## Course Index by Subject

<table>
<thead>
<tr>
<th>Subject</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA –</td>
<td>Advancing Academic Achievement</td>
<td>219</td>
</tr>
<tr>
<td>ACC –</td>
<td>Accounting</td>
<td>219</td>
</tr>
<tr>
<td>AES –</td>
<td>Aerospace Studies</td>
<td>220</td>
</tr>
<tr>
<td>AFR –</td>
<td>African American Studies</td>
<td>220</td>
</tr>
<tr>
<td>AHU –</td>
<td>Arabic Humanities</td>
<td>220</td>
</tr>
<tr>
<td>AIS –</td>
<td>American Indian Studies</td>
<td>220</td>
</tr>
<tr>
<td>AJS –</td>
<td>Administration of Justice Studies</td>
<td>221</td>
</tr>
<tr>
<td>ARC –</td>
<td>Architecture</td>
<td>223</td>
</tr>
<tr>
<td>ARH –</td>
<td>Art Humanities</td>
<td>223</td>
</tr>
<tr>
<td>ART –</td>
<td>Art (Studio)</td>
<td>224</td>
</tr>
<tr>
<td>ART –</td>
<td>Art (Photography)</td>
<td>227</td>
</tr>
<tr>
<td>ASB, ASM – Anthropology</td>
<td>228</td>
<td></td>
</tr>
<tr>
<td>AST –</td>
<td>Astronomy</td>
<td>229</td>
</tr>
<tr>
<td>BIO –</td>
<td>Biology</td>
<td>229</td>
</tr>
<tr>
<td>BPC –</td>
<td>Business-Personal Computers</td>
<td>230</td>
</tr>
<tr>
<td>CAD –</td>
<td>Computer-Aided Drafting</td>
<td>231</td>
</tr>
<tr>
<td>CCS –</td>
<td>Chicana and Chicano Studies</td>
<td>231</td>
</tr>
<tr>
<td>CFS –</td>
<td>Child/Family Studies</td>
<td>231</td>
</tr>
<tr>
<td>CHM –</td>
<td>Chemistry</td>
<td>233</td>
</tr>
<tr>
<td>CIS –</td>
<td>Computer Information Systems</td>
<td>234</td>
</tr>
<tr>
<td>CNS –</td>
<td>Construction</td>
<td>237</td>
</tr>
<tr>
<td>COM –</td>
<td>Communication</td>
<td>237</td>
</tr>
<tr>
<td>CPD –</td>
<td>Counseling and Personal Development</td>
<td>237</td>
</tr>
<tr>
<td>CRE –</td>
<td>Critical Reading</td>
<td>238</td>
</tr>
<tr>
<td>CRW –</td>
<td>Creative Writing</td>
<td>238</td>
</tr>
<tr>
<td>CUL –</td>
<td>Culinary Arts</td>
<td>240</td>
</tr>
<tr>
<td>CWE –</td>
<td>Career Work Experience</td>
<td>242</td>
</tr>
<tr>
<td>DAE –</td>
<td>Dental Assisting Education</td>
<td>242</td>
</tr>
<tr>
<td>DHE –</td>
<td>Dental Hygiene Education</td>
<td>243</td>
</tr>
<tr>
<td>DPR –</td>
<td>Disaster Preparedness and Emergency Response</td>
<td>244</td>
</tr>
<tr>
<td>ECE –</td>
<td>Engineering Science</td>
<td>244</td>
</tr>
<tr>
<td>ECH –</td>
<td>Early Childhood Education</td>
<td>245</td>
</tr>
<tr>
<td>ECN –</td>
<td>Economics</td>
<td>245</td>
</tr>
<tr>
<td>EDU –</td>
<td>Education</td>
<td>246</td>
</tr>
<tr>
<td>EED –</td>
<td>Early Education</td>
<td>246</td>
</tr>
<tr>
<td>EMT –</td>
<td>Emergency Medical Technology</td>
<td>246</td>
</tr>
<tr>
<td>ENG –</td>
<td>English</td>
<td>250</td>
</tr>
<tr>
<td>ENH –</td>
<td>English Humanities</td>
<td>251</td>
</tr>
<tr>
<td>ESL –</td>
<td>English as a Second Language</td>
<td>252</td>
</tr>
<tr>
<td>FON –</td>
<td>Food and Nutrition</td>
<td>254</td>
</tr>
<tr>
<td>FRE –</td>
<td>French</td>
<td>254</td>
</tr>
<tr>
<td>FSC –</td>
<td>Fire Science Technology</td>
<td>254</td>
</tr>
<tr>
<td>GBS –</td>
<td>General Business</td>
<td>256</td>
</tr>
<tr>
<td>GCU –</td>
<td>Cultural Geography</td>
<td>257</td>
</tr>
<tr>
<td>GLG –</td>
<td>Geology</td>
<td>257</td>
</tr>
<tr>
<td>GPH –</td>
<td>Physical Geography</td>
<td>258</td>
</tr>
<tr>
<td>HCC –</td>
<td>Health Care Curriculum</td>
<td>258</td>
</tr>
<tr>
<td>HCR –</td>
<td>Health Care Related</td>
<td>259</td>
</tr>
<tr>
<td>HES –</td>
<td>Health Science</td>
<td>259</td>
</tr>
<tr>
<td>HIM –</td>
<td>Health Information Management</td>
<td>260</td>
</tr>
<tr>
<td>HIS –</td>
<td>History</td>
<td>262</td>
</tr>
<tr>
<td>HST –</td>
<td>Histologic Technology</td>
<td>263</td>
</tr>
<tr>
<td>HUM –</td>
<td>Humanities</td>
<td>264</td>
</tr>
<tr>
<td>IBS –</td>
<td>International Business</td>
<td>264</td>
</tr>
<tr>
<td>INT –</td>
<td>Interior Design</td>
<td>264</td>
</tr>
<tr>
<td>IPP –</td>
<td>Interpreter Preparation Program</td>
<td>265</td>
</tr>
<tr>
<td>LAS –</td>
<td>Paralegal Studies</td>
<td>267</td>
</tr>
<tr>
<td>LBA –</td>
<td>Laboratory Assisting</td>
<td>268</td>
</tr>
<tr>
<td>LDR –</td>
<td>Leadership</td>
<td>269</td>
</tr>
<tr>
<td>MAS –</td>
<td>Medical Assisting</td>
<td>269</td>
</tr>
<tr>
<td>MAT –</td>
<td>Mathematics</td>
<td>270</td>
</tr>
<tr>
<td>MDL –</td>
<td>Medical Laboratory Science</td>
<td>273</td>
</tr>
<tr>
<td>MGT –</td>
<td>Management</td>
<td>275</td>
</tr>
<tr>
<td>MHL –</td>
<td>Music: History/Literature</td>
<td>276</td>
</tr>
<tr>
<td>MIS –</td>
<td>Military Science</td>
<td>276</td>
</tr>
<tr>
<td>MKT –</td>
<td>Marketing</td>
<td>277</td>
</tr>
<tr>
<td>MMT –</td>
<td>Multimedia Technology</td>
<td>277</td>
</tr>
<tr>
<td>MTC –</td>
<td>Music: Theory/Composition</td>
<td>278</td>
</tr>
<tr>
<td>MUC –</td>
<td>Music: Commercial/Business</td>
<td>279</td>
</tr>
<tr>
<td>MUE –</td>
<td>Music Education</td>
<td>280</td>
</tr>
<tr>
<td>MUP –</td>
<td>Music: Performance</td>
<td>280</td>
</tr>
<tr>
<td>NAV –</td>
<td>Navajo</td>
<td>281</td>
</tr>
<tr>
<td>NUR –</td>
<td>Nursing Science: Basic</td>
<td>281</td>
</tr>
<tr>
<td>NVH –</td>
<td>Navajo Humanities</td>
<td>282</td>
</tr>
<tr>
<td>PAD –</td>
<td>Public Administration</td>
<td>282</td>
</tr>
<tr>
<td>PED –</td>
<td>Physical Education</td>
<td>282</td>
</tr>
<tr>
<td>PHI –</td>
<td>Philosophy</td>
<td>283</td>
</tr>
<tr>
<td>PHS –</td>
<td>Physical Science</td>
<td>283</td>
</tr>
<tr>
<td>PHY –</td>
<td>Physics</td>
<td>283</td>
</tr>
<tr>
<td>PLC –</td>
<td>Physical Education</td>
<td>283</td>
</tr>
<tr>
<td>PLB –</td>
<td>Phlebotomy</td>
<td>283</td>
</tr>
<tr>
<td>POS –</td>
<td>Political Science</td>
<td>284</td>
</tr>
<tr>
<td>PSY –</td>
<td>Psychology</td>
<td>285</td>
</tr>
<tr>
<td>RDG –</td>
<td>Reading</td>
<td>286</td>
</tr>
<tr>
<td>REC –</td>
<td>Recreation</td>
<td>286</td>
</tr>
<tr>
<td>REL –</td>
<td>Religious Studies</td>
<td>287</td>
</tr>
<tr>
<td>SBS –</td>
<td>Small Business Management</td>
<td>287</td>
</tr>
<tr>
<td>SBU –</td>
<td>Society and Business</td>
<td>287</td>
</tr>
<tr>
<td>SLG –</td>
<td>Sign Language</td>
<td>287</td>
</tr>
<tr>
<td>SOC –</td>
<td>Sociology</td>
<td>288</td>
</tr>
<tr>
<td>SPA –</td>
<td>Spanish</td>
<td>289</td>
</tr>
<tr>
<td>SPH –</td>
<td>Spanish Humanities</td>
<td>290</td>
</tr>
<tr>
<td>SSH –</td>
<td>Sustainability/Social Sciences and Humanities</td>
<td>290</td>
</tr>
<tr>
<td>SWU –</td>
<td>Social Work</td>
<td>290</td>
</tr>
<tr>
<td>TCM –</td>
<td>Telecommunications</td>
<td>291</td>
</tr>
<tr>
<td>TEC –</td>
<td>Textiles and Clothing</td>
<td>291</td>
</tr>
<tr>
<td>THE –</td>
<td>Theatre</td>
<td>293</td>
</tr>
<tr>
<td>THF –</td>
<td>Theatre and Film</td>
<td>293</td>
</tr>
<tr>
<td>THP –</td>
<td>Theatre Performance/Production</td>
<td>294</td>
</tr>
<tr>
<td>VPT –</td>
<td>Video Production Technology</td>
<td>295</td>
</tr>
<tr>
<td>WED –</td>
<td>Wellness Education</td>
<td>295</td>
</tr>
<tr>
<td>WST –</td>
<td>Women’s Studies</td>
<td>296</td>
</tr>
</tbody>
</table>

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

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](http://www.phoenixcollege.edu>Class Search> Class Schedule).
AAA – Advancing Academic Achievement

AAA/COD150
Creating College Success
3 credit(s) 3 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/COD150A
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/COD150AA
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/COD150AB
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/COD150AC
Educational and Career Planning
1 credit(s) 1 period(s) lecture
Emphasis on increasing student success through educational and career planning. Prerequisites: None.

ACC – Accounting

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

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

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

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

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

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

ACC212
Managerial Accounting
3 credit(s) 3 period(s) lecture
Development and analysis of accounting information for managerial planning and control. Prerequisites: A grade of “C” or better in (ACC111 and ACC112), or ACC211, and (CIS105 or permission of department/division).

ACC216
Fraud Examination
3 credit(s) 3 period(s) lecture
Fundamental theory of fraud examination methodology to detect and prevent accounting fraud. Prerequisites: A grade of C or better in (ACC230 or ACC112 or ACC211) or permission of Department or Division.

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

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

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

ACC260
Certified Bookkeeper (CB) Preparation
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: ACC111 or ACC211 or (bookkeeping experience and permission of Instructor).

ACC270A
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: ACC270A may be repeated for a total of four (4) credits.

ACC270B
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: ACC270B may be repeated for a total of four (4) credits.

ACC270C
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: ACC270C may be repeated for a total of six (6) credits.
AES – Aerospace Studies

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

AES103
Air Force Today II
2 credit(s) 2 period(s) lecture and lab
Introduction to U.S. Air Force and AFROTC. Topics include: the Air Force mission and organization, customs and courtesies, officer opportunities, officerism, 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, officerism, 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.

AFR – African American Studies

AFR/ASB/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.

AHU – Arabic Humanities

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.

AIS – American Indian Studies

AIS101
Survey of American Indian Issues
3 credit(s) 3 period(s) lecture
Introduction to critical issues related to American Indian peoples. Examines cultural, political, economic, educational, social, and environmental issues. Focuses on contemporary issues and factors influencing American Indian communities. Prerequisites: None.

AIS/SOC105
Introduction to American Indian Studies
3 credit(s) 3 period(s) lecture
Introduction to political, economic, and social structures of American Indian Nations. Provides overview of American Indian tribal cultures prior to contact, the impact of European contact, and the influence of western social systems on tribal nations. Prerequisites: None.

AIS110
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/HIS140
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.

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 124-126 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 the 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: 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 SUNG
AJS 1101
Introduction to Criminal Justice
3 credit(s) 3 period(s) lecture
An introduction to crime and society’s responses to it. Examines the nature and causes of crime, the criminal law, constitutional safeguards, and the organization and operation of the criminal justice system including the police, courts, jails, prisons, probation and parole departments, and community corrections agencies. Covers the history of the criminal justice system, terminology and career opportunities. Prerequisites: None.

