derived from medical assisting courses. Prerequisites: Acceptance into the Medical Assisting or Medical Front Office program, negative results on drug screening, and permission of Program Director. Corequisites: MAS275, MAS280, PLB110 and permission of Program Director. Course Note: CPR and Fingerprint Clearance cards must remain current throughout the MAS274 externship/practicum.

MAS275  
Clinical Medical Assisting Externship  
2 credit(s) 9.6 period(s) lab  
Practicum in clinical medical assisting. Application of clinical skills, procedures, and knowledge derived from medical assisting courses. Prerequisites: Acceptance into the Medical Assisting program, negative results on drug screening, and permission of Program Director. Corequisites: MAS274, MAS280, PLB110 and permission of Program Director. Course Note: CPR and Fingerprint Clearance cards must remain current throughout the MAS275 externship/practicum.

MAS280  
Medical Assisting Program Review  
1 credit(s) 1 period(s) lecture  
Preparation for the medical assisting national certification examinations. Topics include medical terminology, anatomy and physiology, medical records management, appointment scheduling, law and ethics, insurance billing and coding, medication administration, electrocardiography, patient assessment, asepsis, clinical procedures, and laboratory techniques and values. Prerequisites: Acceptance into the Medical Assisting program, or current employment with minimum 1 year experience as Medical Assistant, and permission of Program Director. Corequisites: MAS274 and MAS275, and permission of Program Director.
MAT – Mathematics

The following courses require a graphing calculator: MAT090, MAT091, MAT092, MAT112, MAT120, MAT221, MAT222, MAT140, MAT141, MAT142, MAT150, MAT151, MAT152, MAT192, MAT197, MAT206, MAT212, MAT213, MAT214, MAT218, MAT220, MAT221, MAT225, MAT230, MAT231, MAT240, MAT256, MAT257, and MAT270.

MAT081
Basic Arithmetic
4 credit(s) 4 period(s) lecture
Primary emphasis on conceptual understanding of and solving problems involving whole numbers, integers, mathematical operations, decimals, decimal operations, fractions, percentages, angles and geometric figures. Use of systems of measure, similarity, proportionality and the Pythagorean theorem. Focus on mathematical language, connections, patterns and reasoning, and additive and multiplicative reasoning. Prerequisites: None. Course Notes: Student may receive credit for only one of the following: (MAT051 and MAT052 and MAT053), OR MAT081, OR MAT082, OR MAT085.

MAT082
Basic Arithmetic
3 credit(s) 3 period(s) lecture
Primary emphasis on conceptual understanding of and solving problems involving whole numbers, integers, mathematical operations, decimals, decimal operations, fractions, percentages, angles and geometric figures. Use of systems of measure, similarity, proportionality and the Pythagorean theorem. Focus on mathematical language, connections, patterns and reasoning, and additive and multiplicative reasoning. Prerequisites: None. Course Notes: Student may receive credit for only one of the following: (MAT051 and MAT052 and MAT053), OR MAT081, OR MAT082, OR MAT085.

MAT090
Introductory Algebra
5 credit(s) 5 period(s) lecture
Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations. Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change. Prerequisites: A grade of C or better in each of the following courses: (MAT051 and MAT052 and MAT053), OR a grade of C or better in MAT08+, OR an appropriate district placement. Course Notes: MAT090 students may receive credit for only one of the following: (MAT055 and MAT056 and MAT057), OR MAT090, OR MAT091, OR MAT092, OR MAT095, OR MAT096.

MAT091
Introductory Algebra
4 credit(s) 4 period(s) lecture
Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations. Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change. Prerequisites: A grade of C or better in each of the following courses: (MAT051 and MAT052 and MAT053), OR a grade of C or better in MAT08+, OR an appropriate district placement. Course Notes: MAT091 students may receive credit for only one of the following: (MAT055 and MAT056 and MAT057), OR MAT090, OR MAT091, OR MAT092, OR MAT095, OR MAT096.

MAT092
Introductory Algebra
3 credit(s) 3 period(s) lecture
Emphasis on meanings related to variable, equality, inequality, equivalence. The use of additive and multiplicative reasoning in solving linear equations and inequalities in one variable. Validation of solution(s) through a reasonable mathematical defense. Transfer and apply knowledge through a process of sense making and reasonableness in mathematical problems and practical application situations. Recognize patterns and organize data to represent situations where output is related to input. Understand the concept of function and be able to represent functions in multiple ways, including tables, algebraic rules, graphs and contextual situations, and make connections among these representations. Read, represent, and interpret linear function relationships numerically, analytically, graphically and verbally and connect the different representations. Model and solve real world problems involving constant rate of change. Prerequisites: A grade of C or better in each of the following courses: (MAT051 and MAT052 and MAT053), OR a grade of C or better in MAT08+, OR an appropriate district placement. Course Notes: MAT092 students may receive credit for only one of the following: (MAT055 and MAT056 and MAT057), OR MAT090, OR MAT091, OR MAT092, OR MAT095, OR MAT096.

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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: MAT051 or higher OR MAT15+, OR permission of Department or Division Chair.

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 each of the following courses: (MAT051 and MAT052 and MAT053), OR a grade of C or better in MAT08+, OR an appropriate district placement.

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 each of the following courses: (MAT055 and MAT056 and MAT057), OR a grade of C or better in MAT09+, OR an appropriate district placement. Course Note: MAT 120 students may receive credit for only one of the following: MAT120, OR MAT121, OR MAT122 OR MAT126.

MAT121  
Intermediate Algebra  
4 credit(s) 4 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 each of the following courses: (MAT055 and MAT056 and MAT057), OR a grade of C or better in MAT09+, OR an appropriate district placement. Course Note: MAT 121 students may receive credit for only one of the following: MAT120, OR MAT121, OR MAT122 OR MAT126.

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 B or better in each of the following courses: (MAT055 and MAT056 and MAT057), OR a grade of C or better in MAT09+, OR an appropriate district placement. Course Note: MAT 122 students may receive credit for only one of the following: MAT120, OR MAT121, OR MAT122 OR MAT126.

MAT140  
College Mathematics  
5 credit(s) 5 period(s) lecture  
Working knowledge of 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 each of the following courses: (MAT051 and MAT052 and MAT053), OR a grade of C or better in MAT08+ or MAT09+, OR an appropriate district placement, OR permission of Department/Division Chair. Course Note: MAT140 students may receive credit for only one of the following: MAT140, OR MAT141, OR MAT142, OR MAT145, OR MAT146.

MAT141  
MAT 1142  
College Mathematics with Review  
5 credit(s) 5 period(s) lecture  
Working knowledge of 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 each of the following courses: (MAT051 and MAT052 and MAT053), OR a grade of C or better in MAT08+ or MAT09+, OR an appropriate district placement, OR permission of Department/Division Chair. Course Note: MAT140 students may receive credit for only one of the following: MAT140, OR MAT141, OR MAT142, OR MAT145, OR MAT146. This course is designed for students that do not qualify for MAT140 or MAT141 or MAT142, but intend to complete MAT14+ College Mathematics for their degree path. Review of MAT08+ Basic Arithmetic and MAT09+ Introductory Algebra as needed.
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, using multiple methods including matrices, modeling and solving real world problems, and defining and illustrating sequences and series. Prerequisites: A grade of C or better in MAT12+, OR an appropriate district placement. Course Notes: MAT150 students may receive credit for only one of the following: MAT150, OR MAT151, OR MAT152, OR MAT156, OR MAT187.

MAT151  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, using multiple methods including matrices, modeling and solving real world problems, and defining and illustrating sequences and series. Prerequisites: A grade of C or better in MAT12+, OR an appropriate district placement. Course Notes: MAT151 students may receive credit for only one of the following: MAT150, OR MAT151, OR MAT152, OR MAT156, 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, using multiple methods including matrices, modeling and solving real world problems, and defining and illustrating sequences and series. Prerequisites: A grade of C or better in MAT12+, OR an appropriate district placement. Course Notes: MAT152 students may receive credit for only one of the following: MAT150, OR MAT151, OR MAT152, OR MAT156, OR MAT187.

MAT155  College Algebra/Functions with Review
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, using multiple methods including matrices, modeling and solving real world problems, and defining and illustrating sequences and series. Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT12+, OR an appropriate district placement for MAT15+, OR permission of Department/Division Chair. Course Notes: Students may receive credit for only one of the following: MAT152 or MAT213.

MAT156  College Algebra/Functions with Review
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, using multiple methods including matrices, modeling and solving real world problems, and defining and illustrating sequences and series. Prerequisites: A grade of C or better in MAT095, or MAT096, or MAT12+, OR an appropriate district placement for MAT15+, OR permission of Department/Division Chair. Course Notes: Students may receive credit for only one of the following: MAT152 or MAT213.

MAT187  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. Prerequisites: A grade of C or better in MAT15+ OR an appropriate district placement. Corequisites: MAT15+. Course Notes: MAT182 students may receive credit for only one of the following: MAT182 or MAT187.

MAT182  Calculus with Analytic Geometry I
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 Notes: 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 MAT122 or MAT213.

MAT218  Mathematical Analysis for Business
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 Notes: Students may receive credit for only one of the following: MAT212 or MAT213.

MAT220  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 Notes: Students may receive credit for only one of the following: MAT220 or MAT221.

MAT222
Introduction to Actuarial Science: Elements and Techniques
3 credit(s) 3 period(s) lecture
An introduction to the mathematics of actuarial science. Exploration of actuarial science as a profession, including but not limited to mathematical skills applied for problem-solving and technologies used in risk management and financial modeling. Prerequisites: A grade of "C" or better in [MAT220 or MAT221] and CIS105] or permission of Instructor.

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
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.

MAT241
Calculus with Analytic Geometry III
4 credit(s) 4 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.

MAT254
Investigating Quantity: Number, Operations and Numeration Systems
4 credit(s) 4 period(s) lecture
Explore number, number 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: A grade of C or better in 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.

MAT298AA-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: Permission of Program Director or Instructor. Course Notes: MAT298AC may be repeated for a total of six (6) credit hours.

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 MDL190, 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.

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 MDL244, 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 MDL246, acceptance into the Medical Laboratory Science program, and permission of the 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, and trace elements. Emphasis on quality assurance, quality control, mathematics and statistical analysis, specimen collection, and preanalytical processes. Study of immunoassays, nucleic acid probes, viral and tumor markers, automation of analytical techniques, spectrophotometry, genetic diseases and inborn errors of metabolism, and point-of-care testing. Use of reagents, equipment, supplies, and units of measure. **Prerequisites:** A grade of "C" or better in MDL248, acceptance into the Medical Laboratory Science program, and permission of the 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 MDL248, acceptance into the Medical Laboratory Science program, and permission of the Program Director.

**MDL252**
Clinical Preparation I
0.5 credit(s) 2.5 period(s) lecture + lab
Examines clinical laboratory testing in a simulated laboratory environment. Emphasis on interpretation, evaluation, and reporting of a variety of laboratory results, and includes instrument calibration, maintenance, and quality control. **Prerequisites:** A grade of "C" or better in MDL244, acceptance into the Medical Laboratory Science program, and permission of Program Director.

**MDL263**
Clinical Preparation II
0.5 credit(s) 2.5 period(s) lecture + lab
Continuation of examination of clinical laboratory testing in a simulated laboratory environment. Emphasis on interpretation, evaluation, and reporting of a variety of laboratory results, and includes instrument calibration, maintenance, and quality control. **Prerequisites:** A grade of "C" or better in MDL248, acceptance into the Medical Laboratory Science program, and permission of Program Director.

**MDL291**
Medical Laboratory Science Program Capstone
1 credit(s) 1 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 personalized test taking strategies and examination study plan. **Prerequisites:** A grade of "C" or better in MDL247 and MDL249, acceptance into the Medical Laboratory Science program and permission of Program Director.

**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.

**MDL295AB**
Special Topics: Medical Laboratory Science
2 credit(s) 3 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 six (6) credit hours.

**MDL295AC**
Special Topics: Medical Laboratory Science
3 credit(s) 4 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 six (6) credit hours.

**MGT** – Management

**MGT126**
Customer Service Skills and Strategies
3 credit(s) 3 period(s) lecture + lab
Explores strategies to help improve job performance and develop a service-oriented philosophy. Uses practical training concepts and techniques to demonstrate how superior customer service can lead to competitive advantage and profitability in business. Focuses on both internal and external customers, interactions among people, processes, and systems within the organization and how to integrate these areas into a total quality delivery program. **Prerequisites:** None.

**MGT147**
Supply Chain Management
3 credit(s) 3 period(s) lecture
Supply chain management, including basic concepts and underlying principles of logistics and inventory management. **Prerequisites:** None.

**MGT175**
Business Organization and Management
3 credit(s) 3 period(s) lecture
Covers basic principles of managing quality and performance in organizations. Covers management functions: planning, organizing, leading, and controlling. Emphasizes continual improvement, ethics, and social responsibility. **Prerequisites:** None.

**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:** A grade of C or better in MGT229 or permission of Department or Division.

**MGT251**
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 of MGT101, or MGT175, or MGT229 suggested but not required.
MGT253
Owning 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 management processes, advertisement and 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 three (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) credits.

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 methodology for coordinating and monitoring effective employment selection practices. Includes description of employment functions, staffing analysis, employment recruitment and advertising, applicant screening, interviewing and reference checking, employee selection and placement within a human resources division. Prerequisites: A grade of C or better in MGT276 or permission of department.

MHL – Music: History/Literature

MHL140
Survey of Music History
3 credit(s) 3 period(s) lecture
Study of composers, compositions, styles, and periods in music history. Prerequisites: None.

MHL143
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.

MHL145
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.

MHL146
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.

MHL153
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.

MHL155
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 influence our modern American musical sense. Prerequisites: None.

MHL194
Music and Culture
3 credit(s) 3 period(s) lecture
Introduction to the study of multicultural music in its social, cultural, historical and economic contexts. Performance of music using percussion, rhythm, and the human body. Historical and social aspects of global cultures’ musical expressions. Prerequisites: A grade of C or better in MGT101 or MGT108 or permission of Instructor.

MHL204
Hip-Hop Music and Culture
3 credit(s) 3 period(s) lecture
A history of Hip-Hop’s musical and artistic elements and how cultural, social, political, and economic conditions have shaped its evolution. Prerequisites: A grade of C or better in ENG101, or ENG107, or permission of Instructor.

MHL241
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: A grade of C or better in 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: A grade of C or better in MHL241 or permission of Instructor.

MIS – Military Science

MIS101
Introduction to the United States Army
4 credit(s) 5 period(s) lecture and lab (Fall only)
Introduces the personal challenges and competencies that are critical for effective leadership and communication. Students learn how the personal development of life skills such as cultural understanding, goal setting, time management, stress management and comprehensive fitness relate to leadership, officering and the Army profession. Focuses on developing basic knowledge and comprehension of Army leadership dimensions, attributes and core leader competencies while gaining an understanding of the Army ROTC program, its purpose in the Army, and its advantages for the student. Includes physical training assessments, tactical training, as well as lecture-based instruction. Prerequisites: None.
MIS102  
**Foundation of Agile and Adaptive Leadership**  
4 credit(s) 5 period(s) lecture and lab  
*(Spring only)*  
Introduces the professional challenges and competencies that are needed for effective execution of the profession of arms and Army communication. Through this course, students learn how ethics and values shape the Army and the specific ways that these ethics are inculcated into Army culture. Explores the seven Army values and the warrior ethos, investigate the profession of arms and Army leadership as well as an overview of the Army, and gains practical experience using critical communication skills. Includes physical training assessments, tactical training, as well as lecture-based instruction. Prerequisites: A grade of C or better in MIS101.

MIS201  
**Army Leadership and Decision Making**  
4 credit(s) 5 period(s) lecture and lab  
*(Fall only)*  
Academically challenging course where students study, practice and apply the fundamentals of Army leadership, officership, Army values and ethics, personal development and small-unit tactics at the platoon level. Requires the student to demonstrate writing skills and present information briefings as preparation for development in becoming a successful future officer. Includes reading assignments, homework assignments, small group assignments, briefings, case studies, practical exercises, a mid-term exam and final exam. Also includes physical training assessments, tactical training, as well as lecture-based instruction. Prerequisites: A grade of C or better in MIS102.

MIS202  
**Army Doctrine and Team Development**  
4 credit(s) 5 period(s) lecture and lab  
*(Spring only)*  
Academically challenging course where students study, practice and apply the fundamentals of the leadership, officer skills, Army values and ethics, personal development and tactics at the small-unit level. Focuses on cross-cultural competencies as they relate to Army doctrine and how they apply in a combatant commander’s engagement strategies. Stresses Army values, teamwork and warrior ethos and their relationship to the law of land warfare and philosophy of military service. Covers the ability to lead and follow through team building exercises in small units up to squad level. Requires the student to demonstrate writing skills and present information briefings as preparation for development in becoming a successful future officer. Also includes physical training assessment, tactical training, as well as lecture-based instruction. Prerequisites: A grade of C or better in MIS201.

MKT – Marketing

MKT101  
**Introduction to Public Relations**  
3 credit(s) 3 period(s) lecture  
*(Spring only)*  
Introduces the advertising function within business, including media study, creative strategies, and advertising campaigns. Prerequisites: None.

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.

MKT110  
**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.

MKT111  
**Applied Marketing and Social Networking**  
3 credit(s) 4 period(s) lecture + lab  
Examination of the strategic use of digital and social media marketing platforms and tools for global communication and networking, including analysis of various digital and social media platforms and tools for developing brands, creating professional networks and creating engaging content. Hands-on use of social media platforms and tools to conduct research, develop strategies for creating, integrating, and evaluating social media marketing campaigns, and development of metrics to measure effectiveness. Prerequisites: A grade of C or better in MKT110.

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.

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.

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 Sales**  
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.

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 communication in order to satisfy buyer needs. Prerequisites: None. MKT271 suggested but not required.

MKT271  
**Principles of Marketing**  
3 credit(s) 3 period(s) lecture  
An analysis of the marketing process and environment with regard to the product, pricing, distribution, and communication in order to satisfy buyer needs. Prerequisites: None.

MKT/TEC274AC  
**Fashion Merchandising Study Tour**  
3 credit(s) 15 period(s) lab  
A tour of the retail merchandising industry outside the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance awareness of this multifaceted career. Prerequisites: Department approval.

MKT280AA  
**Marketing Internship**  
1 credit(s) 1 period(s) lecture + lab  
Marketing work experience in a business or industry. 80 hours of designated work per credit. Prerequisites: Permission of Department or Division. Course Notes: MKT280AA may be repeated for a total of four (4) credits.

MKT280AB  
**Marketing Internship**  
2 credit(s) 2 period(s) lecture + lab  
Marketing work experience in a business or industry. 80 hours of designated work per credit. Prerequisites: Permission of Department or Division. Course Notes: MKT280AB may be repeated for a total of four (4) credits.
MKT280AC  
Marketing Internship  
3 credit(s) 3 period(s) lecture + lab  
Marketing work experience in a business or industry. 80 hours of designated work per credit. Prerequisites: Permission of Department or Division. Course Notes: MKT280AC may be repeated for a total of six (6) credits.

MMT – Multimedia Technology

MMT/CIS140  
Survey of Multimedia Technology  
2 credit(s) 3 period(s) lecture + lab  
Introduction to multimedia technology and its uses. Overview of the various hardware and software used in developing and delivering multimedia. Emphasis on how multimedia is used in education and training. Provides a basic understanding of the process used to define and develop multimedia applications. Prerequisites: A grade of C or better in CIS105, or permission of Instructor.

MMT/ADA/ART184  
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, storyboard, cells, timing, editing, and surface rendering. Screening and discussion of selected animated short films and videos. Prerequisites: A grade of C or better in ART100, or ART111, or ART116, or permission of Instructor.

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, nubs, and polygons. 3-D translation, shading, materials, and rendering. Prerequisites: A grade of C or better in ADA/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: None.

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: A grade of C or better in CIS/MMT140 or permission of Instructor.

MNT – Micro and Nano Technology

MNT100  
General Principles of Nanotechnology  
3 credit(s) 3 period(s) lecture 
Designed to provide students with a strong fundamental understanding of the scientific principles, processing, and applications of nanotechnology. Includes the concepts of chemical bonding, quantum mechanics, and microstructure applied to various nanomaterials and their use in electronic devices, composites, computing, and various other biological, medical, energy-related, and current consumer applications. Introduces analytical techniques used in nanotechnology, as well as possible societal applications. Prerequisites: A grade of "C" or better in (MAT090, or MAT091, or MAT092, or MAT112, or equivalent) and CHM130, or equivalent.

MNT101  
Materials, Safety, and Equipment for Nanotechnology  
3 credit(s) 4 period(s) lecture + lab  
Introduction to basic nanotechnology processes and a comparison of top-down and bottom-up manufacturing processes. Covers characteristics of plasma and its application to additive and subtractive processes. Also includes basic pattern generation processes, laser ablation, and chemical and physical vapor deposition. Prerequisites: None.

MNT201  
Materials, Safety, and Equipment for Nanotechnology  
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: A grade of C or better in CIS/MMT140 or permission of Instructor.

MNT220  
Materials in Nanotechnology  
3 credit(s) 4 period(s) lecture + lab  
Examination of material used in the field of nanotechnology. Covers colloids, nanoparticles, oxides, and quantum dots in addition to self-assembly applications. Also includes biocompatibility and the dry etch material fabrication process. Prerequisites: None.

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: A grade of C or better in MTC100 or MTC101 or permission of Instructor. Corequisites: 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: A grade of C or better in (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: A grade of C or better in 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: MTC156.

MTC180 Computer Literacy for Musicians
3 credit(s) 4 period(s) lecture + lab
Instruction in basic computer literacy, including generic applications and music-specific programs with hands-on experience. Ability to read music notation required. Prerequisites: A grade of C or better in MTC101, or MTC105, or Corequisites: MTC105, or permission of Instructor.

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: A grade of C or better in 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: A grade of C or better in MTC191 or permission of Instructor.

MTC205 SUNG 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: A grade of C or better in MTC155. Corequisites: MTC206.