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

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

AJS110
Law and Legal Review I
3 credit(s) 3 period(s) lecture
In-depth study of the Arizona laws governing arrest by peace officers, as well as an intensive study of the Arizona substantive criminal law code (ARS Title 13). Focuses on specific sections of ARS Title 4 and ARS Title 8, as they apply to peace officers in Arizona. Partially fulfills the Arizona POST Board requirements for Proficiency Skills Academy attendance. Prerequisites: None.

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. 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.
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, and recordings; corpus delicti; opinion evidence, circumstantial evidence, evidential privileges. Required in AJS curriculum. Prerequisites: None.

AJS205
Criminal Justice Report Writing
3 credit(s) 3 period(s) lecture
Characteristics of reports and field notes, and the importance and uses of each. Form, style, and procedures for writing various reports, including elements of composition, required substance, proper and improper conclusions, and descriptions of persons and property. Prerequisites: None.

AJS210
Constitutional Law
3 credit(s) 3 period(s) lecture
An examination of the U. S. Constitution as it relates to the law enforcement function. Includes statutory law and judicial decisions governing the areas of arrest, search and seizure, interrogations and confessions, self-incrimination and other constitutional guarantees. Required in AJS curriculum. Prerequisites: None.

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

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

AJS214
Evidence Technology/Photography
3 credit(s) 3 period(s) lecture
The use of photography and other aids in identification and preservation of evidence such as fingerprints, footprints and impressions. Techniques in crime scene and traffic accident photography. Prerequisites: None.

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

AJS216
Criminalistics: Biological Evidence
3 credit(s) 3 period(s) lecture
The scientific analysis and examination of biological evidence with emphasis on collection and preservation of evidence. Topics discussed include blood, drugs, blood alcohol, hairs and fibers, and topics of special interest in criminalistics. Prerequisites: None.

AJS218
Evidence Technology/Photography
3 credit(s) 3 period(s) lecture
Discussion of photographic techniques, photographing crime scenes, accident photos, macro and micro photography, filters, and preparation for court presentation using selected simulations. 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: AJS213 and (AJS214 or AJS241) or permission of Instructor.

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

AJS260
Procedural Criminal Law
3 credit(s) 3 period(s) lecture
Concerned with the understanding of procedural criminal law. Examines the rationale underlying major court holdings, the procedural requirements that stem from these holdings, and their effect on the daily operations of the criminal justice system. Prerequisites: None.

AJS270
Community Relations
3 credit(s) 3 period(s) lecture
Examination, recognition and understanding of community problems; community action programs; methods of coping with human behavior, victimology, conflict, and communication; ethnic and minority cultures and environments; the community and relationships with the criminal justice system. Prerequisites: None.

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

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

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

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

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

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 through study of painting, sculpture, architecture, design, photography, and decorative arts. Emphasis on contemporary topics and cultural diversity in the arts. Prerequisites: None.

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

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

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

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

ARH115
History of Photography
3 credit(s) 3 period(s) lecture
Survey of history of photography from beginning to present. Emphasizes medium's impact upon society and other visual arts. Technical developments, aesthetic concerns, and individual photographers studied. Prerequisites: None.
ARH118
Introduction to Chinese Art
3 credit(s) 3 period(s) lecture + lab
Explores Chinese philosophy, symbolism, history and religions that underlie the choice of subject matter and life forms in Chinese art. Uses Chinese bamboo brush, ink and rice paper to study Chinese calligraphy and traditional subjects for painting. Prerequisites: None.

ART – (Studio)

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

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

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. Emphasis on use of Chinese techniques in mixed media works. Prerequisites: None. Course Notes: ART110 may be repeated for credit.

ART111 SUN ART 1111
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 SUN ART 1112
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 SUN ART 1115
Three-Dimensional Design
3 credit(s) 6 period(s) lecture + lab
Fundamental principles of three-dimensional design. Prerequisites: None.

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

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

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

ART120
Inking for Comic and Sequential Art
3 credit(s) 3 period(s) lecture + lab
Development of inking materials and techniques used in sequential art. Emphasis on the types of tools used in the industry and the various means of employing them. Understanding the duties of the inker and the process of computer finishing. Prerequisites: None.

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

ART150
Digital Storytelling
3 credit(s) 6 period(s) lecture + lab
Enables students to find and develop their personal stories. Emphasis on the use of digital technology to create, edit, produce and archive a digital story. Prerequisites: None.

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

ART152
Sculpture II
3 credit(s) 6 period(s) lecture + lab
Continuation of ART151 with emphasis on control of sculptural media. Prerequisites: ART151.
ART105  
Glass Fusing and Slumping I  
3 credit(s) 6 period(s) lecture + lab  
Introduction to the basics involved in glass fusing and slumping. The concepts of glass, glass fusing, and glass slumping will be covered with hands-on experience using a variety of techniques to create finished glass projects such as jewelry, dishes, frames, and door bells. Prerequisites: None.  
Course Notes: ART155 may be repeated for a total of twelve (12) credits.

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

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

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

ART165  
Watercolor Painting I  
3 credit(s) 6 period(s) lecture + lab  
Transparent and Gouache watercolor painting. Prerequisites: (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: 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: (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: ART167 or permission of Instructor.

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

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

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

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

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

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

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

ART183  
Computer Aided Graphic Arts I  
3 credit(s) 6 period(s) lecture + lab  
Graphic design use in microcomputer; black and white graphics, standard and color brushes, lines, shapes, area fills and fonts. Application to illustration, advertising graphics, typography and video interaction. Prerequisites or Corequisites: ART100 or permission of Instructor.
ART/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: 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, nurbs, and polygons. 3-D translation, shading, materials, and rendering.  
Prerequisites: 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 (HTML), digital text, and graphics. Discussion of color, proportion, typography and Web-specific design principles. Emphasizes design of cross-browser compatible interfaces that optimize usability, accessibility and browser interoperability.  
Prerequisites: ART110, 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: ART100, or permission of Instructor.  
CIS133DA recommended.

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

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: 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: ART111 or ART187 or MMT188.

ART192  
Advanced Web Presentation Design  
3 credit(s) 6 period(s) lecture + lab  
Advanced interactive application and training for Web designers and graphic artists using Quark, Illustrator, Photoshop, HTML Flash, Dreamweaver and Digital Video site optimization techniques. Development of design concepts for web pages that communicate and deliver Web content creatively.  
Prerequisites: ART190 or permission of Instructor.  
ART180AM and ART180AN suggested but not required.

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: 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: 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: ART/ MMT185.

ART/THP246  
Introduction to Digital 3D Fabrication Tools  
3 credit(s) 6 period(s) lecture + lab  
Introduction to concepts and application of computer visualization, modeling, and rapid prototyping for interdisciplinary arts. Students will design sculptures applying 3D computer modeling techniques, rapid prototyping, and other available digital output devices to produce solid models.  
Prerequisites: None.

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

ART255  
Art Marketing  
3 credit(s) 3 period(s) lecture  
Career goals, presentation of artist and art work (portfolio, resume, business cards, catalog), pricing and selling works, networking, establishing a studio, promotion and publicity, writing press releases, proposal writing, business ethics, artist rights, copyright law, contracts and agreements, royalties, record keeping, and communication skills.  
Prerequisites: None.
ART255AA  
Self Promotion  
1 credit(s) 1 period(s) lecture  
Career goals, presentation of artist, communication skills, keeping files and records, developing self-promotional materials. Prerequisites: None.

ART255AB  
The Portfolio  
1 credit(s) 1 period(s) lecture  
Choosing the right pieces to include, presenting art work, developing the portfolio. Prerequisites: None.

ART256  
Glass Fusing and Slumping III  
3 credit(s) 6 period(s) lecture + lab  
Further study in the area of glass fusing and slumping with emphasis on advanced techniques and design considerations, such as, plates designed using different techniques, weaving or strip glass, and combining previous techniques to create projects. Prerequisites: ART156. Course Notes: ART256 may be repeated for a total of fifteen (15) credits.

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

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

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: ART275.

ART/ADA283  
Computer Aided Graphic Arts II  
3 credit(s) 6 period(s) lecture + lab  
Advanced skill development of graphic design through use of microcomputer. Emphasis on computer design and techniques for producing all types of camera-ready advertising art for printed matter and package design. Includes illustration, typography, photo imaging, and color separation. Prerequisites: ADA/ART183 or permission of Instructor.

ART/ADA285  
Multipresentation Graphics  
3 credit(s) 6 period(s) lecture + lab  
Computer aided design and development of a company identity program; development of a videotape demonstrating market impact; preparation of a portfolio of completed art and graphics. Prerequisites: ART100 or ART169 or permission of Instructor.

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

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

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

ART/ADA289AA-AC  
Special Projects  
1-3 credit(s) 1-3 period(s) lab  
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: None.

ART – (Photography)  

ART131  
Photography I  
3 credit(s) 6 period(s) lecture + lab  
Basic photographic principles and techniques. Basic camera functions and controls. Experience in the image-making process by creating and editing photographs for various display environments. Introduction to the photographic aesthetic and photography’s role in society. Prerequisites: None. Course Note: Camera required.

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

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

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: ART133 or permission of Instructor.
ART135
Photожournalism I
3 credit(s) 6 period(s) lecture + lab
Basic technical knowledge of photographic
process as applied by mass media.
Prerequisites: ART131 or permission of
Instructor.

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

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

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

ART140
Portrait Photography
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:
ART131 or ART142 or permission of
Instructor. Course Notes: 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:
ART142 or permission of Instructor. Course Note: Semi-adjustable,
high-resolution digital camera is required.

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

ART234
Color Photography I
3 credit(s) 6 period(s) lecture + lab
Basic principles of color theory, camera and
input and output techniques using slide film
or digital photography. Prerequisites:
ART131 or ART142 or permission of
Instructor. Course Note: Film or digital
camera required.

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

ART237
Fashion Photography
3 credit(s) 6 period(s) lecture + lab
Practical application of photographic
techniques within the fashion industry.
Includes the photographing of models,
garments, and accessories. Prerequisites:
ART131 or ART142 or permission of
Instructor. Course Notes: 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,
etnicism, prejudice, discrimination,
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:
Old 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
lifestyles, the rise of cities and complex
societies, political strife across different
cultures and the forces which tend to
fragment societies. Examples drawn from Africa, Asia, Europe,
the Pacific Islands, and Australia. Prerequisites: None.
AST– Astronomy

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: None. May accompany AST101.

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

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

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

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

BIO – Biology

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

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

BIO107 Introduction to Biotechnology
4 credit(s) 6 period(s) lecture and lab
Introduction to biotechnology and its global impact on society. Covers applications, laboratory techniques, limitations and the international economic benefits, risks, and legal and moral issues associated with biotechnology. Prerequisites: None.

BIO108 Plants and Society
4 credit(s) 6 period(s) lecture and lab
A global study of plants in relation to humans; as a source of food, fiber, drugs, and other products; for aesthetic value, survival, and energy. Prerequisites: None.

BIO109 Natural History of the Southwest
4 credit(s) 6 period(s) lecture and lab
Study of the common plants and animals of the Southwest including their distribution, adaptation, behavior, and ecology. Introduction to basic field and laboratory techniques used in the study of natural history. Specific field problems presented dealing with plant and animal analysis and ecological interrelationships. Prerequisites: None. Course Note: Field trips may be required.

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

BIO156 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 RDG091 or higher or eligibility for CRE101 as indicated by appropriate reading placement test score. One year of high school or one-semester of college level 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  BIO 1181
General Biology (Majors) I
4 credit(s) 6 period(s) lecture and lab
The study and principles of structure and function of organisms at the molecular and cellular levels. A detailed explanation of the chemistry of life, the cell, and genetics. Prerequisites: Grade of C or better in RDG091 or higher or eligibility for CRE101 as indicated by appropriate reading placement test score. One year of high school or one semester of college-level biology and chemistry is strongly recommended.

BIO182  BIO 1182
General Biology (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  BIO 2201
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 RDG091 or higher or eligibility for CRE101 as indicated by reading placement test score. CHM130 or higher or one year of high school chemistry suggested but not required.

BIO202  BIO 2202
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  BIO 2205
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 RDG091 or higher or eligibility for CRE101 as indicated by reading placement test score. CHM130 or higher or one year of high school chemistry suggested but not required.

BIO214
Biotechnology Internship
4 credit(s) 4 period(s) lecture
Internship experience in a biotechnology laboratory. Requires 320 clock hours in the laboratory setting. Setting, achieving, and evaluating goals for hands-on learning experience in a biotechnology laboratory. Development of skills and knowledge needed to work in a biotechnology laboratory. Prerequisites: Permission of program director. Corequisites: BIO212AC.

BIO215
Biotechnology Internship
3 credit(s) 3 period(s) lab
Internship experience in a biotechnology laboratory. Setting, achieving, and evaluating goals for hands-on learning experience in a biotechnology laboratory. Development of skills and knowledge needed to work in a biotechnology laboratory. Prerequisites: BIO208 or BIO209 or BIO212AA or BIO212BA or BIO213 completed within the last year) and permission of Program Director. Course Note: BIO215 requires 240 clock hours in the laboratory setting. BIO215 may be repeated for a total of six (6) credit hours.

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

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 BIO100, or BIO181, or permission of Instructor.

BIO296WA, 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.

BIO298AA, 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. Individualized advanced applications of software selected to solve specific problems on the personal computer. 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: 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.

CCS298AA-AC
Special Projects
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: None.

CFS – Child/Family Studies

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.

CFS176 or 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.

CFS212  
Creative Activities for the Young Child  
3 credit(s) 3 period(s) lecture  
(Not offered every semester)  
Children’s development in play, creativity and the arts. Focus on learning environment for creative expression. Field experiences with children in groups required.  
Prerequisites: CFS176 or ECH176 or permission of instructor.