MTC206 SUNG 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: A grade of C or better in 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: A grade of C or better in (MTC105 and MTC106, or equivalent), and permission of Instructor.

MTC255 SUNG 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: A grade of C or better in MTC205. Corequisites: MTC256.

MTC256 SUNG 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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in MUC191 or TCM/VPT105. Corequisites: A grade of C or better in MUC111 or Corequisites: MUC111 or permission of Instructor.

MUC194 Introduction to Audio Mixing Techniques
3 credit(s) 3 period(s) lecture + lab
Approaches in final mixing for different musical genres. Develop critical listening skills, and applying these techniques to students’ projects. Professional-type facilities and equipment available for student use. Prerequisites: A grade of C or better in MUC112 and MUC195 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:** A grade of C or better in 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:** A grade of C or better in 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:** A grade of C or better in 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:** A grade of C or better in (MUC122 or MTC/TCM120), 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 professional-type facilities and equipment available for student use. **Prerequisites:** A grade of C or better in (MTC192, MTC/TCM220, MUC112, MUC196, and MUC222), or permission of Instructor.

MUC293
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.

MUC295
Studio Music Recording III
3 credit(s) 6 period(s) lecture + lab
Producing and engineering a recording project. Covers how recording studios work from pre-production through delivery of the final mix. **Prerequisites:** A grade of C or better in MUC196 and (MUC111 or permission of Instructor).

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.

MUE – Music: Education

MUE240
Introduction to Choral Methods
1 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, euphonium, 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, euphonium, 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**
1 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.

### MUP127
**Class Guitar I**
1 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.

### MUP128
**Class Guitar II**
1 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:** A grade of C or better in MUP127 or permission of Instructor.

### MUP130
**Beginning Group Piano**
1 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**
1 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**
1 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:** A grade of C or better in MUP131 or permission of Instructor.

### MUP133
**Class Voice I**
1 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**
1 credit(s) 3 period(s) lecture + lab
Continuation of Class Voice I including the elements of stage presence and diction. **Prerequisites:** A grade of C or better in 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**
1 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 Notes:** MUP155 may be repeated for credit.

### MUP157
**Women's Chorus**
1 credit(s) 3 period(s) lecture + lab
A women's chorus designed to emphasize choral technique and performance of all styles of appropriate choral literature. Public performances are scheduled during the year. Auditions may be required. **Prerequisites:** None. **Course Notes:** MUP157 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. **Prerequisites:** None. **Course Notes:** MUP161 may be repeated for credit. Auditions may be required.

### MUP163
**Jazz Ensemble**
1 credit(s) 3 period(s) lecture + lab
Practical and performance experience in various jazz styles. **Prerequisites:** None. **Course Notes:** MUP163 may be repeated for credit. Open to all students on the basis of auditions. Auditions may be required.

### MUP164
**Jazz Improvisation I**
2 credit(s) 3 period(s) lecture + lab
Theoretical and performance skills in many styles of jazz improvisation. **Prerequisites:** None. **Course Notes:** MUP164 may be repeated for a total of six (6) credit hours.

### MUP165
**Jazz Improvisation II**
2 credit(s) 3 period(s) lecture + lab
Intermediate theoretical and performance skills in many styles of jazz improvisation. May be repeated for a total of six (6) credit hours. **Prerequisites:** A grade of C or better in MUP164 or permission of Instructor.

### MUP167
**Chamber Music Ensembles**
1 credit(s) 2 period(s) lecture + lab
Practical and performance experience in instrumental, vocal, and mixed ensembles. **Prerequisites:** None. **Course Notes:** MUP167 may be repeated for credit.

### MUP168
**Chamber Singers**
1 credit(s) 3 period(s) lecture + lab
Practical and performance experience in various styles of vocal music. **Prerequisites:** None. **Course Notes:** MUP168 may be repeated for credit. Open to all students on the basis of auditions. Auditions may be required.

### 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. **Prerequisites:** None. **Course Notes:** MUP190 may be repeated for credit. Auditions may be required.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit(s)</th>
<th>Period(s)</th>
<th>Lecture + Lab</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUP290</td>
<td>Elements of Conducting</td>
<td>2</td>
<td>2</td>
<td>Lecture</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Essentials of conducting techniques used in choral and instrumental ensembles including terminology, interpretation, and styles.</td>
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<tr>
<td>MUP227</td>
<td>Class Guitar III</td>
<td>1</td>
<td>3</td>
<td>Lecture + Lab</td>
<td>A grade of C or better in MUP128 or permission of Instructor.</td>
</tr>
<tr>
<td></td>
<td>1 credit(s)</td>
<td>3 period(s)</td>
<td>lecture + lab</td>
<td>Additional fingerboard positions. Ensemble techniques and performance</td>
<td></td>
</tr>
<tr>
<td>MUP228</td>
<td>Class Guitar IV</td>
<td>1</td>
<td>3</td>
<td>Lecture + Lab</td>
<td>A grade of C or better in MUP128 or permission of Instructor.</td>
</tr>
<tr>
<td></td>
<td>1 credit(s)</td>
<td>3 period(s)</td>
<td>lecture + lab</td>
<td>Advanced fingerboard positions. Duet and trio performances. Advanced ensemble techniques.</td>
<td></td>
</tr>
<tr>
<td>MUP231</td>
<td>Class Piano III</td>
<td>1</td>
<td>3</td>
<td>Lecture + Lab</td>
<td>A grade of C or better in MUP227 or permission of Instructor.</td>
</tr>
<tr>
<td></td>
<td>1 credit(s)</td>
<td>3 period(s)</td>
<td>lecture + lab</td>
<td>Development of intermediate piano techniques including selected solo literature, transposition of harmonic patterns, and secondary dominants.</td>
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<tr>
<td>MUP232</td>
<td>Class Piano IV</td>
<td>1</td>
<td>3</td>
<td>Lecture + Lab</td>
<td>A grade of C or better in MUP231 or permission of Instructor.</td>
</tr>
<tr>
<td></td>
<td>1 credit(s)</td>
<td>3 period(s)</td>
<td>lecture + lab</td>
<td>Continuation of Piano III including modulation techniques, improvisation of piano accompaniments, advanced chromatic harmony, and sight reading of advanced literature.</td>
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<tr>
<td>MUP233</td>
<td>Class Voice III</td>
<td>1</td>
<td>3</td>
<td>Lecture + Lab</td>
<td>A grade of C or better in MUP132 or permission of Instructor.</td>
</tr>
<tr>
<td></td>
<td>1 credit(s)</td>
<td>3 period(s)</td>
<td>lecture + lab</td>
<td>Interpretive singing through a closer examination of coloring, tone production, dynamics, and tempo indications.</td>
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<tr>
<td>MUP234</td>
<td>Class Voice IV</td>
<td>1</td>
<td>3</td>
<td>Lecture + Lab</td>
<td>A grade of C or better in MUP233 or permission of Instructor.</td>
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<td></td>
<td>1 credit(s)</td>
<td>3 period(s)</td>
<td>lecture + lab</td>
<td>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.</td>
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**NAV – Navajo**

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<tr>
<td>MUP250AB</td>
<td>Survey of Diction for Singers (Italian/Latin)</td>
<td>1</td>
<td>2</td>
<td>Lecture + Lab</td>
<td>None</td>
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<tr>
<td></td>
<td>Introduction to the use of phonetics in the study of Italian/Latin song literature.</td>
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<tr>
<td>MUP250AC</td>
<td>Survey of Diction for Singers (German)</td>
<td>1</td>
<td>2</td>
<td>Lecture + Lab</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Introduction to the use of phonetics in the study of German song literature.</td>
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**NUR – Nursing Science: Basic**

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**NUR172**

Nursing Theory and Science II

9 credit(s) 163 period(s) lecture and lab

Utilization of Nurse of the Future competencies to develop knowledge, skills, and attitudes to provide safe, quality patient care across the wellness/illness continuum in selected medical-surgical and mental health patients. Prerequisites: A grade of C or better in (BIO202 and NUR192) or permission of Nursing Department Chair.

**NUR252**

Nursing Theory and Science III

9 credit(s) 163 period(s) lecture and lab

Application of critical thinking strategies related to holistic care of the newborn and childbearing patients. Integration of concepts related to holistic care of adults and older adult patients with selected acute and chronic alterations in health. Integration of professional nursing standards in role development. Utilization of previous knowledge of physical, biologic, psychosocial sciences, and the cultural, spiritual aspects of nursing care. Integration of concepts of nutrition, pharmacology, communication, health promotion, and pathophysiology into nursing care. Prerequisites: A grade of C or better in (CRE101 and NUR172 and PSY101) or permission of Nursing Department Chair.

**NUR283**

Nursing Theory and Science IV

9 credit(s) 163 period(s) lecture and lab

Applies Nurse of the Future competencies to practice and manage care for the child/family unit and adults requiring complex care throughout the wellness/illness continuum, and prepare for transition from student to professional nurse. Prerequisites: A grade of C or better in (BIO205 and NUR252) or permission of Nursing Department Chair.

**NVH – Navajo Humanities**

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**NVH245**

Navajo Culture and Heritage

3 credit(s) 3 period(s) lecture

Survey of the Navajo people, including their history, culture/aesthetics, education, spirituality, and language. Prerequisites: None.
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: A grade of C or better in PAD100 or permission of Instructor.

PED – Physical Education

PED101
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.

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.

PED118
Strength Training and Muscular Fitness
2 credit(s) 4 period(s) lecture + lab
Tailored by certified fitness professionals to assessment of current strength and goal-specific program design to increase strength and muscular fitness. Prerequisites: None.

PHI – Philosophy

PHI101
Introduction to Philosophy
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
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: A grade of C or better in ENG101 or ENG107 or permission of Instructor. Course Notes: Course may contain adult content. All students under 18 years old are required to have a signed parental consent form on file, which is on the back of the “Students Under The Age of 18” Enrollment Form.

PHI215
Ethics in Public Policy and Administration
3 credit(s) 3 period(s) lecture
Examines the role of ethics in the development and implementation of public policy, with an emphasis on the ethical issues faced by public administrators and policy makers. Prerequisites: None.

PHI216
Environmental Ethics
3 credit(s) 3 period(s) lecture
Philosophical considerations 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
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: A grade of C or better in ENG101 or ENG107 or permission of Instructor. Course Notes: Course may contain adult content. All students under 18 years old are required to have a signed parental consent form on file, which is on the back of the “Students Under The Age of 18” Enrollment Form.

PHS – Physical Science

PHS110
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 equivalent, or satisfactory score on Math placement exam.

PHY – Physics

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 equivalent, or satisfactory score on Math placement exam. Course Note: Students may receive credit for only one of the following: PHY101 or PHY101AA.
PHY111 Suggested but not required
General Physics I
4 credit(s) 6 period(s) lecture and lab
Includes motion, energy, and properties of matter. Prerequisites: A grade of C or better in MAT182 or MAT187 or MAT220 or MAT221 or eligibility for MAT220 as indicated by appropriate placement test score 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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in MAT230, or MAT231, or permission of Department or Division, and a grade of C or better in PHY121. Corequisites: MAT241 or permission of Department or Division.