CFS232  
Developing Child: Theory-Practice, Birth-Prekindergarten  
3 credit(s) 3 period(s) lecture  
Understanding and working with young children, birth through prekindergarten. Development of young children’s physical, emotional, social, cognitive and linguistic characteristics. Special focus on children from diverse multicultural backgrounds. Typical and atypical development. Implications for teachers and parents. Includes opportunities for observations and curriculum planning.  
Prerequisites: None.

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: 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.

See pages 124-126 for Instructional Department details.
CFS/ECH 271
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/ECH 275
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.

CFS 277
Adult-Adolescent Interaction
3 credit(s) 3 period(s) lecture 
(Not offered every semester)
Provides 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.

CFS 281
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.

CFS 283
Multicultural Early Child Education
1 credit(s) 1 period(s) lecture 
(Not offered every semester)
Practical early childhood classroom applications for a diverse ethnic population, including integration of multicultures into the classroom, facilitation of a second language acquisition, and practical teaching strategies which are also developmentally appropriate. Prerequisites: CFS/ECH 176.

CFS/ECH 287
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.

CFS 290 AA
Child Abuse: Identification and Reporting in Child Care Settings
1 credit(s) 1 period(s) lecture 
(Not offered every semester)
Identification, recording, and reporting by child care providers of sexual abuse, physical abuse, or neglect of young children. Prerequisites: None.

CHM – Chemistry

CHM 090
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 CHM 130. Prerequisites: None.

CHM 107 and 107 LL
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 CHM 107 LL is required to meet the Natural Science requirement. Prerequisites: None. LAB: Laboratory experience in support of CHM 107. Prerequisites or Corequisites: CHM 107.

CHM 130 and 130 LL SDWN
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 ICHM 090 or MAT 090 or MAT 091 or MAT 092 or (MAT 103 AA and MAT 103 AB) or higher or satisfactory score on math placement exam and (RDG 091 or higher or eligibility for CRE 101 as indicated by appropriate reading placement test score). LAB: Laboratory experience in support of CHM 130. Prerequisites or Corequisites: A grade of "C" or better in CHM 130.

CHM 138 and 138 LL
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 CHM 090, or one year of high school chemistry with a grade of "C" or better, or MAT 092, or satisfactory score on placement exam. LAB: Laboratory experience in support of CHM 138, Chemistry for Allied Health. Prerequisites: None. Corequisites: CHM 138.

CHM 150
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 (CHM 130 and CHM 130 LL), or CHM 130 AA, or one year of high school chemistry taken within the last five years] and (MAT 151 or higher level mathematics course). Completion of all prerequisites within the last two years is recommended. Course Note: Student may receive credit for only one of the following: CHM 150 and CHM 151 LL, or CHM 151 and CHM 151 LL, or CHM 150 AA, or CHM 151 AA.

CHM 151 and 151 LL SDWN
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 (CHM 130 and CHM 130 LL), or CHM 130 AA, or one year of high school chemistry taken within the last five years] and (MAT 151 or higher level mathematics course). Completion of all prerequisites within the last two years is recommended. Course Notes: Student may receive credit for only one of the following: CHM 150 and CHM 151 LL, or CHM 151 and CHM 151 LL, or CHM 150 AA, or CHM 151 AA.
CHM152 and 152LL\textsuperscript{sun} CHM 1152 General Chemistry II and Lab 4 credit(s) 6 period(s) lecture and lab
LEC: A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics. \textbf{Prerequisites:} A grade of "C" or better in CHM150 or CHM151L, or CHM150AA, or CHM151AA. Course Notes: Completion of prerequisites within the last two years recommended.

LAB: Laboratory experience in support of CHM152. \textbf{Prerequisites or Corequisites:} A grade of "C" or better in CHM152. Course Notes: Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA.

CHM230 and 230LL\textsuperscript{sun} CHM 2230 Fundamental Organic Chemistry and Lab 4 credit(s) 6 period(s) lecture and lab
LEC: Chemistry of representative groups of organic compounds, emphasizing biological applications. \textbf{Prerequisites:} (CHM130 and CHM130L), or (CHM150 or CHM151 and CHM151L). Completion of (CHM130 and CHM130L) or (CHM150 or CHM151 and CHM151L) within the last two years recommended. \textbf{Course Notes:} CHM230 course content is designed to meet the needs of students in such areas as agriculture, home economics, nursing, pre- physician assistant, and physical education, among others. \textbf{LAB:} Laboratory experience in support of CHM230. \textbf{Prerequisites or Corequisites:} CHM130L, or CHM151LL, or equivalent.

CHM235 and 235LL\textsuperscript{sun} CHM 2235 General Organic Chemistry I and Lab 4 credit(s) 7 period(s) lecture and lab
LEC: Rigorous introduction to chemistry of carbon-containing compounds. Reaction mechanisms and recent methods of synthesis emphasized. \textbf{Prerequisites:} A grade of "C" or better in (CHM152 and CHM152L), or CHM152AA, or (CHM154 and CHM154L). Completion of prerequisites within the last two years recommended. \textbf{LAB:} Laboratory experience in support of CHM235. \textbf{Prerequisites or Corequisites:} A grade of "C" or better in CHM235. Completion of prerequisites within the last two years recommended.

CHM236 and 236LL\textsuperscript{sun} CHM 2236 General Organic Chemistry II and Lab 4 credit(s) 7 period(s) lecture and lab
LEC: Study of chemistry of carbon-containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized. \textbf{Prerequisites:} A grade of "C" or better in CHM235 and CHM235LL. Completion of prerequisites within the last two years recommended. \textbf{LAB:} Laboratory experience in support of CHM236. \textbf{Prerequisites or Corequisites:} A grade of "C" or better in CHM236. Completion of prerequisites within the last two years recommended.

CHM238 and 238LL General Organic Chemistry IIIB and Lab 5 credit(s) 9 period(s) lecture and lab
LEC: Alternate to CHM236. Study of chemistry of carbon-containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized. Recommended for chemistry, chemical engineering and mining engineering majors. \textbf{Prerequisites:} CHM235 and CHM235LL or equivalent. \textbf{LAB:} Laboratory experience in support of CHM238. \textbf{Prerequisites or Corequisites:} CHM235L or equivalent.

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. \textbf{Prerequisites:} None.

CIS – Computer Information Systems

\textbf{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. \textbf{Prerequisites:} None.

\textbf{CIS1105} Sun\textsuperscript{sun} CIS 1120 Survey of Computer Information Systems 3 credit(s) 4 period(s) lecture + lab
Overview of computer technology, concepts, terminology, and the role of computers in business and society. Discussion of social and ethical issues related to computers. Use of word processing, spreadsheet, database, and presentation software. Includes uses of application software and the Internet for efficient and effective problem solving. Exploration of relevant emerging technologies. \textbf{Prerequisites:} None.

\textbf{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. \textbf{Prerequisites:} None.

\textbf{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. \textbf{Prerequisites:} None.

\textbf{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. \textbf{Prerequisites:} None. \textbf{Course Notes:} CIS114DE may be repeated for a total of nine (9) credit hours.

\textbf{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. \textbf{Prerequisites:} None. \textbf{Course Notes:} CIS117DM combines the contents of CIS117AM, CIS117BM and CIS117CM. CIS117DM may be repeated for a total of nine (9) credit hours.

\textbf{CIS118AB} PowerPoint: Level I 1 credit(s) 2 period(s) lecture + lab
Use of PowerPoint software to produce professional-quality presentation visuals. \textbf{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.

CIS122AE
Windows Operating System: Level II
1 credit(s) 2 period(s) lecture + lab
Additional capabilities of the Windows program that configure devices and customize the presentation of the operating system. System tools, control panel utilities, the My Computer, Network Neighborhood, and Microsoft Exchange desktop icons. Other helpful utilities presented. Prerequisites: CIS121AE or permission of Instructor.

CIS126AA
UNIX Operating System: Level I
1 credit(s) 2 period(s) lecture + lab
Use of the UNIX operating system: system components, built-in commands, files and directories, editors, and UNIX Shell and command lines. Prerequisites: None.

CIS126DA
UNIX Operating System
3 credit(s) 4 period(s) lecture + lab
Use of a UNIX operating system including system components, built-in commands, files, and directories, editors, and UNIX shell and command lines. Installation, configuration, and maintenance of a UNIX operating system. Create scripts and batch files, and maintain system communications. 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.

CIS133DA
Internet/Web Development Level I
3 credit(s) 4 period(s) lecture + lab
Overview of the Internet/WWW and its resources. Hands-on experience with various Internet/WWW communication, resource discovery, and information retrieval tools. Web page development also included. Prerequisites: None.

CIS150
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: CIS105, or permission of Instructor.

CIS150AB
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: 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: CIS105, or permission of Instructor.

CIS162AC
Visual C++: Level I
3 credit(s) 4 period(s) lecture + lab
Introduction to Visual C++ programming including general concepts, program design, development, data types, operators, expressions, flow control, functions, classes, input and output operations, debugging, structured programming, and object-oriented programming. Prerequisites: CIS105 or permission of Instructor.

CIS166
Web Scripting/Programming
3 credit(s) 4 period(s) lecture + lab
Software development for Web sites, including client-side script and Common Gateway Interface (CGI) scripting. Covers Web-based transaction processing and use of databases in conjunction with the Web. Includes security issues. Prerequisites: CIS133CA or CIS133DA 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: CIS133CA or CIS133DA or permission of Instructor.

CIS166AC
Web Scripting with Active Server Pages (ASP).NET
3 credit(s) 4 period(s) lecture + lab
Introduction to web scripting using Microsoft’s ASP.Net (Active Server Pages). Web application development using Hypertext Markup Language (HTML), ASP, Net Web Forms, programming logic, and Structured Query Language (SQL). Prerequisites: (CIS133CA or CIS133DA) and (CIS159 or CIS162AD)) or permission of Instructor.

CIS166AE
Web Scripting with PHP: Hypertext Preprocessor (PHP)
3 credit(s) 4 period(s) lecture + lab
Introduction to web scripting with PHP (PHP: Hypertext Preprocessor). Web application development using Hypertext Markup Language (HTML), PHP, programming logic, and Structured Query Language (SQL). Prerequisites: CIS133CA or CIS133DA or permission of Instructor.
CIS190  
Introduction to Local Area Networks  
3 credit(s) 4 period(s) lecture + lab  
Overview of local area networks. Emphasis on the elements of a local area network, current issues and products, and use of a local area network. Include terminology, hardware and software components, connectivity, resource monitoring and sharing, electronic mail and messaging, and security issues. Prerequisites: CIS105, or permission of Instructor.

CIS224  
Project Management Microsoft Project for Windows  
3 credit(s) 4 period(s) lecture + lab  
Introduction to project management concepts while working with MS Project to solve complex project management networks, including creating Gantt and PERT charts, tracking project progress, planning for restrictions, and integrating MS Project with other software packages such as Excel, Word, Powerpoint, and cc Mail. Prerequisites: None.

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

CIS225AB  
Object-Oriented Analysis and Design  
3 credit(s) 4 period(s) lecture + lab  
Methodologies and notations for fundamental object-oriented analysis and design including use cases, objects, classes, stereotypes, and relationships. Object-oriented iterative process for system development. A continuous application development exercise for applying the analysis and design concepts. Prerequisites: Any program language, or permission of Instructor.

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

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

CIS235  
e-Commerce  
3 credit(s) 4 period(s) lecture + lab  
Introduction to Electronic Commerce on the Internet. Designing an electronic storefront including web page content and development, e-commerce site marketing, advertisement, legal and security considerations, credit card and other debit transaction secured. Also includes current issues in e-commerce. Prerequisites: CIS133CA, or CIS133DA, or permission of Instructor.

CIS236  
Web-Based Teaching and Learning I  
2 credit(s) 3 period(s) lecture + lab  
Experience using a web-based learning environment from an online student’s perspective. Use communication tools, submit assignments, use evaluation tools, create homepages, and navigate online-learning environment. Introduction to basics of online pedagogy. Hands-on experience with a web-based learning environment. Prerequisites: CIS133CA or CIS133DA, or permission of Instructor.

CIS237  
Web-Based Teaching and Learning II  
2 credit(s) 3 period(s) lecture + lab  
Create an online or hybrid course using a web-based learning environment. Create, prepare, and manage content and resource files; locate and add resources; and manage a course homepage. Add, delete, and revise tools; create, maintain, and release quizzes and assignments; and manage a course. Track students, data, and revise student grades, submissions, and attendance. Hands-on experience with creating a course using a web-based learning environment. Prerequisites: CIS236, or permission of Instructor.

CIS238DL  
Linux System Administration  
3 credit(s) 4 period(s) lecture + lab  
Managing Linux Operating Systems including sophisticated manipulation of file structures, backup systems, printing processes, troubleshooting, user account management, hard disk maintenance and configuration, process monitoring and prioritizing, kernel customization, and system resource control. Preparation for industry certifications such as the SAIR/ GNU LCP and LCA certificates, CompTIA’s Linux+, RHCT, RHCE, and LPIC. Prerequisites: CIS126DL or permission of Instructor.

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

CIS259  
Visual Basic Programming II  
3 credit(s) 4 period(s) lecture + lab  
Use of the Visual Basic programming language to identify and solve advanced problems using suitable examples from business or other disciplines. Prerequisites: 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: CIS162AD, or permission of Instructor.

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

CNS101
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.

COM – Communication

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

COM110
Interpersonal Communication
3 credit(s) 3 period(s) lecture
Theory and practice of communication skills which affect day-to-day interactions with other persons. Topics may include using verbal and nonverbal symbols, interactive listening, resolving interpersonal conflict, developing and maintaining personal and professional relationships. Prerequisites: None.