PLB10
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: A grade of C or better in PHY111 or PHY111AA, and a grade of C or better in 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.

PLB10AA
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
Application of specimen processing in phlebotomy and specimen processing including laboratory test codes, equipment, and procedures. Prerequisites: A grade of C or better in PLB109 and permission of Program Director.

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: A grade of C or better in PLB109 and PLB110. Corequisites: PLB111 and PLB121, or permission of Instructor.

PLB114 Refresher Course for Phlebotomists
0.5 credit(s) 0.75 period(s) lecture + lab
Review of phlebotomy theory and practices including equipment, procedures, and special considerations. Reinforces basic skills and competencies of phlebotomy techniques for trained phlebotomists currently working in the field. Prerequisites: Must be currently employed as a phlebotomist or permission of the Program Director. Course Note: PLB114 may be repeated for credit.

PLB115 Developmental Skills for Law Enforcement Phlebotomy
1 credit(s) 1 period(s) lecture + lab
Provides an update for specific law enforcement phlebotomy. Includes phlebotomy theory and practices including equipment, procedures, and special considerations of phlebotomy techniques. Prerequisites: Permission of Program Director. Course Note: PLB115 may be repeated for credit.

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: A grade of C or better in PLB109 and PLB110. Corequisites: PLB111 and PLB121 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: A grade of C or better in PLB109 or permission of Program Director. Prerequisites: A grade of C or better in PLB111 or Corequisites: PLB111 or 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: A grade of C or better in 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 overall institution's ongoing utility, productivity and creativity. Prerequisites: None.

**POS201**  
Political Ideologies  
3 credit(s) 3 period(s) lecture  
Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures. 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 and Liberties  
3 credit(s) 3 period(s) lecture  
The historic background and current status of major civil rights and civil liberties 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: A grade of C or better in POS280 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.

**POS285**  
Political Issues and Public Policy  
3 credit(s) 3 period(s) lecture + lab  
Introduction to public policy, how policy is made, and how public policy decisions are affected. Prerequisites: None.

**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.

**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.

**PSY215**  
Introduction to Sport Psychology  
3 credit(s) 3 period(s) lecture  
Application of the psychological, behavioral, social, cognitive, and humanistic perspectives in psychology to sport. Includes topics such as optimal performance, correlation, motivation, co-action effect, self-actualization, psycho-behavioral techniques, self-efficacy, and the general health benefits of sport participation. Prerequisites: PSY101 with a grade of 'C' or better or permission of Instructor.

**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: A grade of "C" or better in PSY101 and MAT092 or higher MAT course) or (a grade of "C" or better in PSY101 and eligibility for MAT112 or higher as indicated by appropriate mathematics placement test score) 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 the 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: A grade of C or better in PSY101. Course Notes: PSY277 course may contain adult content. All students under the age of 18 are required to have a signed parental consent form on file, which is on the back of the Under the Age of 18 Enrollment Form.

PSY290AB
SUNA PSY 2290
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: A grade of C or better required in all Prerequisites. Prerequisites: ENG101 or ENG107. Prerequisites or Corequisites: PSY230 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. Thus it is 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/or academic goals. Please Note: For CRE (Critical Reading) courses, see page 245.
RDG071  
Basic Reading  
3 credit(s) 3 period(s) lecture  
Provide opportunities for practice and application of basic reading skills. Includes phonic 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 RDG/ESL046, 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.

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 may be repeated for a total of twelve (12) credit hours.

REA180  
Real Estate Principles II  
3 credit(s) 3 period(s) lecture  
Advanced work in real estate including escrow procedures and title insurance, liens and encumbrances, advanced contracts, water rights, toxic waste and environmental hazards, agency, ethics and professional relationships, real estate code and the Commissioner's rules, investment, property management, and government restrictions. Prerequisites: A grade of C or better in REA179 or permission of Instructor.

REA290AH  
Real Estate Seminar: Contract Writing  
0.5 credit(s) 0.5 period(s) lecture  
Contract writing skills, techniques, and requirements. Writing of basic real estate contracts, including purchase offers, counter offers, sales listing agreements, and riders. Prerequisites: None.

REC – Recreation

REC120  
Leisure and the Quality of Life  
3 credit(s) 3 period(s) lecture  
Overview of the historical, psychological, social, and cultural aspects of play, leisure, and recreation and their role in contemporary society. Nature of play and leisure behavior in human development within different cultures and the contribution play, recreation, and leisure make to the quality of life for individuals in today's society. Prerequisites: None.

REC150AA  
Outdoor Adventure Skills Field Experience  
1 credit(s) 2 period(s) lab  
Practical application of camping and outdoor skills including camping, equipment selection and use, cooking, fire building, camp programs, backpacking, and safety. Prerequisites: None. Course Note: Course may be repeated for a total of four (4) credits.

REC210  
Leisure Delivery Systems  
3 credit(s) 3 period(s) lecture  
Systematic study of delivery of leisure services in public, commercial, and independent sectors; particular emphasis placed on the urban setting. Prerequisites: None.

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: A grade of C or better in 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: A grade of C or better in 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: A grade of C or better in SBS220 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 273.

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: A grade of C or better in 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
3 credit(s) 3 period(s) lecture
Introduction to fingerspelling techniques. Focus on methods, theory, and applications on receptive and expressive skills including manual alphabet production and numbers. In addition, skill development in speed, dexterity, clarity, and lexicalized fingerspelling, numeric incorporation, prefixes, suffixes, and polysyllabic words. Prerequisites: A grade of C or better in SLG101, 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, deaf-blind, and hard of hearing individuals. Local, state, and national organizations, activities, and agencies affecting the deaf community. Prerequisites: A grade of C or better in SLG102 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) and (CRE101 or exemption by score on the reading placement test (ASSET)). 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 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.

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.

SLG212
Deaf Culture
3 credit(s) 3 period(s) lecture
Linguistic, social, educational, and political issues in deaf culture. Values and group identity issues as related to heritage and literature. Special emphasis on the cultural and philosophical attitudes shared with other minority groups. Prerequisites: SLG202, or permission of Department or Division. Completion of prerequisites within the last three years is required.

SOC – Sociology

SOC101
Introduction to Sociology
3 credit(s) 3 period(s) lecture
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.

SOC110
Drugs and Society
3 credit(s) 3 period(s) lecture
Provides a sociological understanding of drug use and policy. Examines social-cultural factors contributing to use and abuse and effects of commonly used drugs on the individual and society. Reviews current theories and research relating to drug use. Introduces extensive coverage of various methods and statistics for measuring drug use. Explores prevention, intervention, and treatment. Examines public policies concerning drug related issues. Prerequisites: None.

SOC157
Sociology of Families and Relationships
3 credit(s) 3 period(s) lecture
Systemic analysis of socio-cultural and historical origins of modern families in the United States 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.

SOC/AIS160
American Indian Law
3 credit(s) 3 period(s) lecture
Analyzes the legal system of the United States Government as it applies to American Indian Nations. Examines how United States legal institutions have impacted Indian sovereignty. Units of analysis include the development of Indian law, United States Supreme Court decisions, Congressional Acts, treaty rights and the development of tribal governments. Focuses on legal institutions that have abridged the property rights of Indian Nations. Prerequisites: None.

SOC180
Social Implications of Technology
3 credit(s) 3 period(s) lecture
Effects of development and implementation of technology on society. Historical and multi-cultural comparisons of this process, current concerns addressed, and prospects for the future analyzed. Prerequisites: None.

SOC212
Gender and Society
3 credit(s) 3 period(s) lecture
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: None.

SOC241
Race and Ethnic Relations
3 credit(s) 3 period(s) lecture
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.
SOC251 Sociology 2250
Social Problems
3 credit(s) 3 period(s) lecture
A systematic and in-depth survey of selected social problems and inequalities from a sociological perspective, including what is known about the problem, recent trends, their causes and consequences, individual and societal responses to them, and possible remedies or policies that could address these issues. Issues to be examined may include 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.

SOC265 Sociology of Aging
3 credit(s) 3 period(s) lecture
Examination of the aging process from post adolescence through old age from interdisciplinary and multicultural perspectives. Emphasis on positive participation in major social institutions and the amelioration of age-related problems. Prerequisites: None.

SOC266 Sociology Through Film
3 credit(s) 3 period(s) lecture
Examines movie-going and the experience of spectatorship. Studies how motion pictures reflect, influence, and are influenced by American culture and societal institutions. Explores the role of the movie industry as a vehicle for social commentary, analysis, and criticism. Prerequisites: None.

SPA – Spanish

SPA101 or SPA 1101
Elementary Spanish I
4 credit(s) 4 period(s) lecture
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 or SPA 1102
Elementary Spanish II
4 credit(s) 4 period(s) lecture
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 Elementary Spanish for Spanish Speakers I
4 credit(s) 4 period(s) lecture
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 departmental approval.

SPA104 Elementary Spanish for Spanish Speakers II
4 credit(s) 4 period(s) lecture
Continued review of grammatical problems in speaking and writing and reading in Spanish. Prerequisites: A grade of C or better in SPA103 or equivalent or departmental approval. Completion of prerequisites within the last three years is required.

SPA106 Spanish for Medical Interpretation II
3 credit(s) 3 period(s) lecture
Basic conversational Spanish for health care personnel or students. Emphasis on basic sentence structure, pronunciation, and vocabulary used in health care settings. Prerequisites: A grade of "C" or better in SPA205 or permission of Department or Division. Completion of prerequisites within the last three years is required.

SPA107 Health Care Spanish I
3 credit(s) 3 period(s) lecture
Basic conversational Spanish for health care workers or students. Emphasis on basic sentence structure, pronunciation and vocabulary used in health care settings. Prerequisites: None.

SPA108 Health Care Spanish II
3 credit(s) 3 period(s) lecture
Basic conversational Spanish for health care personnel or students. Emphasis on basic sentence structure, pronunciation, and vocabulary used in health care settings. Prerequisites: A grade of C or better in SPA107 or permission of Department or Division. Completion of prerequisites within the last three years is required.

SPA109 Spanish for Educational Settings I
3 credit(s) 3 period(s) lecture
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.

SPA160 Spanish for Spanish-Speaking Students I
4 credit(s) 4 period(s) lecture
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.

SPA161 Spanish for Spanish-Speaking Students II
4 credit(s) 4 period(s) lecture
Designed for Spanish-speaking students. Emphasis on written composition, grammar review, punctuation and spelling, literature and conversation. May be taken in lieu of SPA202. 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. Course Notes: SPA204 may be taken in lieu of SPA202.

SPA162 Spanish for Spanish-Speaking Cultural Studies
3 credit(s) 3 period(s) lecture
Continuation of Spanish interpretation for medical interpreters. Medical vocabulary relating to human anatomy and physiology emphasized. Prerequisites: A grade of B or better in SPA106 or permission of Department or Division. Completion of prerequisites within the last three years is required.

SPA180 Health Care Spanish I
3 credit(s) 3 period(s) lecture
Basic conversational Spanish for health care workers or students. Emphasis on basic sentence structure, pronunciation and vocabulary used in health care settings. Prerequisites: None.

SPA181 Health Care Spanish II
3 credit(s) 3 period(s) lecture
Basic conversational Spanish for health care personnel or students. Emphasis on basic sentence structure, pronunciation, and vocabulary used in health care settings. Prerequisites: A grade of C or better in SPA180 or permission of Department or Division. Completion of prerequisites within the last three years is required.

SPA182 Spanish for Educational Settings II
3 credit(s) 3 period(s) lecture
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.
SPH – Spanish Humanities

SPH245 Spanish 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.

SSH – Sustainability/ Social Sciences and Humanities

SSH111 Sustainable Cities 3 credit(s) 3 period(s) lecture
Introduction to the field of sustainability and exploration of the practices leading to the development of sustainable cities. Explores the concept of sustainable development of cities within local, regional, and global contexts. Prerequisites: None.

SWU – Social Work

SWU130 Addictions and Substance Use Disorders 3 credit(s) 3 period(s) lecture
Sociological, psychological and physiological aspects of addictive behaviors and chemical abuse. Consideration of a variety of treatment programs offered in community agencies. Prerequisites: None.

SWU171 Introduction to Social Welfare 3 credit(s) 3 period(s) lecture
Analysis of contemporary social welfare services and professional social work. Prerequisites: (A grade of 'C' or better in RDG100 or eligibility for CRE101 as indicated by appropriate reading placement test score) and (a grade of 'C' or better in ENG091 or eligibility for ENG101 as indicated by appropriate writing placement test score).

SWU/JAS225 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: A grade of C or better in MAT092 or completion of higher level mathematics course.

SWU250 Mindfulness for Stress Management 3 credit(s) 3 period(s) lecture
Introduction to the theory, research and practice behind mindfulness and stress management as it relates to quality of life issues and professional self-care. Focus on maintaining a healthy lifestyle and managing personal/professional stress by incorporating evidence-based research on nutrition, mindfulness, communication, positive psychology, exercise, environmental factors contributing to wellness and disease; immune system support, activity management and developing practices that facilitate maintaining living in balance. Prerequisites: None.

SWU/JAS/EMT/FSC258 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.

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.

SWU295 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. 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.

TCM/MTC120 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: A grade of C or better in (TCM100 and TCM136) or permission of Instructor.

TCM/MTC220 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: A grade of C or better in 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: A grade of C or better in (TCM241 and independent footage) or permission of Instructor. Course Note: TCM242 may be repeated for a total of six (6) credits.

TCM283 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: A grade of C or better in TCM241 or permission of Instructor.
TEC103 Developing Your Fashion Business
2 credit(s) 2 period(s) lecture
Creating and understanding a financial plan, developing operating and control systems, planning growth strategies and a business plan for the Fashion Entrepreneur. Emphasis on fashion merchandise and successful fashion business development. Prerequisites: None.

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.

TEC110 Basic Sewing Skills
3 credit(s) 5 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: A grade of C or better in TEC110 or permission of Instructor. Course Note: TEC111 may be repeated for a total of 12 credit hours with permission of Instructor. If student has no previous sewing experience, TEC110 Basic Sewing Skills should be taken prior to and not during this course.

TEC112AQ Pattern Alteration and Fit
2 credit(s) 3 period(s) lecture + lab
Structural features of patterns and altering patterns to achieve proper fit. Includes figure irregularities, pattern style variations, fashion, and individual figure problems. Prerequisites: A grade of C or better in TEC111 or permission of Instructor. Course Notes: TEC112AQ may be repeated for a total of six (6) credit hours with Instructor permission.

TEC112AU Sewing Clothing Accessories
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
Construction of clothing accessories for personal or professional use. Includes overview of accessories, principles of design, selection of fabrics and trims, use of commercial patterns, creation of custom patterns, construction techniques, and evaluation of accessories. Prerequisites: A grade of C or better in TEC111 or permission of Instructor. Course Note: TEC112AU may be repeated for a total of twelve (12) credit hours.

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 textile designs on fabric for fashion and interior design applications. Fabric dyeing techniques through hands-on practices such as tie dyeing, shibori dyeing and batik dyeing. Prerequisites: None. Course Notes: TEC113 may be repeated for a total of three (3) credits.

TEC114 Textiles: Block Printing/Silk Screening
1 credit(s) 2 period(s) lecture + lab
(Not offered every semester)
Block printing and silk screen printing techniques used to create designs on fabric for apparel and interiors. Prerequisites: None. Course Notes: TEC114 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)
Techniques used to hand paint designs on textiles for fashion and interior design. Techniques include water color and oil, marbling, stenciling, stamping and various resist methods such as gutta and tapeing. Includes color theory and design development. Prerequisites: None. Course Notes: TEC115 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: TEC116 may be repeated for a total of three (3) credits.

TEC120 Intermediate Clothing Construction
3 credit(s) 5 period(s) lecture + lab
Application of intermediate clothing and fitting techniques. Emphasis on improving basic construction skills. Prerequisites: A grade of C or better in TEC111 or permission of Instructor. Course Notes: TEC120 may be repeated for a total of 9 credit hours with permission of Instructor.

TEC121 Creative Sewing Machine Use
3 credit(s) 3 period(s) lecture
Use of the sewing machine for other than construction of garments or household items. Emphasis on decorative uses of the sewing machine on items made or purchased by the user. Prerequisites: None.

TEC122 Sewing with Knits
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
Skills and techniques used in the construction of garments made from knit fabrics. Prerequisites: A grade of C or better in TEC111 or permission of Instructor.

TEC124 Advanced Clothing Construction
3 credit(s) 5 period(s) lecture + lab
Advanced garment construction techniques, pattern alteration and fit and techniques used on specialty fabrics. Prerequisites: A grade of C or better in TEC111 or permission of Instructor. Course Note: TEC124 may be repeated for a total of 12 credit hours with permission of Instructor.

TEC125 Fashion Design
3 credit(s) 3 period(s) lecture
Overview of the fashion design industry. Includes terminology, fashion trends, elements and principles of design, sources of inspiration, fabric selection, sketching and costing a collection, an introduction to pattern making techniques, and global fashion centers’ design and manufacturing specialties. Prerequisites: None.
TEC/INT126
Sewing for the Home
3 credit(s) 3 period(s) lecture
Provides students systematic skills and knowledge to plan and construct draperies, shades, pillows, bedding and other home furnishings through instructional projects. Emphasizes techniques used in producing textile goods for the home. Prerequisites: None. Course Notes: Basic sewing skills recommended. TEC/INT126 may be repeated for a total of nine (9) credit hours.

TEC128
Home Upholstery
3 credit(s) 5 period(s) lecture + lab
Demonstration and application of knowledge and skills involved in upholstering stools, chairs, headboards, and other home furnishings. Includes measuring and cutting upholstery fabric and sewing outdoor/indoor cushions. Prerequisites: A grade of C or better in TEC110 or TEC111 or permission of Instructor.

TEC129
Sewing with a Serger
3 credit(s) 5 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: A grade of C or better in TEC110 or TEC111 or permission of Instructor.

TEC134
Fashion Illustration I
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
Introduction of media and illustrative styles for portfolio design, trade sketches, and fashion advertisements. Prerequisites: None. Course Notes: TEC134 may be repeated for a total of nine (9) credits.

TEC135
Fashion Illustration II
3 credit(s) 5 period(s) lecture + lab
Intermediate-level study of proportion and techniques used in drawing fashion figures and flats. Continued study of garments, fabric textures and patterns. Development of skills in presentation drawing and commencing fashion design portfolio illustrations. Prerequisites: A grade of C or better in TEC134 or permission of Instructor. Course Notes: TEC135 may be repeated for a total of nine (9) credits.

TEC136
Fashion Illustration III
3 credit(s) 5 period(s) lecture + lab
Advanced-level study of proportions and techniques used in drawing fashion figures, clothing, and flats. Continued study of illustrative styles for garments, fabric textures and patterns. Further development of skills in portfolio presentation. Prerequisites: A grade of C or better in TEC135 or permission of Instructor. Course Notes: TEC136 may be repeated for a total of nine (9) credits.

TEC150
Fashion Show Production
3 credit(s) 4 period(s) lecture + lab
Students will learn and experience real-time production techniques and skills of a fashion show. Includes but not limited to, budget planning, project management, marketing, staffing, décor, staging, and production. Prerequisites: None. Course Notes: TEC150 may be repeated for a total of six (6) credit hours.

TEC221
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: A grade of C or better in (TEC125 and TEC134) or permission of Instructor.

TEC222
Textiles
3 credit(s) 4 period(s) lecture + lab
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: A grade of C or better in TEC124 or permission of Instructor. Course Notes: TEC223 may be repeated for a total of twelve (12) credit hours with permission of Instructor.

TEC224
Pattern Drafting
2 credit(s) 3 period(s) lecture + lab
(Not offered every semester)
Draft patterns from measurements of dress forms and human figures. Development of slopers and garment patterns. Design and produce an original garment using pattern drafting techniques. Prerequisites: A grade of C or better in TEC111 or permission of Instructor. Course Notes: TEC224 may be repeated for a total of six (6) credit hours.

TEC225
Pattern Design I
3 credit(s) 5 period(s) lecture + lab
Creation of pattern designs by flat pattern methods. Produce a variety of styles. Production of an original pattern design and garment. Prerequisites: A grade of C or better in TEC111 or permission of Instructor. Course Note: TEC225 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 woven fabrics to create basic and intermediate designs. Introduction of knitwear draping. Drape and construct an original design. Prerequisites: A grade of C or better in TEC111 or permission of Instructor. Course Notes: TEC226 may be repeated for a total of nine (9) credits.

TEC227
Couture Sewing
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
Construction techniques used in couture sewing. Includes fabric selection, fabric preparation, hand sewing, garment shaping, edge finishes, embellishments, and closures. Emphasis on fitting and couture construction techniques used to construct skirts, pants, blouses, dresses, sleeves, pockets, jackets, coats, and evening wear. Prerequisites: A grade of C or better in TEC111 or permission of Instructor. Course Note: TEC227 may be repeated for a total of twelve (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, shorts/pants, dresses/gowns and other woven fabrics. Also includes draping swimwear/leotards and other garments in knit fabrics. Drape and construct an original design. Prerequisites: A grade of C or better in TEC226 or permission of Instructor. Course Notes: TEC228 may be repeated for a total of nine (9) credits.
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 creation of woven and knit original designs. Prerequisites: A grade of C or better in TEC225 or permission of Instructor. Course Notes: TEC230 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, figure types, grading charts, types of grade, even and uneven grades, and grading basic and intermediate designs. Prerequisites: A grade of C or better in TEC111 or permission of Instructor. Course Notes: TEC231 may be repeated for a total of six (6) credit hours.

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: A grade of C or better in 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: A grade of C or better in TEC225 or permission of Instructor. Course Notes: TEC233 may be repeated for a total of twelve (12) credit hours with permission of Instructor.

TEC234
Vintage Fashion Design
3 credit(s) 5 period(s) lecture + lab
Research of 20th-century fashions from the 1920s through the 1990s influencing vintage garment styles. Analysis of vintage era and revival trends. Development and construction of an original vintage garment/ensemble including design, fabric selection, and commercial pattern use with flat-patternmaking and/or draping variations. Prerequisites: A grade of C or better in (TEC225 or TEC226) or permission of Instructor. Course Notes: TEC234 may be repeated for a total of twelve (12) credit hours.