COM225
Public Speaking
3 credit(s) 3 period(s) lecture
Designed to enhance the student’s ability to present public speeches confidently and competently. Also designed to improve information literacy and critical thinking skills. Prerequisites: ENG101 or ENG107, or equivalent.

COM230
Small Group Communication
3 credit(s) 3 period(s) lecture
Principles and processes of small groups and development of skills for participation and leadership in small group settings. Practice in problem solving, decision making, and information sharing. Prerequisites: None.

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

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

COM298AA-AC
Special Projects
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: None.

CPD – Counseling and Personal Development

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

CPD101
Personal Development
2 credit(s) 2 period(s) lecture
Designed to assist students in developing confidence in making personal, social, and educational decisions. Examination and assessment of individual needs, interests, abilities, and values to develop and strengthen interpersonal communication, enhance transitional skills, and identify realistic life planning goals. Prerequisites: None.

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

CPD102AA
Assertiveness Training
2 credit(s) 2 period(s) lecture
Designed to help students differentiate assertive, non-assertive and aggressive behavior, overcome blocks to acting assertively, establish boundaries, and develop effective verbal and nonverbal assertive behavior. Group discussion, role playing, and videotape feedback are used to enable students to express feelings, beliefs, and opinions in a direct, appropriate manner. Prerequisites: None.

CPD102AB
Career Exploration
2 credit(s) 2 period(s) lecture
Designed to assist students make informed career decisions. Focuses on current occupational trends and outlook. Explores career-related interests, values, needs, preferences, skills, and strengths with the use of various assessments. Aids in the development of individualized educational/career goals and action plan. Prerequisites: None. Course Notes: CPD102AB may be repeated for a total of six (6) credit hours.

CPD102AD
Eliminating Self-Defeating Behavior
2 credit(s) 2 period(s) lecture
Designed to help students change behaviors that work against their potential, i.e., inferior feelings, shyness, nervousness, stage fright, underachievement, etc. Focus on identifying undesirable thoughts, emotions and behaviors, for the purpose of developing alternative, and more desirable thoughts, emotions, and behaviors. Prerequisites: None.

CPD102AH
Stress Management
2 credit(s) 2 period(s) lecture
Reviews the sources of stress, the physiological effects and the psychological impact of stress on the individual. Provides strategies to reduce stress. Prerequisites: None.
CPD102AN
Anger Management
2 credit(s) 2 period(s) lecture
Provides an understanding of the emotion of anger, explores the types, origins and typical reactions to anger. Covers stress and the need for stress management in relation to anger. Examines personal anger patterns and feelings, and the use of effective interpersonal communications in effective anger management. Prerequisites: None.

CPD102AR
Relaxation Training
1 credit(s) 1 period(s) lecture
Emphasis on specific relaxation techniques to alleviate dysfunctional tension. Use of progressive relaxation methods to reduce stress. Discussion of other modalities of relaxation. Prerequisites: Permission of Instructor.

CPD102AS
Conflict Resolution
2 credit(s) 2 period(s) lecture
Developing new skills for dealing effectively with everyday conflict and improving quality of one's own life. Opportunity to discuss issues and seek cooperative resolutions. Prerequisites: None.

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

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

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

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

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

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

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

CPD108 Personal Money Management for College Students
1 credit(s) 1 period(s) lecture
Designed to assist students in examining values related to spending, borrowing and saving money. Identify financial priorities and responsibilities associated with debt. Develop and follow a personal budget plan and learn strategies for maintaining a financially balanced personal life. Prerequisites: None.

CPD/AAA115
Creating College Success
1 credit(s) 1 period(s) lecture
Strategies to create success in college. Methods for selecting and developing effective academic strategies, increasing self-awareness and developing self-management strategies. Elements of college resources and relationships with others explored in support of students' educational experience. Prerequisites: None.

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

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

CPD160 Introduction to Multiculturalism
3 credit(s) 3 period(s) lecture
Examination of the multiple cultures and subcultures within the contemporary United States. Personal exploration of awareness and appreciation of multiculturalism. Activities for experiencing diverse cultural perspectives. Critical thinking skills for recognizing, analyzing, and mediating cultural and psychological factors impacting conflict and accord between diverse cultures through written and oral discourse. Prerequisites: ENG101, or ENG107, or permission of Instructor.

CRE – Critical Reading
Please Note: For additional Reading courses, see RDG, starting on page 286.

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 RDG091 or RDG095 or RDG100 or RDG111 or RDG112 or RDG113 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
Introduces the student to elements and techniques of creative writing in a variety of genres; teaches terminology and concepts needed for successful participation in writing workshops; facilitates writing practice and evaluation; offers individual guidance on the student's development as a writer. 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.

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: 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 (CRWI), 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: 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: 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: 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.

CRW260 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 workshop. Prerequisites: CRW160 or permission of Instructor.

CRW261 Topics in Writing: Poetry
3 credit(s) 3 period(s) lecture
Analysis, writing, and revision of genre or element within poetry. Prerequisites: 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 workshop. Prerequisites: 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: 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: 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: 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: 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: CRW150 or permission of Instructor.

CRW289
Intermediate Screenwriting
3 credit(s) 3 period(s) lecture
Drafting and revision of original screenplay; overview of marketing a screenplay. Prerequisites: CRW190 or permission of Instructor.

CRW291
Topics in Writing: Plays
3 credit(s) 3 period(s) lecture
Analysis, writing, and revision of genre or element within plays and/or motion picture screenplays. Prerequisites: CRW150 or permission of Instructor.

CUL – Culinary Arts

CUL105
Principles and Skills for Professional Cooking
3 credit(s) 5 period(s) lecture + lab
Introductory principles and skills for professional cooking. Introduces organizational structure of kitchen staff in different types of kitchens. Includes basic principles of safety and sanitation, equipment and utensil use, French cooking terms, recipe use, measuring techniques, identification and use of seasoning agents, and basic cooking methods applied to stocks, sauces and soups, vegetables, starches, entrées and eggs. Emphasis on practical experience in a commercial kitchen. Prerequisites: None.

CUL106
Principles and Techniques of Garde Manger
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
Prepares students for employment in garde manger pantry positions in restaurants and resorts. Includes costing out and ordering food products; food and safety factors; preparing and garnishing pantry product. Emphasis on classical food presentation. Prerequisites: A grade of "C" or better in CUL105, or permission of Program Director.

CUL109/HRM102
Menu Planning Development
2 credit(s) 2 period(s) lecture
(Not offered every semester)
Principles and techniques of menu planning for food service operations where food is served in quantity; includes applications for health care institutions, commercial kitchens, school cafeterias, and industrial facilities. Prerequisites: None.

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

CUL113
Commercial Baking Techniques
3 credit(s) 5 period(s) lecture + lab
Principles and techniques for preparation, storage, and serving of bakery products. Includes breads, cakes, pies, pastry, cookies, fillings, and icings. Emphasis on practical experiences in a commercial bakery. Prerequisites: None.

CUL119
Baking Theory and Retail Operations
3 credit(s) 3 period(s) lecture
Basic business operations for a retail bakery including bakery product line and floor plan design. Prerequisites: None.

CUL123
Customer Service Practicum
4 credit(s) 11 period(s) lecture + lab
Professional food and beverage experience in a commercial food service operation. Focuses on food server, host/hostess, cashier, and busperson. Includes beverage preparation, application of sanitation, and safety concepts. Stresses professionalism in service, demeanor, and appearance. Prerequisites: FON104.

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

CUL127
Commercial Baking: Classical Desserts
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
Advanced principles and techniques in commercial baking and dessert preparation. Focus on fine pastries with European flair and on desserts served in better hotels, restaurants, and resorts. Preparation of macarons, tarts, puff pastries, specialty cakes, and desserts such as Bavarian creams, mousses, custards, soufflés, crepe desserts, and flanmeryers. Preparation and use of sauces, techniques for using nuts and chocolate, and exploration of new recipes. Prerequisites: A grade of "C" or better in CUL113, or permission of Program Director.

CUL137
Specialty Breads and Breakfast Pastry
3 credit(s) 5 period(s) lecture + lab
The preparation of classical and artisan breads using advanced production techniques and skills. Classic breakfast pastry, with the production of laminated doughs, sweet doughs, and rich yeast doughs to include Danish, croissant, puff pastry, brioche, and other international classics. Completion of edible centerpieces made out of various styles of bread. Prerequisites: CUL113 or permission of Program Director.

CUL145
Banquet Food and Beverage Service Externship
1 credit(s) 5 period(s) lab
(Not offered every semester)
Waiter/waitress serving experiences in a banquet setting; includes Instructor-assisted placement, orientation, job seeking skills, and working a minimum of four banquets or twenty-four hours in banquet service. Professional appearance and attire required. Prerequisites: CUL121, CUL123, and FON104.

See pages 124-126 for Instructional Department details.
CUL201
International Cuisine
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
Gourmet international food preparation applied to restaurants. Review principles of sanitation and safety. Explores history and customs, serving styles, and preparation techniques of foods unique to selected international cultures. Emphasis on practical cooking experiences in a restaurant kitchen. Cultures to include, but not limited to: Italian, German, Oriental, Middle Eastern, and Spanish. Prerequisites: A grade of "C" or better in CUL105, or permission of Program Director.

CUL203
American Regional Cuisine
3 credit(s) 5 period(s) lecture + lab
American regional food preparation applied to restaurants. Review principles of sanitation and safety. Explores history and customs, serving styles, and preparation techniques of foods unique to selected American regions. Emphasis on practical cooking experiences in a restaurant setting. American regions to include, but not limited to: Southern, Cajun/Creole, New England, Mid-West, and Pacific Coast. Prerequisites: A grade of "C" or better in CUL105, or permission of Program Director.

CUL205
French Cuisine
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
Principles of French cooking applied to restaurant kitchens. Includes review of safety and sanitation principles, orientation to French culture, use of French terms and recipes, and reading French menus. Emphasis on practical experiences in preparing French meals in a restaurant kitchen. Introduces preparation of appetizers, hors d’oeuvres, charcuterie items, pastries and desserts. Prerequisites: A grade of "C" or better in CUL105, or permission of Program Director.

CUL207
Pacific Rim Cuisine
3 credit(s) 5 period(s) lecture + lab
Local and gourmet Pacific Rim food preparation applied to restaurants. Overview of principles of sanitation and safety. Explores history and customs, serving styles, and preparation techniques of foods unique to Pacific Rim cultures. Emphasis on practical cooking experiences in a restaurant kitchen. Cultures to include, but not limited to Chinese, Japanese, Thai, Korean, and South Pacific islands. Prerequisites: A grade of "C" or better in CUL105.

CUL209
Italian Cuisine
3 credit(s) 5 period(s) lecture + lab
Principles of Italian cooking applied to restaurant kitchens. Includes review of safety and sanitation principles, orientation to Italian culture, use of Italian terms and recipes, and reading Italian menus. Emphasis on practical experiences in preparing Italian meals in a restaurant kitchen. Introduces preparation of appetizers, entrees, salads, fresh pasta items, pastries, and desserts. Prerequisites: A grade of "C" or better in CUL105.

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

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

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

CUL212
Advanced Pastry Arts
3 credit(s) 5 period(s) lecture + lab
Advanced pastry arts and decorative work as applied to showpieces and special occasion cakes. Includes sugar work such as pulled, blown, and poured as well as the use of tempered and modeling chocolate. Design and execution of a three-tier wedding cake as well as work on a special occasion and team wedding cake using gum paste, pastillage, chocolate, or marzipan. Includes desserts for special diets and spa desserts. Prerequisites: CUL113 and CUL127, or permission of Program Director. Course Note: CUL212 may be repeated for a total of six (6) credits.

CUL215
Commercial Wedding Cake Production
3 credit(s) 5 period(s) lecture + lab
Basic and advanced execution for special occasion, wedding, and groom’s cakes to include initial design work, baking, icing, and advanced finishing techniques to include the use of fondant and gum paste. Enhancement of cakes to include basic sugar, pastillage, and chocolate decoration. Prerequisites: CUL113 or permission of Program Director.

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

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

CUL231AA
Commercial Wedding Cake Production
3 credit(s) 5 period(s) lecture + lab
Preparation of hot and cold foods in a commercial food service operation; experience in volume food production preparing salads, soups, stocks, sauces, entrees, starchy, and sauces; designed to develop knowledge and skills necessary to cook in a variety of commercial kitchens. Prerequisites: (CUL105 and FON104) or permission of Department or Division. Corequisites: CUL211BB.

CUL231BB
Commercial Wedding Cake Production
3 credit(s) 5 period(s) lecture + lab
Preparation of hot and cold foods in a commercial food service operation; experience in volume food production preparing salads, soups, stocks, sauces, entrees, starchy, and sauces; designed to develop knowledge and skills necessary to cook in a variety of commercial kitchens. Prerequisites: (CUL105 and FON104) or permission of Department or Division. Corequisites: CUL211BA.

For additional information on MCCCD course competencies, visit: https://asa.maricopa.edu/mcccd/center-for-curriculum-transfer-articulation

For additional information on MCCCDD course competencies, visit: https://asa.maricopa.edu/mccdd/center-for-curriculum-transfer-articulation
CUL231AB
Culinary Studies Internship
2 credit(s) 10 period(s) lab
Work experience preparing hot and cold foods in a commercial food service operation, experience in volume food production preparing salads, soups, stocks, sauces, entrées, starchy, and vegetables. Ten (10) hours of work weekly. Supervision and evaluation by an internship coordinator. Prerequisites: CUL105, FON104, and permission of Department or Division. Course Notes: CUL231AB may be repeated for a total of six (6) credits.