TEC236
Portfolio Development
1 credit(s) 3 period(s) lab
(Not offered every semester)
This course is designed to assist students in the preparation and presentation of an original professional portfolio. Students will design, produce, and present artistic sketches and illustrations of fashion figures wearing designs, flats for garment designs, and fabric swatches/samples selected for designs. Including but not limited to using computer-assisted design software, presentation boards, and other required components in the field of portfolio development. Prerequisites: A grade of C or better in TEC134 and permission of Department or Division. TEC221 is recommended. Course Notes: TEC236 may be repeated for a total of three (3) credits.

TEC238
Industry Patternmaking Standards
1 credit(s) 2 period(s) lecture + lab
Study of patternmaking techniques for industry. Specifications for production patterns, labeling methods, and direction cards. Prerequisites: A grade of C or better in TEC225 or permission of Instructor. Course Notes: TEC238 may be repeated for a total of three (3) credit hours.

TEC240
Apparel Production Management
2 credit(s) 3 period(s) lecture + lab
Overview of apparel production management for the global marketplace examining component details of the technical package, tech-pack, which include specifications and costing in the most time-efficient manner. Prerequisites: None. Course Notes: TEC240 may be repeated for a total of six (6) credit hours.

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 CAD pattern design for original patterns, grading, and markers. Create storyboards for product development and personal portfolio. Prerequisites: A grade of C or better in TEC124 and TEC221.

TEC270
Design Studio
2 credit(s) 2 period(s) lab
Design of an original garment for a line/collection. Includes design inspiration, sketches/illustrations, developing pattern for design, selecting fabrics/trims for design, fit and construction of design. Prerequisites: A grade of C or better in TEC225 or TEC226. Course Notes: TEC270 may be repeated for a total of four (4) credit hours.

TEC271AA
Fashion Design Internship
1 credit(s) 5 period(s) lab
Work experience in fashion design business or industry. Work hours are coordinated for a minimum of 80 hours per semester. Supervision and evaluation by internship coordinator. Prerequisites: Permission of Department or Division. Course Notes: TEC271AA may be repeated for a total of three (3) credit hours.

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: A grade of C or better in 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.

THE298AA-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
Purposes, materials, and techniques of makeup for stage and screen. Prerequisites: None.

THF120
Combat for Stage and Screen
3 credit(s) 4 period(s) lecture + lab
Fundamental techniques and terminology of staged combat with and without weapons. Analysis and performance of safely choreographed violence that tells a story for stage and screen. Prerequisites: None. Course Notes: THF130 may be repeated for a total of twelve (12) credit hours.

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: A grade of C or better in 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: A grade of C or better in THF115.

THF219
Advanced Acting for the Camera
3 credit(s) 4 period(s) lecture + lab
Focuses on special technical aspects of advanced acting before a camera. Prerequisites: A grade of C or better in THF209 or permission of Instructor.

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.

THP131
Stage Movement
3 credit(s) 4 period(s) lecture + lab
Movement skills for the actor to develop a flexible, expressive physical instrument. Includes pantomime, physical isolation, and awareness exercises. Prerequisites: None. Course Notes: THP151 may be repeated for a total of six (6) credit hours.

THP151
Theatre for Youth
3 credit(s) 4 period(s) lecture + lab
Principles and techniques of selecting plays, adapting stories, playwriting, directing, designing, producing, and acting in theatre for youth. The course will provide the opportunity to analyze and experience the production process from creating a script to performing a theatre production for a youth audience. Prerequisites: None. Course Notes: THP151 may be repeated for a total of six (6) credit hours.

THP203
Technical Theatre Production
3 credit(s) 6 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.

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: A grade of C or better in 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: A grade of C or better in THP112 or THP220, 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: A grade of C or better in 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.

THP219
Introduction to Puppetry
3 credit(s) 4 period(s) lecture + lab
Use of different types of puppets in a variety of performance settings. Practical experience with diverse audiences. Prerequisites: None.

THP225
Visual Script Analysis
2 credit(s) 2 period(s) lecture
Theory and practice in analysis of dramatic literature for the technician and designer. Emphasis on techniques of script analysis for visual information. Prerequisites: None.

THP226
Theatrical Design: Costuming
3 credit(s) 4 period(s) lecture + lab
Basic techniques involved in researching and designing costumes for the stage. Prerequisites: None.

THP/ART246
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.

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.

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: A grade of C or better in 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.

THP/MUP270
Musical Theatre Workshop
2 credit(s) 5 period(s) lecture + lab
Workshop in the study and performance of Musical Theatre repertoire. Includes audition techniques, talent evaluation and updating portfolio materials. Prerequisites: None. Course Notes: THP270 may be repeated for credit.

THP/COM271
Voice and Diction
3 credit(s) 3 period(s) lecture
Exercises and techniques to free the voice and improve projection, resonance, and articulation. Covers international phonetic alphabet and standard stage speech. Prerequisites: None.

THP/STO285
Creating/Performing Solo/Collaborative Works
3 credit(s) 3 period(s) lecture
Developing, rehearsing, and performing solo and collaborative works for fringe festivals and other storytelling and theatre venues. 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.

VPT – Video Production Technology

VPT/TCM114
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: A grade of C or better in TCM/VPT105 or TCM/VPT108.

WAC – Writing Across the Curriculum

WAC101
Writing Across the Curriculum
3 credit(s) 3 period(s) lecture
Emphasis on the elements of sentence and paragraph structure, the four stages of the writing process for personal-based and expository. Extensive journal entries, editing and revision of written assignments. Prepare and write multi-paragraph essays. Assigned readings, participation in extensive workshops and group work. Prerequisites: None.

WED – Wellness Education

WED120
Massage Therapy: Anatomy Refresher - Upper Body
1 credit(s) 1 period(s) lecture + lab
This course is designed for individuals in the field of massage therapy and provides a review of upper body musculature affecting the neck, shoulder, spine, elbow and wrist joints. Origins and insertions and resistive stretches included. Prerequisites: None. Course Notes: WED120 may be repeated for a total of six (6) credit hours.

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.

WED145
Hand and Foot Massage
1 credit(s) 1 period(s) lecture + lab
History and application of specific pressure points on the hands and feet that have correlation to different body organs and systems. Practice of micromovement techniques with the goal of creating a response throughout the body. Prerequisites: None. Course Notes: WED145 may be repeated for a total of six (6) credit hours.

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.

WED210
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: A grade of C or better in 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
Principles of professionalism, ethics, and legalities. Includes use of terminology related to massage therapy. Applications, indications, and contraindications of the nine strokes of Swedish massage. Study of the human osseous and muscular structure. Emphasis on normal movement patterns, origins, insertions, and function of the muscular system. Prerequisites: Acceptance into the Massage Therapy program or permission of Program Director. 

WED231
Therapeutic Massage Practices II
6 credit(s) 9 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: A grade of C or better in WED230.

WED232
Therapeutic Massage Practices III
6 credit(s) 10 period(s) lecture + lab
Refinement and integration of technical skills, psychosocial competencies, and role identity. Exploration of techniques to assess and facilitate range of motion and function; purpose, benefits, indications, and contraindications of therapeutic massage for specific neuro-musculoskeletal disorders/injury and special populations. Application of massage techniques with therapist’s pre- and post-client evaluations of the client. Adaptation of massage techniques for special populations. Prerequisites: A grade of C or better in WED231. Corequisite: WED250, or permission of Program Director.

WED250
Clinical Practicum
3 credit(s) 6 period(s) lab
Application of fundamental massage techniques. Prerequisites: A grade of C or better in WED231. Corequisites: WED232, and permission of Program Director.

WED250AA
Clinical Practicum: Part I
1.5 credit(s) 3 period(s) lab
Application of fundamental massage techniques. Prerequisites: A grade of C or better in WED231. Corequisites: WED232 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: A grade of C or better in WED250AA.

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.

Questions:

SHARED UNIQUE NUMBER (SUN) SYSTEM
Take the guesswork out of college course transfer in Arizona -- Shared Unique Number (SUN) courses transfer with direct equivalency among Arizona’s public community colleges and three state universities. Plan ahead and work with an academic advisor to ensure the courses taken are required for your academic plan. Look for the SUN icon and number in the class schedule and catalog or search for SUN courses at your college by visiting www.aztransfer.com/sun/

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.
Career Services

Career Services Staff
Alicia Middleton, Director

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
  o How to Choose a Major, Phoenix College brochure that provides a shortened career assessment test based on John Holland’s RIASEC codes.
  o 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 O-NET Online, helps you identify and explore your interests and how they relate to the world of work, exploration of various career options.
  o Jung Typology Test, discover careers and occupations most suitable for your personality type
  o Many more!

• Explore your options
  o 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.
  o 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.
  o Research labor market information, occupations, wages, trends, in-demand careers, companies

• Develop a plan of action
  o Learn what it will take to complete your chosen degree and career goals
  o Develop a plan that is specific in nature, manageable, action-focused, and realistic.
  o Make a timeline, evaluate your progress and make necessary adjustments.
  o Be accountable to your plan and work diligently to complete your goals
  o 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 - Wednesday: 8:00 a.m. - 6:00 p.m.
Thursday: 8:00 a.m. - 4:30 p.m.
Friday: 10:00 a.m. - 4:30 p.m.

Summer semesters:
Monday - Wednesday: 8:00 a.m. - 6:00 p.m.
Thursday: 8:00 a.m. - 4:30 p.m.
Friday: Closed

The Career Services Center is located in the Hannelly Center, Room 113
https://www.phoenixcollege.edu/careerservices
Phone: 602.285.7420 • Fax: 602.285.7951
Career Planning for a Lifetime of Work

To find information on available job-related education and training programs to expand your career opportunities, visit the Phoenix College Career Center. Students are realizing that the Maricopa Community Colleges provide high-quality, affordable education and training to get the skills that employers are seeking.

Whether you are new to college, starting your career, or changing careers, the Maricopa Community Colleges have hundreds of programs to choose from, and can help you find a career path that will expand your career opportunities. In addition, you will learn about the projected salary ranges for jobs in your chosen field, plus lots of other related information.