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

CWE – Career Work Experience

CWE198AA
Career/Work Experience
1 credit(s) 1 period(s) lecture and lab
Participation in a work experience, gaining on-the-job training, and/or exploring a career or field of choice. Helps students relate their education to the real 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: DAE156 or permission of Program Director. Corequisites: DAE131 or permission of Program Director.

DAE131
Dental Radiography Laboratory
2 credit(s) 6 period(s) lab
Radiation safety and infection control procedures for operator and patient. Image receptor placement, exposure, processing, mounting, and evaluation of dental radiographs. Operation and maintenance of x-ray and processing equipment. Interpretation of radiographic findings. Prerequisites: DAE156 or permission of Program Director. Corequisites: DAE124 or permission of Program Director.

DAE140
Dental Issues Seminar
1 credit(s) 1 period(s) lecture
Examination of legal and ethical responsibilities of dental team members. Review and analysis of clinical procedures in general and specialty practices. Includes professional and career development strategies and certification information and processes. Prerequisites: DAE156 or permission of Program Director. Corequisites: (DAE224, DAE225, DAE226, DAE227, and DAE228) or permission of Program Director.

DAE156
Dental Assisting II
7 credit(s) 16 period(s) lecture and lab
Intermediate dental assisting skills, with an emphasis in treatment provided in general dentistry, including an introduction to dental diseases and their prevention, and preparing for and assisting in general dental restorative procedures, including the use of local anesthetics, dental materials, and pharmacological agents for procedures. Introduction to ethics and the legal aspects of dental practices. Prerequisites: DAE112 or permission of Program Director.

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

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

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

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

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

DAE256
Dental Assisting IV
1.5 credit(s) 3 period(s) lecture and lab
Advanced dental assisting sciences, with an emphasis in the recognition of oral pathologies, use of technology in dentistry, intermediate dental office management skills, and legal considerations for the practice of dentistry. Additional emphasis will be placed on coronal polishing and community oral health. Prerequisites: DAE212 or permission of Program Director.
DHE119
Head and Neck Anatomy
3 credit(s) 3 period(s) lecture
Study of the structures of the head and neck relevant to dental hygiene. Topics include: osteology, musculature, blood supply, glandular tissue, cranial nerves and routes of infection. Course activities include use of skulls, models and multi-media resources.
Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.

DHE120
Pre-Clinical Dental Hygiene
6 credit(s) 12 period(s) lecture + lab
Introduction to the dental hygiene profession and the process of care. Infection control, patient assessment, preventive treatment and dental hygiene instrumentation are practiced. Students are introduced to self assessment skills and quality improvement.
Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.

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

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

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

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

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

DHE201
Dental Materials
2 credit(s) 2 period(s) lecture
Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor. Corequisites: DHE202.

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

DHE212
Dental Hygiene Theory II
2 credit(s) 2 period(s) lecture
Study of the dental hygiene process of care with emphasis on comprehensive care planning, case presentation, and clinical decision making. Introduction to advanced periodontal instrumentation.
Prerequisites: DHE132 and DHE133 and admission to the Dental Hygiene Program. Corequisites: DHE213.
DHE213
Dental Hygiene Clinic II
5 credit(s) 15 period(s) lab
Application of the dental hygiene process of care with emphasis on comprehensive care planning, case presentation, clinical decision making, advanced instrumentation and improved time utilization. Prerequisites: DHE132 and DHE133 and admission to the Dental Hygiene Program. Corequisites: DHE212.

DHE219
Practice Management
2 credit(s) 2 period(s) lecture
Integration of practice management concepts and comprehensive quality patient care in preparation for future collaborative practice between dental hygienists and dentists. Students are challenged with practice situations including productivity, conflict management, ethical and legal issues. Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.

DHE225
Periodontics
3 credit(s) 3 period(s) lecture
Principles of periodontontology; etiology, microbiology, pathogenesis, classification and characteristics of healthy and diseased periodontal tissues. Surgical treatment of periodontal disease and the effects of dental hygiene therapy, surgical techniques and maintenance therapy. Evaluation of the scientific literature and multi-media resources are used extensively. Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.

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

DHE229
Community Oral Health
3 credit(s) 3 period(s) lecture
An examination of methods used to assess the oral health status of the community and to plan, implement, finance and evaluate dental public health programs. Focus on community-based health promotion and disease prevention measures to improve the oral health of the population, as well as the characteristics of dental care delivery systems and the social, political, psychological and economic factors affecting utilization within the system. Prerequisites: Admission to the Dental Hygiene Program or permission of Instructor.

DHE232
Dental Hygiene Theory III
2 credit(s) 3 period(s) lecture + lab
Study of the dental hygiene process of care with emphasis on the patient with special needs and advanced instrumentation. Students participate in field observations and present case documentations. Prerequisites: (DHE212 and DHE213), and admission to the Dental Hygiene Program. Corequisites: DHE232.

DHE233
Dental Hygiene Clinic III
5 credit(s) 15 period(s) lab
Application of the dental hygiene process of care with emphasis on diverse populations. Students prepare for clinical practice using self assessment, evaluation and critical thinking skills. Prerequisites: (DHE212 and DHE213), and admission to the Dental Hygiene Program. Corequisites: DHE232.

DPR – Disaster Preparedness and Emergency Response

DPR/ajas/fsc139
Emergency Response to Terrorism
3 credit(s) 3 period(s) lecture
Fundamentals of emergency response to suspected terrorist events. Historical perspective of terrorist activities and methods by which responders can identify and protect themselves and the public from these threats. Coordination of responding agencies. Prerequisites: None.

DPR/ajas/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.

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: Two years of high school algebra or MAT122 or departmental approval. Corequisites: MAT151 or MAT182 or MAT187.

ECE103
Engineering Problem Solving and Design
2 credit(s) 4 period(s) lecture + lab
Fundamentals of the design process: engineering modeling, communication, and problem-solving skills in a team environment. Emphasis on process-based improvements to the design process. Introduction to engineering as a profession. Prerequisites: (ECE102 or ECE102AA) and (high school physics, or PHY111, or PHY111AA).
ECE211  Engineering Mechanics - Statics  3 credit(s) 5 period(s) lecture and lab  
Mathematical treatment of the basic physical principles of statics. Methods of vector algebra and vector calculus.  
**Prerequisites:** ECE103, (MAT230 or MAT231), and (PHY115 or PHY121).  
**Corequisites:** MAT240 or MAT241.

ECE212  Engineering Mechanics - Dynamics  3 credit(s) 5 period(s) lecture and lab  
Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles.  
**Prerequisites:** ECE211 and (MAT240 or MAT241).

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

ECH – Early Childhood Education

ECH/CFS176  Child Development  3 credit(s) 3 period(s) lecture  
Study of the science of human development from conception through adolescence. Includes observation skills, parent and adult roles in the lives of children, and contemporary issues.  
**Prerequisites:** None.

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

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

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

ECH/CFS271  Arranging the Environment  1 credit(s) 1 period(s) lecture  
(Not offered every semester)  
Exploration of the influence of the environment on the behavior of you 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.

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  ECON 2201  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  ECON 2202  Microeconomics Principles  3 credit(s) 3 period(s) lecture  
Microeconomic analysis including the theory of consumer choice, price determination, resource allocation and income distribution. Includes non-competitive market structures such as monopoly and oligopoly; and the effects of government regulation.  
**Prerequisites:** None.

ECN263  The Economics of Natural Resources, Population and the Environment  3 credit(s) 3 period(s) lecture  
Applies economic analysis to both the causes and possible remedies of the problems of environmental deterioration and natural resource depletion. Includes discussion of the economic problems of urban communities and the relationship between population and economic growth and the depletion of natural resources and environmental pollution.  
**Prerequisites:** ECN100, or ECN211, or ECN212.

See pages 124-126 for Instructional Department details.
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. Prerequisites: None.

EED – Early Education

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

EMT – Emergency Medical Technology

EMT101
Basic Life Support/Cardiopulmonary Resuscitation (CPR) for Health Care Providers 0.5 credit(s) 0.45 period(s) lecture + lab
Designed to provide the allied healthcare provider with the knowledge and skills to perform Basic Life Support (BLS) according to current guidelines for emergency cardiovascular care (ECC). Prerequisites: None. Course Notes: EMT101 may be repeated for credit.

EMT/FSC104
Emergency Medical Technology 9 credit(s) 11.4 period(s) lecture + lab
Techniques of emergency medical care in accordance with national and state curriculum. Study of the human body, patient assessment, treatment of medically or traumatically compromised patients, special hazards, and medical operations, IV monitoring, patient-assisted medication administration, automated external defibrillators (AEDs), and blood-glucose monitoring. Prerequisites: EMT101 or a current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer and appropriate score on Reading placement test to demonstrate minimum tenth grade level reading or completion of an Associate’s degree or higher from an accredited institution. Course Notes: Students are required to complete additional hours in a competency-based clinical, vehicular, and/or scenario based experience. This may be completed through EMT104AB or program director-approved rotation. Students must meet National Registry of EMTs requirements for certification. Additional information available at nremt.org. EMT/FSC104 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
Designed to educate and train individuals as the emergency link among the community, health care providers, and law enforcement agencies. Comprehensive program to educate and train in procedures of communications, interrogation, assessment, and deployment. Includes interactive computer lab and scheduled observation with assignment at a dispatch center. Prerequisites or Corequisites: EMT101, or any current American Red Cross, or CPR for the Professional Rescuer, or American Heart Association Basic Life Support Health Care Provider validation.
EMT120
Spanish for Emergency-Care Providers
1 credit(s) 1 period(s) lecture
Participative course for prehospital and other emergency-care providers. Vocabulary, pronunciations, voice inflections, phrases, conversational terms, and methods of interviewing the ill or injured victim. Cultural information to facilitate approach and interaction with the victim, family, and/or significant other. Documentation of the interview content on the prehospital encounter form. Prerequisites: Certified EMT or licensed medical personnel.

EMT165
Pediatric Education for Prehospital Providers: Basic
2 credit(s) 2.87 period(s) lecture + lab
An interactive, scenario-based course designed for Basic EMTs who are not yet practicing in the field. Enables these EMTs to perform a rapid assessment of sick and injured children in a variety of different circumstances. Includes use of pediatric assessment triangle, developmental differences, injury prevention, basic airway management techniques, recognition of medical emergencies such as pediatric trauma, mechanism of injury, submersion events, children with special health care needs, abuse and neglect, child and family interactions, use of specialized equipment, and special issues in pediatric transportation. Treatment to children is in accordance with recommendations of the American Academy of Pediatrics. Prerequisites: EMT104, or permission of Instructor.

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

EMT220
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 (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.

Course information is subject to change.

Visit https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation for most current information.
EMT241
Advanced Cardiac Life Support Refresher
0.5 credit(s) 1.5 period(s) lecture + lab
Designed to provide the healthcare professional with a review and updated information in emergency cardiovascular care and protocols for the patient in cardiac arrest, post-resuscitative patient management, and core cases in Advanced Cardiac Life Support (ACLS) according to current Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care 2004. Includes the ACLS approach to cardiovascular emergencies, elements of emergency cardiovascular care, ethical and legal issues, review and validation of the techniques of airway assessment and management, ventilation techniques, oxygen therapy, intravenous therapy, analyzing and interpreting the electrocardiogram (ECG), analyzing and interpreting the 12-lead ECG, myocardial ischemia, injury, and infarction, electrical interventions, cardiovascular pharmacology, acute coronary syndromes, emergency cardiovascular care algorithms, acute stroke and transient ischemic attack, and special resuscitation situations. Prerequisites: (Current validation in Basic Life Support (BLS) Health Care Provider/Professional Rescuer or EMT240) or permission of Instructor. Course Notes: EMT241 may be repeated for credit.

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

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

EMT245
Trauma Management I
2 credit(s) 3.5 period(s) lecture + lab
Designed to instruct prehospital care personnel in the critical skills necessary to manage the trauma victim and the emergency scene through the Incident Command System (ICS). Enhances basic emergency medical technology (EMT) skills by focusing on emergency care interventions. Provides exposure to victim assessment, initial treatment, resuscitative techniques, victim stabilization, transportation of the victim to an emergency care facility, and documentation. Prerequisites: Basic EMT certification or nurse with emergency room experience, or permission of department.

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

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

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, writing objectives, preparing class and course schedules, preparing for lectures, developing and using audio visual (AV) aides; processing assignments and exams, classroom discipline, counseling, and student/Instructor evaluation methods. Successful completion qualifies individual to teach Advanced Cardiac Life Support Classes. Prerequisites: Current certification as Advanced Cardiac Life Support Provider and (State of Arizona EMT [Paramedic] certification or Arizona Registered Nurse or licensed physician or physician assistant) or permission of Instructor.

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

Visit www.aztransfer.com
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 courses.
Prerequisites: Current certification as a Basic Life Support Healthcare Provider level, EMT101, or equivalent.

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, writing objectives, 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 a Pediatric Advanced Life Support Provider and (State of Arizona Advanced EMT [Paramedic] certification or Arizona Registered Nurse or licensed physician).

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.

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.

CHECK OUT WHAT’S NEW
How many more courses do you need to complete your program?
From your Student Center in My.maricopa.edu, you can now monitor the completion of your educational goal by running your Degree Progress Report. The Degree Progress Report places the courses you have completed into a report of your declared program plan. In addition, the What-if Report lets you see how your courses apply to a different program plan.
Go to your Student Center and check out these reports for assistance, visit the Welcome Center or meet with an Academic Advisor.

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) 17.38 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 (MAT090 or higher, or a satisfactory score on the ASSET, or COMPASS, or Accuplacer placement exam), (ENG101 or ENG107), EMT235, and EMT236], or permission of Program Director. Comprehensive written, oral and practical evaluation on all EMT272AA prerequisite courses. Course Notes: EMT272AA may be repeated for credit.

EMT272AB
Advanced Emergency Medical Technology
12.5 credit(s) 17.38 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 EMT272AA. Comprehensive written, oral and practical evaluation on EMT272AA. Course Notes: EMT272AB may be repeated for credit.
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/

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

EMT272LB
Advanced Emergency Medical Technology Practicum Part II
3.75 credit(s) 18.75 period(s) lab
Clinical and vehicular practicum using diagnostic and advanced emergency medical treatment skills learned in the classroom. Emphasis on hands-on application of skills to real-life scenarios involving acute illness and serious injuries. Prerequisites: EMT272AA and EMT272LA. Prerequisites or Corequisites: EMT272AB. Course Notes: EMT272LB may be repeated for credit.

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

EMT273
Advanced Life Support Refresher Course
3.5 credit(s) 4 period(s) lecture + lab
Designed to meet requirements for EMT-Intermediate and EMT- Paramedic under guidelines of the U.S. Department of Transportation (U.S. DOT), National Registry of EMTs (NREMT) as recognized by the Arizona Department of Health Services (A-DHS) Bureau of Emergency Services (B-EMS). Provides updated knowledge and skills related to hypoperfusion states, respiratory arrest or insufficiency, seizure states, cardiovascular emergencies, unconscious of undetermined etiology, head injury with altered levels of consciousness, and chest trauma. Validates requisite knowledge, validates skills, reviews and informs students of new standards and technologies. Trains and educates out of state applicants in knowledge, procedures, medications, and skills specific to Arizona's system. Remediates students who have been unsuccessful three times on the certification examinations, and refreshes information for those who have expired certifications and desire re-entry into the EMS system. Prerequisites: EMT - Advanced Paramedic certification or EMT-Intermediate certification or proof of current paramedic registry with the National Registry of Emergency Medical Technicians (NREMT) or permission of Instructor.

ENG – English

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

ENG091
Preparatory Academic Writing III
3 credit(s) 3 period(s) lecture
Emphasizes preparation for first year composition with a focus on critical writing, reading, and thinking skills and processes at an increased level of academic complexity. Prerequisites: Appropriate writing placement test score, or a grade of C or better in ENG081 or ESL087, or permission of Department or Division.

ENG100AA
American-English Spelling System
1 credit(s) 1 period(s) lecture
American-English spelling system rules, mnemonic devices. Prerequisites: Appropriate English placement test score, or a grade of "C" or better in ENG091 or ESL097, or permission of Instructor.

ENG100AC
The Mechanics of Written English
1 credit(s) 1 period(s) lecture
Review of the mechanics of written English, including punctuation, arbitrary marks and usages, capitalization, agreement, tense, and sentence patterns. Prerequisites: Appropriate English placement test score, or a grade of "C" or better in ENG091 or ESL097, or permission of Instructor.

ENG101
First-Year Composition
3 credit(s) 3 period(s) lecture
Emphasis on rhetoric and composition with a focus on expository writing and understanding writing as a process. Establishing effective college-level writing strategies through four or more writing projects comprising at least 3,000 words in total. Prerequisites: Appropriate writing placement test score, or a grade of C or better in ENG091 or ESL097.

ENG102
First-Year Composition
3 credit(s) 3 period(s) lecture
Emphasis on rhetoric and composition with a focus on persuasive, research-based writing and understanding writing as a process. Developing advanced college-level writing strategies through three or more writing projects comprising at least 4,000 words in total. Prerequisites: Grade of C or better in ENG101.

ENG107
First-Year Composition for ESL
3 credit(s) 3 period(s) lecture
Equivalent of ENG 101 for students of English as a Second Language (ESL). Emphasis on rhetoric and composition with a focus on expository writing and understanding writing as a process. Establishing effective college-level writing strategies through four or more writing projects comprising at least 3,000 words in total. Prerequisites: Appropriate writing placement test score, or a grade of C or better in ENG091 or ESL097.

ENG071
Preparatory Academic Writing I
3 credit(s) 3 period(s) lecture
Emphasizes preparation for college level composition and related reading tasks with a focus on communicating through complete, grammatically correct writing, organized to communicate a central idea. Prerequisites: Appropriate writing placement test score or permission of Department or Division.

ENG081
Preparatory Academic Writing II
3 credit(s) 3 period(s) lecture
Emphasizes preparation for college-level composition and related reading tasks with a focus on critical writing, reading, and thinking skills and processes. Prerequisites: Appropriate writing placement test score, or a grade of C or better in ENG071 or ESL077, or permission of Department or Division.
ENG108
First-Year Composition for ESL
3 credit(s) 3 period(s) lecture
Equivalent of ENG102 for students of English as a Second Language (ESL). Emphasis on rhetoric and composition with a focus on persuasive, research-based writing and understanding writing as a process. Developing advanced college-level writing strategies through three or more writing projects comprising at least 4,000 words in total. Prerequisites: Grade of C or better in ENG107.

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

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

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

ENG215
Strategies of Academic Writing
3 credit(s) 3 period(s) lecture
Advanced course in techniques of analyzing and writing academic expository prose. Writing to be research based. Prerequisites: A grade of "C" or better in ENG102 or ENG111, or permission of Instructor.

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

ENG217
Personal and Exploratory Writing
3 credit(s) 3 period(s) lecture
Using writing to explore one’s self and the world one lives in; emphasis on journal writing as a source and inspiration for public writing. Prerequisites: ENG101 or ENG107 or equivalent.

ENG219
Life Stories
3 credit(s) 3 period(s) lecture
Uses of biography and autobiogaphy to pass on stories, hand down traditions, and share wisdom. Analysis and practice of biographical and autobiographical writing. Prerequisites: ENG101 and ENG102.

ENG226
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: ENG226 may be repeated for a total of six (6) credit hours.

ENG218
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.

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.

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: (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 from the nineteenth and twentieth centuries. Prerequisites: (ENG101 or ENG107) or equivalent.

ENH230
Introduction to Shakespeare
3 credit(s) 3 period(s) lecture
(Spring only)
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.

See pages 124-126 for Instructional Department details.
ENH236
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: None.

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

ENH251
Mythology
3 credit(s) 3 period(s) lecture
Deals with the myths and legends of civilizations with the greatest influence upon the development of the literature and culture of the English speaking people, and compares those myths with myths from other cultures. Prerequisites: None.

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

ENH256
Shakespeare on Film
3 credit(s) 3 period(s) lecture
Presents cinematic versions of Shakespeare’s plays and explains and analyzes how the dramatist’s major tragedies, comedies, histories and romances have been presented on film. Prerequisites: None.

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

ENH260
Literature of the Southwest
3 credit(s) 3 period(s) lecture
Investigates major themes in Southwestern American literature including the Western myth, minority roles in the region’s literature, control of nature versus primacy of nature, and growth. Both prose and poetry are examined with an emphasis on contemporary Southwestern writing. Prerequisites: None.

ENH280
Topics in American Literature
3 credit(s) 3 period(s) lecture
Exploration of selected topic(s) in American Literature. Focuses on a theme, genre, era, technique, or critical approach. Includes reading and interpretation of literature from a variety of cultures within the United States. Prerequisites: (ENG101 or ENG107) or permission of Instructor. Course Note: ENH280 may be repeated for a total of nine (9) credit hours.

ENH/WST285
Contemporary Women Writers
3 credit(s) 3 period(s) lecture
Explores twentieth century literature (short stories, essays, plays, and poetry) written by women and about women. Focus on themes relevant to women’s lives regardless of age, creed, or ethnic background. Prerequisites: None.

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

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 with some reading and sentence level writing. Prerequisites: Appropriate ESL placement test score, or a grade of P or C or better in ESL010. Course Notes: ESL010 may be repeated for a total of nine (9) 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 social exchange. Asking and answering questions, using tag questions. Practice with question and answer patterns. Polite questions and responses. Prerequisites: Appropriate ESL placement test score or ESL010 or ESL011 or ESL012 or RDG/ESL016. Course Notes: ESL012 may be repeated for a maximum of six (6) credits.

ESL012
ESL I-Writing with Oral Practice
3 credit(s) 3 period(s) lecture
Emphasis on basic conventions of writing in English. Includes introduction to the alphabet, capitalization, punctuation, and simple sentence structure. Prerequisites: Appropriate ESL placement test score or permission of Instructor. Course Notes: ESL012 may be repeated for a maximum of six (6) credits.

ESL013
Vocabulary for ESL I
1 credit(s) 1 period(s) lecture + lab
Emphasis on the acquisition of basic English vocabulary including identifying and pronouncing words related to people, medical/dental care, occupations and other activities. Prerequisites: Appropriate ESL placement test score or permission of Instructor. Course Notes: ESL013 may be repeated for a maximum of two (2) credits.

ESL020
English as a Second Language II: Grammar
3 credit(s) 3 period(s) lecture
Second level of English as a Second Language (ESL). Continued emphasis on conversational skills, pronunciation, vocabulary building and grammar with some reading and sentence level writing. Prerequisites: Appropriate ESL placement test score, or a grade of C or better in ESL010. Course Notes: ESL020 may be repeated for a maximum of six (6) credits. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog.

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

ESL022
ESL II-Writing with Oral Practice
3 credit(s) 3 period(s) lecture
Emphasis on basic writing skills, accompanied by recitation of short writings. Sentence patterns and introduction of paragraph writing. May be repeated for a maximum of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL012, or permission of Instructor.
ESL023  Vocabulary for ESL II
1 credit(s) 1 period(s) lecture + lab
Emphasis on the acquisition of basic English vocabulary including identifying and pronouncing words related to people, medical/dental care, occupations and other activities. Prerequisites: Appropriate ESL placement test score or permission of Instructor.
Course Notes: ESL023 may be repeated for a maximum of two (2) credits.

ESL030  English as a Second Language III:
Grammar
3 credit(s) 3 period(s) lecture
Third level of English as a Second Language (ESL). Emphasis on sentence structure and paragraph building. Extensive grammar study and writing practice. Prerequisites: Appropriate ESL placement test score, or a grade of P or C or better in ESL020. Course Notes: ESL030 may be repeated for a maximum of six (6) credits. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog.

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

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

ESL033  Vocabulary for ESL III
1 credit(s) 1 period(s) lecture + lab
Emphasis on the acquisition of basic English vocabulary including identifying and pronouncing words related to people, medical/dental care, occupations and other activities. Prerequisites: Appropriate ESL placement test score or permission of Instructor.
Course Notes: ESL033 may be repeated for a maximum of two (2) credits.

ESL040  English as a Second Language IV:
Grammar
3 credit(s) 3 period(s) lecture
Fourth level of English as a Second Language (ESL). Continued emphasis on sentence structure and paragraph building. Extensive grammar study and writing practice. Prerequisites: Appropriate ESL placement test score, or a grade of P or C or better in ESL030. Course Notes: ESL040 may be repeated for a maximum of six (6) credits. Credit (P) or no credit (Z). Standard grading available according to procedures outlined in catalog.

ESL041  English as a Second Language IV —
Listening and Speaking
3 credit(s) 3 period(s) lecture
Emphasis on academic skills. Listening to lectures, notetaking, peer interaction, accessing and using media resources, formal oral presentations. Prerequisites: Appropriate ESL placement test score or ESL030 or ESL031 or ESL032 or RDG/ESL036. Course Notes: ESL041 may be repeated for a maximum of six (6) credits.

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

ESL050  Review Grammar For ESL
3 credit(s) 3 period(s) lecture
Review of grammatical concepts for ESL (English as a Second Language) students who have some previous experience in reading and writing English. Appropriate for students who want to practice sentence skills in English. May be repeated for a total of six (6) credits. Prerequisites: Appropriate ESL course placement score, or a grade of C or better in ESL040, or permission of Instructor.

ESL050A  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. Prerequisites: Appropriate ESL placement test score, or a grade of C or better in ESL030, or permission of Instructor.
Course Notes: ESL050A 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 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. 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.

ESL050AC  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 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 six (6) credits.

ESL050A  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: ESL050A may be repeated for a total of six (6) credit hours.

ESL050A  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: ESL050A may be repeated for a total of two (2) credit hours.
FON – Food and Nutrition

FON100
Introductory Nutrition
3 credit(s) 3 period(s) lecture
Introduction to the science of food and human nutrition. Current sustainable dietary recommendations and applications for maximizing well-being and minimizing risk of chronic disease throughout the life cycle. An overview of the nutrients, emphasizing the importance of energy and fluid balance, and optimal functioning of the digestive system. Understanding factors that influence food intake in different cultures. Methods for evaluating credibility of nutrition claims, a focus on modern food safety and technology practices, and a worldview of nutrition are included. Emphasis is on personal dietary behavior change for a holistic life of wellness.
Prerequisites: None.

FON104
Certification in Food Service Safety and Sanitation
1 credit(s) 1 period(s) lecture
Preparation for and certification in a national food sanitation and safety program. Emphasis on food from purchasing, receiving, and storing to preparation, holding, and serving. Focuses on safe and sanitary food service facilities and equipment, employee habits and personal hygiene, and role of management in safety and sanitation. Includes time-temperature principles, foodborne illnesses, pest control, accident prevention, standards for cleaning and sanitizing, and regional regulations and standards.
Prerequisites: None.