To explore what career cluster your occupational goal is in, visit O*NET at https://www.onetonline.org/find/career. Then see pages 121-125 of this catalog to find the Maricopa Community College that delivers the program you are interested in pursuing. Remember, we have lots of resources available to you, and you don’t have to make this journey alone.
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<thead>
<tr>
<th>Name</th>
<th>Department/Field</th>
<th>Education Details</th>
</tr>
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<tbody>
<tr>
<td>AMADOR, FRED L.</td>
<td>Counseling</td>
<td>B.A., M.C., Arizona State University.</td>
</tr>
<tr>
<td>AMBROSICH, KORY</td>
<td>Mathematics</td>
<td>B.A., Evergreen State College; M.A.T., Northern Arizona University.</td>
</tr>
<tr>
<td>ARISTIZABAL, CRYSTAL</td>
<td>Nursing</td>
<td>A.A.S., Phoenix College; B.S., M.B.A., University of Phoenix; M.S.N., University of Texas.</td>
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<tr>
<td>BAILEY, TIFFANY</td>
<td>Fine and Performing Arts</td>
<td>M.F.A., Arizona State University.</td>
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<tr>
<td>BEDNAREK, SALINA M.</td>
<td>Nursing</td>
<td>B.S.N., University of Arizona; M.S.N., University of Phoenix; Ed.D., Arizona State University.</td>
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<tr>
<td>BELL, AMY</td>
<td>Biosciences</td>
<td>B.S., University of Arizona; M.Ed., Arizona State University.</td>
</tr>
<tr>
<td>BERGE, ERIC D.</td>
<td>English</td>
<td>B.S.Ed., Northern Arizona University; M.F.A., Lesley University.</td>
</tr>
<tr>
<td>BERRY, TYNISA</td>
<td>Nursing</td>
<td>B.S.N., Grand Canyon University; M.S.N., University of Phoenix.</td>
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<tr>
<td>BOBROW, MOJDEH K.</td>
<td>Criminal Justice, Emergency Response, and Legal Studies</td>
<td>B.S., Pennsylvania State University; J.D., Villanova School of Law.</td>
</tr>
<tr>
<td>BROMLEY, RAYMOND</td>
<td>Liberal Arts</td>
<td>B.A., M.A., Ph.D., University of California at Los Angeles.</td>
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<tr>
<td>BRYAN, TIMOTHY M.</td>
<td>Mathematics</td>
<td>B.S., California State University; San Bernardino; M.A., California State University, Long Beach.</td>
</tr>
<tr>
<td>CARNAHAN, DARRELL</td>
<td>Business</td>
<td>A.A.S., Salt Lake City Community College; B.A., University of Utah; M.S., Arizona State University.</td>
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<td>CARRILLO, JENNIFER</td>
<td>Mathematics</td>
<td>B.S., University of Scranton; M.S., Northern Arizona University.</td>
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<td>CELOZA, ALBERT</td>
<td>Liberal Arts</td>
<td>B.A., M.P.A., University of the Philippines; B.I.S., Northern Arizona University; M.A., University of San Francisco; M.A., Ph.D., Claremont Graduate University.</td>
</tr>
<tr>
<td>CHAPMAN, AMANDA S.</td>
<td>Biosciences</td>
<td>B.S., M.P.H., University of Arizona; Ph.D., University of Phoenix.</td>
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<td>CLARK, LOMAN B.</td>
<td>Counseling</td>
<td>B.S., M.Div., M.C., Arizona State University.</td>
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<td>CORKINS, JAMES A.</td>
<td>Physical Sciences</td>
<td>B.S., M.S., Ph.D., Arizona State University.</td>
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<td>COTTER, ROBIN L.</td>
<td>Biosciences</td>
<td>B.A., DePauw University; Ph.D., University of Nebraska Medical Center.</td>
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<td>DARROW, LaQUERA</td>
<td>Dental</td>
<td>B.S., University of Minnesota-St. Paul; M.Ed., Northern Arizona University.</td>
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<td>DEELA, KRISTINA J.</td>
<td>Dental</td>
<td>A.A.S., Rio Salado College; B.S., Northern Arizona University.</td>
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<td>DOPP, GEORGE DAWSON</td>
<td>Business</td>
<td>B.S., Arizona State University; M.Ed., Northern Arizona University.</td>
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<td>DURY, PAMELA</td>
<td>English</td>
<td>B.S., Texas Tech University; M.A., University of Phoenix; M.Ed., Grand Canyon University.</td>
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<tr>
<td>DWOR, JESSICA</td>
<td>Nursing</td>
<td>A.S., Scottsdale Community College; B.S.N., Grand Canyon University; M.S.N., University of Phoenix.</td>
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<tr>
<td>ELDOT, JEFF</td>
<td>English</td>
<td>B.A., University of Wisconsin; M.A., Northern Arizona University.</td>
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<td>ERSPAMER, ERIK S.</td>
<td>Fine and Performing Arts</td>
<td>B.A., Grand Canyon University; M.S., Arizona State University.</td>
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<td>ETCHART, MARTIN</td>
<td>English</td>
<td>B.A., M.F.A., Arizona State University; Ph.D., The Union Institute.</td>
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<td>FINKENSTADT, PATRICIA M.</td>
<td>Biosciences</td>
<td>B.S., Southeast Missouri State University; Ph.D., Johns Hopkins University School of Medicine.</td>
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<tr>
<td>FRANZ, STEPHANIE MARIN</td>
<td>Nursing</td>
<td>A.S., Pima Community College; B.S.N., Chamberlain College; M.S.N., Grand Canyon University.</td>
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<tr>
<td>FRENCH, ROSE MARIE</td>
<td>Fine and Performing Arts</td>
<td>B.S., B.M., Duquesne University; M.M., D.M.A., Arizona State University.</td>
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<tr>
<td>FULTON, APRIL L.</td>
<td>Nursing</td>
<td>A.A.S., Scottsdale Community College; B.S.N., M.S.N., Western Governors University.</td>
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<tr>
<td>GALLUCCI, MATTHEW J.</td>
<td>Biosciences</td>
<td>B.S., M.S., University of Arizona.</td>
</tr>
</tbody>
</table>
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. (EDDIE) (2006) Liberal Arts
– B.A., B.S., Arizona State University; M.A., City University of New York Graduate Center; J.D., Boalt Hall School of Law, University of California, Berkeley.

GIBNEY, ROBERT M. (2012) English
– B.A., University of Arizona; M.A., Northern Arizona University; Ph.D., University of Nebraska-Lincoln.

GOMPERT, SCOTT A. (2017) Physical Sciences

– B.S., University of Texas.

HAAG, AUDREY (2011) Nursing
– B.S.N., University of Toledo; M.S.N., Grand Valley State University; R.N.

HAMDAN, ABEER M. (2015) Physical Sciences
– B.S., MAS-GIS, M.A., Ph.D., Arizona State University.


– B.S., Embry-Riddle University; M.B.A., University of New Mexico; M.Ed., Duquesne University; M.S., Walden University; J.D., University of Dayton.

HELMSKIND, ROCHELLE T. (2005) Health Professions, Fitness and Wellness
– B.S., Arizona State University; M.S., University of Alabama, Birmingham.

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.

HIRSCH, DIANE J. (2016) Mathematics
– B.A., Fort Lewis College; M.A., Northern Arizona University; M.A., Ottawa University.

HOLDER, DANIEL (2012) Mathematics
– B.S.E.E., M.S.E.E., M.S. (Mathematics), Texas Tech University.

JOHN, HERSHMAN R. (1999) Liberal Arts

KAPOOR, ANIL (2014) Biosciences
– B.S., Pace University; M.S., California State University, Chico; M.B.A., California State University, San Bernardino.

KILDUFF, JOSIAH R. (2017) English

KIMBUEFDE, JOSEPH (2000) English

KING, DOLORES (2005) Business
– B.S., M.B.A., Lindenwood University; Ph.D., Walden University.

LAFFOON, JENNIFER (2006) Fine and Performing Arts

LAMBERT, AMY (2012) Mathematics
– B.S., University of Nebraska; M.Ed., Northcentral University.

LaVOY, KATHLEEN (2013) Dental

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; M.Ed., Northern Arizona University.

LOGVINENKO, DMITRI (2006) Mathematics
– B.S., Moscow State University; M.A., Arizona State University.

LOPEZ, VIOLETTA (2019) Counseling
– B.A., Northern Arizona University; M.A., Argosy University; Ed.D., Arizona State University.


MARFAI, 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.

MARÍN, CHRISTINA (2017) Fine and Performing Arts
– B.S., Northwestern University; Ph.D., Arizona State University.

MARTÍ-SUBIRANA, ANNA (2001) Biosciences
– B.S., Ministry of Education and Science, Spain; M.S., Ph.D., Universitat Autonoma de Barcelona, Spain.

MARTÍN, JAMIE (2011) English
– B.S., University of Texas; M.Ed., Texas State University.

MAYNARD, BRENDALISA (2006) Business
– A.A.S., Alpena Community College; B.S., Ferris State University; M.A., Washington University; SPHR.

McKENZIE, ALVERTA (2005) Applied Technology, Family and Consumer Sciences
– A.A.S., Phoenix College; B.A., University of Phoenix; M.A., Prescott College.
MIHALJEVIC, 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; Ed.D., Nova Southeastern University.

MILLER, JR., KENNETH (2011) Fine and Performing Arts

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. (2014) 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.

MYERS, JULIE A. (2018) Communication, Reading, ASL, and Education
  – B.S., Northern Arizona University; M.M.C., Arizona State University.

  – M.A., M.S.W., Arizona State University; Ph.D., Stanford University.

NELSON, LEXA J. (2010) Nursing
  – B.S.N., Arizona State University; M.S.N., Walden University.

NEUFELDT, JAMES (2004) Biosciences
  – B.S., M.S., University of Wisconsin; M.Ed., Northern Arizona University; M.B.A., Colorado State University.

  – B.S., M.B.A., Western International University; M.S.A., University of Phoenix.

NUNN, MARY (2009) Communication, Reading, American Sign Language, and Education
  – A.A., Jamestown Community College; B.A., M.A., Northern Arizona University.

  – 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.

  – B.S.N., Grand Canyon University; M.S.N., University of Phoenix; Ed.D., Walden University; R.N.

  – 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.

PINEDA, DAVID (1995) English

PODKASKI, JO ANN (2015) Nursing
  – B.S.N., Marian College; M.S.N., University of Phoenix; D.N.P., Arizona State University; R.N.

POWERS, CONSTANCE (2014) Nursing
  – A.S., Mesa-Boswell Community College; B.S.N., M.S.N., Grand Canyon University.

RAFIEI, NOSHIN (2017) Behavioral Sciences
  – B.A. (Psychology), B.A. (Sociology), M.A., Ph.D., Arizona State University.

RANDON, RODY (2002) Communication, Reading, ASL, and Education
  – B.S., M.A., University of Northern Colorado.

REDENDO, ANTHONY P. (2001) Business
  – A.O.S., Culinary Institute of America, B.S., University of Phoenix.

RICHARDSON, DONALD J. (1971) English
  – B.A., M.A., Fort Hays State University.

ROBBINS, JOANNA (2018) English
  – B.A., Arizona State University; M.F.A., University of California, Riverside.

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.

  – 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.

SCHAEFFER, WILLIAM C. (2017) Liberal Arts
  – B.A., University of Massachusetts; M.A., University of Arkansas; Ph.D., Arizona State University.