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

FSC – Fire Science Technology

FSC101
Intro to Fire Service Selection
3 credit(s) 4 period(s) lecture + lab
Overview of the application and selection processes used by various fire departments and fire service organizations. Elements of fire service culture and their effects on personal growth and interpersonal relationships. Major components of written application processes, requirements, preparation of resumes and their effect on employment prospects. Preparation for the interview to include communications skills, mental preparation techniques, behaviors, and the importance of the interview in the pre-employment process. Preparation for on-site experiences at a fire station. General components of the selection process, the importance of general education, and components of lifelong learning in career choices.
Prerequisites: None.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Contact Hours</th>
<th>Corequisites/Prerequisites</th>
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<tbody>
<tr>
<td>FSC102</td>
<td>Fire Department Operations</td>
<td>11</td>
<td>19.6</td>
<td>EMT104, FSC105 and FSC130 and permission of Instructor.</td>
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<tr>
<td>FSC104</td>
<td>Emergency Medical Technology</td>
<td>9</td>
<td>11.4</td>
<td>FSC105 or permission of Instructor.</td>
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<td>FSC105</td>
<td>Hazardous Materials/First Responder</td>
<td>3</td>
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<td>FSC106</td>
<td>Introduction to Fire Protection</td>
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<td>FSC108</td>
<td>Fundamentals of Fire Prevention</td>
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<tr>
<td>FSC112PS</td>
<td>Public Safety Emergency Telecommunications</td>
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<tr>
<td>FSC113</td>
<td>Introduction to Fire Suppression</td>
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<tr>
<td>FSC114</td>
<td>Hazardous Materials First on the Scene/Awareness Level</td>
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<tr>
<td>FSC117</td>
<td>Fire Apparatus</td>
<td>3</td>
<td>3</td>
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<tr>
<td>FSC118</td>
<td>Fire Hydraulics</td>
<td>3</td>
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<tr>
<td>FSC119</td>
<td>Introduction Fire Service Ethics</td>
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<tr>
<td>FSC130</td>
<td>Fire Apparatus</td>
<td>3</td>
<td>3</td>
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<tr>
<td>FSC131</td>
<td>Introduction to Urban Technical Rescue</td>
<td>3</td>
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<tr>
<td>FSC134</td>
<td>Fitness and Conditioning for Firefighters</td>
<td>3</td>
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<tr>
<td>FSC136</td>
<td>Women Firefighter Preparation</td>
<td>2</td>
<td>2.87</td>
<td>None.</td>
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<tr>
<td>FSC137</td>
<td>Emergency Response to Terrorism</td>
<td>3</td>
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<tr>
<td>FSC138</td>
<td>Women Firefighter Preparation</td>
<td>2</td>
<td>2.87</td>
<td>None.</td>
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<tr>
<td>FSC139</td>
<td>Emergency Response to Terrorism</td>
<td>3</td>
<td>3</td>
<td>None.</td>
</tr>
</tbody>
</table>
FSC/AJS/DPR146
Disaster Recovery Operations
3 credit(s) 3 period(s) lecture
Specialized knowledge and skills for the emergency manager in developing programs and activities associated with disaster recovery assistance and mitigation actions that reduce losses from future disasters. Prerequisites: None.

FSC/AJS/DPR147
Emergency Preparedness
3 credit(s) 3 period(s) lecture
Emergency preparedness related to natural and manmade disasters. Planning concepts and the planning process; awareness and education programs and strategies for the general community as well as business and industries. Prerequisites: None.

FSC/AJS/DPR148
Fundamentals of Emergency Management
3 credit(s) 3 period(s) lecture
Emergency management systems including career opportunities, function, tasks and responsibilities of the emergency management program manager, role of the emergency manager in mitigation, preparedness, response, and recovery. Past civil defense and current emergency management systems since evolution from World War II. Prerequisites: None.

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

FSC152
Engine Company Officer
1 credit(s) 1 period(s) lecture
Overview of all aspects of engine company operations including the activities and responsibilities performed by the captain as well as mechanisms for developing a personal supervisory style. Designed for the aspiring company officer or anyone having the opportunity for the role of a company officer. Prerequisites: None.

FSC202
Supervisory Training for Firefighters
3 credit(s) 3 period(s) lecture
Administrative methods applied to the fire service, departmental organization, and personnel management. Includes fire alarm signaling systems, fire service planning, and relationships with other city departments. Prerequisites: None.

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

FSC205
Command Strategies for Major Emergencies
3 credit(s) 3 period(s) lecture
Effective methods of managing major emergency incidents including multiple alarm structural fires, high rise fires, major brush fires, complex hazardous materials incidents and multi-fatality medical incidents. Includes incidents that require the commitment of resources based on a transitional situation and/or managing the effective interaction between numerous agencies to achieve control. Prerequisites: FSC204.

FSC208
Firefighter Safety and Building Construction
3 credit(s) 3 period(s) lecture
Actions necessary to provide for the safety of firefighters operating on the fireground. Effects that fire and heat may have on various types of building construction resulting in the loss of structural integrity. Includes signs and symptoms of structural damage. Prerequisites: FSC113 or permission of instructor or equivalent.

FSC209
Fire Investigation I
3 credit(s) 3 period(s) lecture
Methods of determining point of fire origin, path of fire travel, and fire cause. Includes recognizing and preserving evidence; interviewing witnesses; arson laws and types of arson fires; and court testimony, reports, and records. Prerequisites: None.

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

FSC215
Customer Service in the Public Sector
3 credit(s) 3 period(s) lecture
Examiners 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.

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

GBS220  Quantitative Methods in Business
3 credit(s) 3 period(s) lecture
Business applications of quantitative optimization methods in operations management decisions. Prerequisites: (A grade of "C" or better in MAT150 or MAT151 or MAT152) or satisfactory score on the District math placement test.

GBS221  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: Grade of C or better in GBS220 or MAT217.

GBS232  Business Communication
3 credit(s) 3 period(s) lecture
Internal and external business communications, including verbal and nonverbal techniques. Prerequisites: ENG101 or ENG107 with grade of "C" or better, or permission of department/division.

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

GBS270AA  Business Internship
1 credit(s) 1 period(s) lab
General business work experience in a business or industry. Eighty hours of designated work per credit per semester. Maximum of 3 credits allowed. Prerequisites: Permission of Department.

GBS270AB  Business Internship
2 credit(s) 2 period(s) lab
General business work experience in a business or industry. Eighty hours of designated work per credit totaling 160 hours per semester. Maximum of 3 credits allowed. Prerequisites: Permission of Department.

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

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

GBS298AA-AC  Special Projects
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: None.

GCU – Cultural Geography

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

GCU121  SUN# GEO 1121
World Geography I: Eastern Hemisphere
3 credit(s) 3 period(s) lecture
Description and analysis of spatial variations in culture, social, economic, and political phenomena in major world regions. Emphasis on the major cultural realms of Europe, North Africa, and Asia. Prerequisites: None.

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.

GLG – Geology

GLG101  SUN# GLG 1101
Intro to Geology I - Physical Lecture
3 credit(s) 3 period(s) lecture
A study of the kind and arrangement of materials composing the Earth’s crust and the geological processes at work on and within the Earth’s surface. Prerequisites: None.

GLG103  SUN# GLG 1101
Intro to Geology I - Physical Lab
1 credit(s) 3 period(s) lab
May accompany GLG101. Study of common rock-forming minerals, rocks, and maps. Prerequisites: None.
GPH110
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
May accompany GLG110. Basic geological processes and concepts. Emphasis on geology-related environmental problems concerning Arizona. Case histories and field studies. May require field trips. Prerequisites: None.

GLG280
Geology of Arizona Lecture
3 credit(s) 3 period(s) lecture
Acquaints students with the physical and historical geology of Arizona, including the origin of present-day 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.

GPH111
Introduction to Physical Geography Lecture
3 credit(s) 3 period(s) lecture
Spatial and functional relationships among climates, landforms, soils, water, and plants. Prerequisites: None.

GPH112
Intro to Physical Geography Lab
1 credit(s) 3 period(s) lab
Laboratory experience in support of GPH111. Prerequisites or Corequisites: GPH111.

GPH113
Introduction to Physical Geography
4 credit(s) 6 period(s) lecture + lab
Spatial and functional relationships among climates, landforms, soils, water, and plants. Prerequisites: None.

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.

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

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

HCC – Health Core Curriculum

HCC130
Fundamentals in Health Care Delivery
3 credit(s) 3 period(s) lecture
Overview of current 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 inter-professional teamwork in the health care setting. Focus on development of personal communication skills and an understanding of how effective communication skills promote teamwork. Focus on intercultural communication strategies. 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, including basic word parts. Selected medical services. Body systems approach to terms with special care populations and in special services. 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.

Visit www.aztransfer.com
HCC164  
**Pharmacology for Allied Health**  
0.5 credit(s) 0.5 period(s) lecture  
**Prerequisites:**  
HCC130 or (HCC130AA, HCC130AB, HCC130AC, HCC130AD, HCC130AE and HCC130AF), or equivalent course education as evaluated by the Health Care Curriculum Coordinator.

HCC204  
**Clinical Pathophysiology**  
3 credit(s) 3 period(s) lecture  
**Prerequisites:**  
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:**  
HCC130 or (HCC130AA, HCC130AB, HCC130AC, HCC130AD, HCC130AE and HCC130AF), or equivalent.

HCR230  
**Culture and Health**  
3 credit(s) 3 period(s) lecture  
Relation between cultures of diverse groups and health/illness. Emphasis on cross-cultural communication, including awareness of own cultural influences and indigenous and complementary healing practices.  
**Prerequisites:** None.

HCR240  
**Human Pathophysiology**  
4 credit(s) 4 period(s) lecture  
Chemical, biological, biochemical, and psychological processes as a foundation for the understanding of alterations in health. The structural and functional pathophysiology of alterations in health selected therapeutics considered.  
**Prerequisites:** BIO202 or BIO205, or permission of Instructor.

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

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

HES154  
**First Aid/ Cardiopulmonary Resuscitation**  
3 credit(s) 3 period(s) lecture  
Cardiopulmonary Resuscitation (CPR) and first aid for the adult, child and infant patients includes Automated External Defibrillator (AED), rescue breathing, obstructed airway, and other first aid procedures. Designed to train citizen responders in skills and procedures required during emergency situation.  
**Prerequisites:** None.

HES201  
**Substance Abuse and Behavior**  
3 credit(s) 3 period(s) lecture  
Principles and factual bases of drug use and abuse. Physiological and socio-psychological effects of drug use and law enforcement of drug abuse. Consultants used extensively to enrich course.  
**Prerequisites:** None.

HES210  
**Cultural Aspects of Health and Illness**  
3 credit(s) 3 period(s) lecture  
Examines how culture influences health and illness, health care practices, barriers to health care, interactions with health care professionals, and health disparities in the U.S.  
**Prerequisites:** None.

HES271  
**Prevention and Treatment of Athletic Injuries**  
3 credit(s) 3 period(s) lecture  
Prevention and care of athletic injuries, emphasizing use of modern training techniques and support materials. Utilization of preventive taping, strapping, bandaging, cardiopulmonary resuscitation, massage, cryotherapy, hydrotherapy, and practical application of muscle reconditioning.  
**Prerequisites:** None.

HES272  
**Clinical Practicum in Athletic Training**  
1 credit(s) 7.5 period(s) lab  
Designed to train citizen responders in skills and other first aid procedures. 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:** HES271.

HES273  
**Athletic Training: Advanced Wrapping and Taping Techniques**  
2 credit(s) 2 period(s) lecture  
Practical application, in a clinical setting and under direct supervision, of methods and techniques of treatment of athletic injuries.  
**Prerequisites:** HES271 or permission of Instructor.

See pages 124-126 for Instructional Department details.
HIM – Health Information Management

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

HIM105
Computers in Healthcare and Health Record Systems
2 credit(s) 2 period(s) lecture
Introduction to computer applications in healthcare settings including electronic health records, health record content, structure, and origin of clinical information for various healthcare settings. A basic review of federal, state, and organizational documentation guidelines. Legal and ethical issues applicable to health information documentation and coding practices. Prerequisites: HCC130 or permission of Program Director. Prerequisites or Corequisites: HIM101.

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 related to privacy and patient confidentiality. Types of patient authorizations and procedures for access and release of protected health information. Prerequisites: 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: HCC130 or permission of Program Director.

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

HIM140
Acute Care Documentation and Standards
2 credit(s) 3 period(s) lecture + lab
A comprehensive review of acute care hospital health records. Study of the 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: HCC130 or permission of Program Director. Prerequisites or Corequisites: HIM101 or permission of Program Director.

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

HIM180
Introduction to Medical Billing and Reimbursement
2 credit(s) 2 period(s) lecture
An overview of the medical billing profession, the claims process, and federal billing guidelines. Study of major medical third-party payers including coverage offered, client eligibility, and reimbursement methodologies. Prerequisites: Acceptance into one of the Health Information Management programs (the AAS/3324 in Health Information Technology, the CLL/5014 in Medical Billing and Coding: Physician-Based, or the CLL/5092 in Medical Coding: Hospital-Based) and (HCC130 or permission of Program Director).

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

HIM182
Human Diseases for Coding in Long Term Care Settings
2 credit(s) 2 period(s) lecture
Overview of diseases commonly treated in long term, home health, and hospice settings. Systems approach to causes, signs, symptoms, manifestations, diagnosis, and treatment of these diseases as required for accurate diagnostic coding. Prerequisites: [BIO160 and HCC146] or permission of Program Director.