SCHAMPEL, JOHN (2006) Biosciences
  – B.S., University of Wisconsin; M.S., University of Minnesota.
<table>
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<tr>
<th>Name</th>
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<tr>
<td>SINNER, JAMES E.</td>
<td>(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.</td>
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<td>SOUSA, JAMES</td>
<td>(2002) Mathematics – B.A., Sonoma State University; M.S., California State University at Hayward.</td>
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<td>USHERY, JENNIFER</td>
<td>(2014) Communication, Reading, American Sign Language, and Education – B.A., California State University, San Bernardino; M.A., California State University, Fullerton; and M.A., Arizona State University.</td>
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<td>WANG, YUN DAN</td>
<td>(2016) Physical Sciences – B.S., M.S., St. John’s University.</td>
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<td>WILBURN, JANET</td>
<td>(1995) Dental – A.S., San Diego Mesa College; B.S., Texas Woman’s University; C.D.A.</td>
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</table>

**Emeritus Faculty**

(Years of Service to MCCCD)

<table>
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<tr>
<th>Name</th>
<th>Degrees and Institutions</th>
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<tbody>
<tr>
<td>ANDERSON, KRISTIN</td>
<td>(1981-2008) Dental Hygiene</td>
</tr>
<tr>
<td>AWE, FLORETTA S.</td>
<td>(1960-1983) District Director, Allied Health &amp; Nursing</td>
</tr>
<tr>
<td>Name</td>
<td>Years</td>
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<tr>
<td>-------------------------</td>
<td>----------------------</td>
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<tr>
<td>BAILEY, LOWELL, JR.</td>
<td>1965-1989</td>
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<tr>
<td>BAIZ, LUIS</td>
<td>1970-2001</td>
</tr>
<tr>
<td>BENHAM, MILFORD J.</td>
<td>1946-1983</td>
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<tr>
<td>BOGUE, JAMES W.</td>
<td>1960-1982</td>
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<td>BOSCHULT, J. M.</td>
<td>1973-2004</td>
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<tr>
<td>BOUTELLE, KATHERINE M.</td>
<td>1966-1989</td>
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<tr>
<td>BRATT, MARION</td>
<td>1976-1989</td>
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<td>BRUCE, SHIRLENE M.</td>
<td>1976-1997</td>
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<tr>
<td>BRUNDAGE, JOE R.</td>
<td>1946-1973</td>
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<td>BURSH, EULA RILEY</td>
<td>1980-2006</td>
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<tr>
<td>BUZZARD, CHARLES E.</td>
<td>1965-1989</td>
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<td>CAÑEZ, OFELIA</td>
<td>2001-2007</td>
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<td>CARPENTER, AFTON J.</td>
<td>1963-1983</td>
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<td>CHRISTEN, KAREN</td>
<td>1980-2003</td>
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<td>CLIFTON, LORAYNE</td>
<td>1961-1983</td>
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<td>COFFEEN, CLIFF G.</td>
<td>1962-1987</td>
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<td>COLE, DALE L.</td>
<td>1961-1989</td>
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<td>CULMER, CARITA M.</td>
<td>1971-1999</td>
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<td>CUPS, RICHARD</td>
<td>1982-2014</td>
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<td>DAMERON, LOGAN D.</td>
<td>1966-1992</td>
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<td>DECKER, JESSE SMITH</td>
<td>1946-1973</td>
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<td>DILLARD, GEORGIA</td>
<td>1973-1999</td>
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<td>DIMAS, PETE</td>
<td>1990-2007</td>
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<td>DORR, DEBRA</td>
<td>1996-2015</td>
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<td>DRISCOLL, JOHN EDWARD</td>
<td>1970-1990</td>
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<td>DUTTON, ALLEN A.</td>
<td>1961-1982</td>
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<tr>
<td>EVANS, SETH PARKER</td>
<td>1958-1989</td>
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<td>FERNIE, ROBERT W.</td>
<td>1975-2002</td>
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<td>FIELDEN, JOHN R.</td>
<td>1961-1986</td>
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<td>FITZGERALD, EUGENIA</td>
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POLICHTNO, LOUIS M. (1956-1977) Speech
REPP, ANN (1972-1992) Physical Education
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
TANKERSLEY, CATHERINE M. (1985-2006) Phlebotomy
TATE, PHILIP (1984-2008) Biology
VILLEGAS, AMALIA VALLE (1990-2016) Counseling
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
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
CHAVEZ, ENRIQUETA (1984-2018) Counseling
CIPRIANO, CHERYL (2010-2014) Nursing
COOK, NANCY (2010-2018) Nursing
CRANDALL, JEWELL (retired 1979) Home Economics
DOLPHIN, HARRIET (1977-1989) Art
DRUDING, C. EDWIN (1965-1983) Psychology
DYER-HURDON, MICHELLE M. (2002-2018) Library

Emeritus Administration
(Years of Service to MCCCD)
WALLACE, WILLIAM B. (1961-1989) Dean of Administrative Services
ELLIS, LENORA H. (2017-2019) Health Professions, Fitness, and Wellness
ESCALANTE, DELIA P. (1976-2016) Liberal Arts
EWALD, BONNIE (2001-2009) Nursing
EYGENDAAL, JAN (1978-2001) Dental Assisting
FARRINGTON, ROSEMARIE (1968-1986) Dental Assisting
FAWCETT, IRENE M. (1998-2013) Nursing
GALLOWAY, LAURA (1987-2018) Communication, Reading, ASL, and Education
GARCIA, LINDA (1991-2007) Dental Hygiene
GEDDIS, DIANNE (2002-2019) Health Professions, Fitness and Wellness
GIBNEY, MARIAN (1983-2016) Behavioral Sciences
HABERMAN, JUDITH G. (1990-2006) English
HACKLEMAN, RANDOLPH (1963-1976) Technology
HATHY, SANDRA (2001-2011) Business
HAUGEN, VIVIAN K. (1973-1983) Medical Records Technology
HERRERA, VERONICA (2006-2016) Mathematics
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
JENKINS, BEVERLY (2001-2015) Business
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
LOGAN, ELIZABETH (1998-2019) Health Professions, Fitness and Wellness
LOSICKI, DEBRA A. (2010-2016) Nursing
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
MILLER, LISA (1981-2015) English
OSBORN, APRIL (1977-1997) Dental Hygiene
PEPE, PHILIP (1984-2009) Biosciences
PETERSON, EULA (retired 1973) Nursing
PETTERSON, BONNIE J. (1993-2011) Health Professions, Fitness and Wellness
PHILLIPS, VIVIAN (1965-1975) Business
PRATHER, MARIANNE (1991-2004) Reading
RASSAS, SARA LEYVA (2003-2016) English
RUSSELL, R. KEITH (1961-1980) Physics, Engineering
SAMSON, PATRICK (1983-1993) Medical Records Technology
SANDOVAL, RALPH (2000-2014) Communication, Reading, ASL, and Education
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Phoenix College Administration

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Manager of Public Relations and Marketing . . Erika Keenan, M.S.
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District Governing Board

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Ms. Kathleen Winn, Secretary ............... term expires 12/2022
Mr. Laurin Hendrix ............................... term expires 12/2020
Ms. Jean McGrath ................................. term expires 12/2022
Dr. Tom Nerini .................................... term expires 12/2020
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HARRISON, MYRNA (1988-1993) President
KAKAR, CASANDRA (1995-2019) Vice President, Academic Affairs
MOORE, JAMES D. (1994-2007) Vice President, Administrative Services
SOLLEY, ANNA (1976-2015) President
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MATHEMATICS FLOWCHART
Please consult an advisor. This chart is for reference only.

**For many AAS and CERTIFICATE programs**

- **MAT112**
  - by permission only.
  - Many AAS & certificate programs do not transfer. Please consult with an advisor to determine if this class is right for you.

**MAT08X**
- Basic Math for GPA<2.6 who are not ready for MAT09x.

**MAT108**
- Tutored Math for MAT08x to MAT15x

**For many Liberal Arts/non-STEM AA degree programs**

- **GPA<2.6**
  - MAT08X
  - Basic Math for GPA<2.6 who are not ready for MAT09x.

- **GPA>2.6**
  - MAT140 or MAT145
  - MAT141 or MAT142

- **MAT121/MAT122**
  - Intermediate Algebra may only be taken with department permission to assure proper placement.

- **MAT14X**
  - College Math may be required for an AAS in Business but may not meet transfer requirements. Check with an advisor.

**For Business (ABUS-GR, ABUS-SR)**

- **GPA<2.6**
  - MAT090 or MAT095
  - MAT150 or MAT155
  - MAT212 or MAT213

- **GPA 2.6-2.99**
  - MAT121 or MAT122
  - MAT151 or MAT152
  - MAT212 or MAT213

- **GPA>3.0**
  - MAT151 or MAT152
  - MAT217 or MAT218
  - See Advisor

**For Elementary Education (AAEE) – see the mathematics department for placement**

- **GPA<2.6**
  - MAT140 or MAT145
  - MAT121 or MAT122

- **GPA 2.6-2.99**
  - MAT121 or MAT122
  - MAT141 or MAT142

- **GPA>3.0**
  - MAT151 or MAT152

**For Math, Science, Engineering, and Computer Science**

- **MAT225 is strongly recommended and now required for some majors.**

**GPA<2.6**
- MAT090 or MAT095
- MAT150 or MAT155
- MAT182
- MAT220 or MAT221

**GPA 2.6-2.99**
- MAT121 or MAT122
- MAT151 or MAT152
- MAT182
- MAT225
- See Advisor

**GPA>3.0**
- MAT151 or MAT152

**MAT150 or MAT155**
- MAT182
- MAT212 or MAT213
- MAT217 or MAT218
- See Advisor

**MAT14X**
- College Math may be required for an AAS in Business but may not meet transfer requirements. Check with an advisor.

**MAT206**
- Elements of Statistics: Required for many degrees or professions.
Urban Campus Map

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ART 101-233  M 102-128
B 101-328  NUR 100-242
C 102-326  OSNANX
DB 102-331  OSW 101-206
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Academic Resources
Center for Teaching, Learning & Technology (F)
Fannin Library (L)
Honors Program (HB)
Learning Commons (L)
Tutoring (L)

Campus Life
Allen A Dutton Center for Photography (ART)
Bulpitt Auditorium (AU)
Eric Fischl Gallery (ART)
John Paul Theatre (T)
Sessions Music Hall (M)
Student Life and Leadership (SU)

Off Campus Locations
PC Center for Excellence in Healthcare Education (HE)
3144 N. 7th Avenue
Phoenix, AZ 85013

PC Center for Nursing Excellence (NUR)
3700 N. 3rd Avenue
Phoenix, AZ 85013

Campus Resources
Alumni & Development (OSE)
Bookstore (HB)
Career Services (HC)
Counseling (HC)
Dental Hygiene Clinic (HE)
Disability Resource & Services (HC)
Safety (S)
Student Massage Therapy Clinic (HE)

ASU Transfer Office (HC)
NAU Transfer Office (HC)

Student Support Services
Hannely Enrollment Center (HC)
Admissions & Records
Advisement
Cashier/Fiscal
Financial Aid & Scholarships
International Student Services
Recruitment & Retention
Testing Services
Transfer Services
Veteran Services
Welcome Center

Conference Rooms
Campus Vista (L)
Dome Conference Room (OSS101)
Hacienda (F121)
Student Life (SU)
Willo Conference Room (OSS110)

Athletic Facilities
CAVE (G)
Gymnasium/Fitness Center (G)
Hogan Field at Hoy Stadium
Marich Field
Softball Field

Other Offices
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Copy Services Center (OSNANX)
Event and Fleet Services (G, south)
Information Technology (D)
Operations (O)