HIM183
Diagnostic Coding in Long Term Care Settings
2 credit(s) 4 period(s) lecture and lab
Introduction to International Classification of Diseases (ICD) in long term care, home health and hospice settings. Principles for diagnostic coding. Standards of ethical coding. Emphasis on diagnostic coding for reimbursement and coding compliance. Prerequisites: [BIO160 and HCC146] or permission of Program Director. Prerequisites or Corequisites: HIM182 or permission of Program Director.

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: [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: HCC145 or permission of Instructor. Corequisites: [BIO202 and HIM150] or permission of Instructor.
HIM205 Health Information Management Systems in Long Term Care Settings
2 credit(s) 4 period(s) lecture + lab
Overview of the health information management department roles, systems, policies and procedures in long term care settings. Introduction to computer applications used in long term care (LTC). Creation and maintenance of the LTC indices. Application of relevant healthcare statistics. Prerequisites or Corequisites: HIM101 or permission of Program Director.

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

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

HIM207 Health Information Organizational Resource Management
2 credit(s) 2 period(s) lecture
Principles and practices essential to the efficient use of human, financial, and physical resources within health information systems. Focus on roles and responsibilities applicable to practice as a health information team performing planning, organizing, directing, and controlling functions. Prerequisites: HIM150 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: [HCC145, HCC164, HCC204, 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: BIO202 and HCC204. Prerequisites or Corequisites: HIM208 or permission of Program Director.

HIM211 Advanced Applications of Coding and Reimbursement
4 credit(s) 6 period(s) lecture + lab
Use of references, source documents, and computers for International Classification of Diseases (ICD) code assignment. Uniform Hospital Discharge Data Set and diagnostic-related group guidelines and federal regulations for hospital-based settings. Coding guidelines, code sets, and code assignment for home health, long term care, rehabilitation, and other health care settings. Identification of care provider documentation that supports code assignment. Use of codes for administrative purposes, reimbursement, marketing, and meeting regulatory requirements. Prerequisites: BIO202, HCC204, HIM208, 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: [HCC145, HCC164, HCC204 and (BIO160 or BIO202)], or permission of Program Director. Prerequisites or Corequisites: HIM190.

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: (HCC204 and HIM212) or permission of Program Director.

HIM215 Physician-Based Billing and Coding Seminar
1 credit(s) 1 period(s) lecture
Content and development of physician-based services billing and coding compliance programs. Forum for discussion of classroom, laboratory, and professional practice experiences. Prerequisites: [HCC204, HIM208 and HIM212], or permission of Program Director. Corequisites: HIM216 or permission of Program Director. Prerequisites 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. 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 and practice in specialized health information activities. Forum for discussion of classroom, laboratory, and clinical affiliation experiences. Prerequisites: (HIM106, HIM150, HIM201, and HIM206), or permission of Program Director. Corequisites: HIM218 or permission of Program Director.

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

Course information is subject to change.
Visit https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation for most current information.
HIM219
Health Information Management Systems
3 credit(s) 5 period(s) lecture + lab
Overview of the fundamental concepts, terminology, and structure of health information systems with emphasis on computer applications used to manage electronic health information. Review of electronic health information concepts and its impact on health care delivery in multiple settings. Prerequisites: HIM150 or permission of Program Director.

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

HIM221
Medical Coding Seminar
1 credit(s) 1 period(s) lecture
Content and development of coding compliance programs. Forum for discussion of classroom, laboratory, and professional practice experience. Prerequisites: HIM212. Prerequisites or Corequisites: (HIM211 and HIM214) or permission of Program Director. Corequisites: HIM222 or permission of Program Director.

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

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

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

HIM298AA-AC
Special Projects
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: Permission of Program Director or Instructor.

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 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 the United States from 1865 to the present time. Prerequisites: None.

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

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

HIS108
United States History 1945 to the Present
3 credit(s) 3 period(s) lecture
Survey of American history from 1945 to the present. Focuses on the political, social, economic and cultural history of the United States from the end of World War II to the present time. Includes domestic developments and foreign policy. Prerequisites: None.

HIS109
Mexican-American History and Culture
3 credit(s) 3 period(s) lecture
Examination of origins and development of the Spanish-American and Mexican-American peoples and their contribution to the culture, history and development of 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.

HIS1131
United States History to 1865
3 credit(s) 3 period(s) lecture
The political, economic, and social development of the United States from the Pre-Columbian period through the end of the Civil War (1865). Prerequisites: None.
HIS/AIS170
American Indian History of the Southwest
3 credit(s) 3 period(s) lecture
Covers history of Indian peoples in the southwestern United States from pre-Columbian era to the present. Includes historical events, the development and implementation of Spanish-Mexican and United States’ policies and their impact on Indian peoples in these areas, and current issues of importance to Indian peoples. Prerequisites: None.

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.

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.

HST171
Chemistry of Fixation
2 credit(s) 2 period(s) lecture
Principles of fixation and fixative solutions. Anatomic laboratory instrumentation and specimen handling, identification, and tracking protocols. Emphasis on gross examination processes, tissue processing protocols, and specialized processing techniques. Prerequisites: Admission to Histologic Technology Program or permission of Program Director. Corequisites: HST170 and HST172.

HST172
Practicum: Chemistry of Fixation
3 credit(s) 6 period(s) lab
Practicum in histology techniques performed in an anatomic laboratory. 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: Admission to Histologic Technology Program or permission of Program Director. Corequisites: HST170 and HST171.

HST173
Microtomy
3 credit(s) 3 period(s) lecture

HST174
Practicum: Microtomy
3 credit(s) 6 period(s) lab
Practicum in histology techniques performed in an anatomic laboratory. Use of decalcification and frozen section techniques. Includes embedding orientation by tissue type and ergonomic safety practices for microtomy. Procedures for the paraffin embedding station, cryostat and rotary microtome set-up and maintenance, and sharps safety practices for the microtome. Emphasis on techniques for microtomy, specialized microtomy, frozen section, and cytology specimen preparation. Prerequisites: HST172. Corequisites: HST173.

HST175
Cellular Biological Staining
3 credit(s) 3 period(s) lecture

HST176
Practicum: Cellular Biological Staining
3 credit(s) 6 period(s) lab
Practicum in histology techniques performed in an anatomic laboratory. Recognition of basic cellular structure, carbohydrate structures, connective tissue, lipid structures, and pigments and minerals in tissues. Application of chemical staining. Emphasis on stains for nuclear and cytoplasmic structures, carbohydrates and lipids, connective tissue, and tissue pigments and minerals stains. Prerequisites: HST173 and HST174. Corequisites: HST175.

HST177
Cellular Biological and Immunohistochemical Staining
3 credit(s) 3 period(s) lecture

HST178
Practicum: Cellular Biological and Immunohistochemical Staining
3 credit(s) 6 period(s) lab
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
Introduction to the influence of culture and ethnicity on the artist, including factors such as race, religion, gender, class, sexual preference, age, and region. Lecture and discussion on various art forms, including literature, visual arts, music, dance, film, and theater. Prerequisites: None.

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: 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: 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 drawing types, including floor plans, elevations, sections, details, multi-view projection, and paraline. Brief exploration of hand sketching and Computer-Aided Design (CAD) techniques as they relate to manual drafting. Prerequisites: None.

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.

INT140
Introduction to CAD for Interior Design
3 credit(s) 6 period(s) lecture + lab
Introduction to CAD tools for the interior designer with emphasis on industry-accepted standards for interior design following American Institute of Architects (AIA) guidelines. Prerequisites: ARC121 or INT100.

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: ARC121 or INT100 or permission of Department or Division.
INT105 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.

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: 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: 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. Prerequisites: INT105 and (ARC121 or INT100 or permission of Department or Division). Prerequisites or Corequisites: ARC141 or INT140.

INT215 Professional Practices
3 credit(s) 3 period(s) lecture
Marketing and business processes used in interior design studios. Ethical issues facing interiors industry. Development of business plan. Prerequisites: INT190.

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: 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 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.

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.

INT274AA 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.

INT274AB 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.

INT274AC 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.

INT285 Design Portfolio Development
1 credit(s) 1.5 period(s) lab
Design, produce, and present a professional portfolio appropriate to the field of Interior Design. Includes material selection and techniques, customer focus, contents and organization, presentation formats, and presentation boards to represent a variety of technical and aesthetic areas of design. Prerequisites: INT240 or permission of Program Director.

IPP – Interpreter Preparation Program
Also see Sign Language, SLG on page 287.

IPP205 Introduction to Interpreting
3 credit(s) 3 period(s) lecture
Theories of role, function, responsibilities, and communication strategies of the American Sign Language (ASL)/English interpreter. Covers application and implementation of the National Registry of Interpreters for the Deaf (R.I.D) and National Association of the Deaf (N.A.D) Code of Professional Conduct. Additional topics addressed include interpreters functioning as advocates, moral systems vs. ethical systems, standard business practices, and perceptions of consumers. Prerequisites: SLG201 with a grade of “C” or better, or permission of Department or Division. Completion of prerequisites within the last three years is required. Course Notes: IPP205 may be repeated for a total of nine (9) credit hours.

IPP208 Advanced American Sign Language Discourse
4 credit(s) 4 period(s) lecture
(Spring only)
Advanced study of terminology and discourse in various fields such as medical, judicial, technological, as well as financial and business transactions. Use of specialized terminology/concepts in dialogues, discussions, and narratives. Advanced use of classifiers, structuring of space, and grammatical features of American Sign Language (ASL). Prerequisites: A grade of B or better in SLG203. Completion of prerequisites within the last three years is required.
IPP215
ASL to English Consecutive Interpreting
2 credit(s) 3 period(s) lecture + lab
(Fall only)
Sequential development of consecutive interpreting skills from American Sign Language (ASL) to English. Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of naturally occurring monologues, guidance for discovering personal filters, practice of skills, techniques for self and peer evaluations, and application of theoretical models. Prerequisites: Acceptance into the Interpreter Preparation Program or permission of Department or Division and IPP211 with a grade of “B” or better.

IPP216
ASL to English Simultaneous Interpreting
3 credit(s) 4 period(s) lecture + lab
(Spring only)
Sequential development of simultaneous interpreting skills from American Sign Language (ASL) to English. Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of naturally occurring monologues, guidance for discovering personal filters, practice of skills, techniques for self and peer evaluations, and application of theoretical models. Prerequisites: A grade of “B” or better in IPP215, or permission of department/division.

IPP218
English to ASL Consecutive Interpreting
2 credit(s) 3 period(s) lecture + lab
(Fall only)
Sequential development of consecutive interpreting skills from English to American Sign Language (ASL). Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of naturally occurring monologues, guidance for discovering personal filters, practice of skills, techniques for self and peer evaluations, and application of theoretical models. Prerequisites: Acceptance into the Interpreter Preparation Program or permission of Department or Division and IPP221 with a grade of “B” or better. IPP215 suggested but not required.

IPP219
English to ASL Simultaneous Interpreting
3 credit(s) 4 period(s) lecture + lab
(Spring only)
Sequential development of simultaneous interpreting skills from English to American Sign Language (ASL). Source language analysis and target language equivalents emphasized. Analysis of texts and contexts of naturally occurring monologues, practice of skills, techniques for self and peer evaluations, and application of theoretical models. Prerequisites: A grade of “B” or better in IPP218, or permission of Department or Division. Completion of prerequisites within the last three years is required.

IPP219
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.

IPP220
Interactive Interpreting I
4 credit(s) 5 period(s) lecture + lab
(Fall only)
Sequential development of interactive interpreting skills from English to American Sign Language (ASL) and from ASL to English. Perform source language analysis, apply cognitive processing techniques, and produce target language equivalents. Analysis of texts and contexts of naturally occurring dialogues, practice of skills, techniques for self and peer evaluations, and application of theoretical models. Prerequisites or Corequisites: IPP215 and IPP218, or permission of Department or Division. Completion of prerequisites within the last three years is required.

IPP221
Interactive Interpreting I
3 credit(s) 4 period(s) lecture + lab
(Spring only)
Continued development of interactive interpreting skills from English to American Sign Language (ASL) and from ASL to English. Perform source language analysis, apply cognitive processing techniques, and produce target language equivalents. Analysis of texts and contexts of naturally occurring dialogues, practice of skills, techniques for self and peer evaluations, and application of theoretical models. Prerequisites: A grade of “B” or better in IPP220, or permission of Department or Division. Completion of prerequisites within the last three years is required.

IPP222
Interpreter Preparation Internship Seminar
1 credit(s) 1 period(s) lecture
(Spring only)
Classroom portion of the Interpreter Preparation Program seminar. 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.

IPP223
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.

IPP224
Interpreter Preparation Program Internship
2 credit(s) 10 period(s) lab
(Spring only)
Laboratory portion of the Interpreter Preparation Program seminar. One hundred sixty (160) clock hours of work required. Practical experience in settings such as educational, rehabilitation, community service centers, and agencies serving children, adolescents and/or adults who are deaf or hard of hearing. Designed to provide students with the opportunity to synthesize practical and academic experiences gained during the in-classroom portion of the program. Site, supervision, and plan of activity mutually agreed upon by the student and Instructor. Capstone experience for AAS degree students. May be repeated for a total of four (4) credits. Prerequisites: Acceptance into the Interpreter Preparation Program and/or program director approval. Corequisites: IPP229.
IPP242  
**Educational Interpreting**  
3 credit(s) 3 period(s) lecture  
Principles, vocabulary, and techniques used specifically in educational interpreting and transliterating. Introduces students to issues in primary, secondary, vocational, and post-secondary settings. Covers sign systems, technical signs, and methods of sign invention. Includes required student observations of educational interpreting outside class.  
**Prerequisites:** (IPP205 and SLG200) or permission of Department or Division. SLG203 suggested but not required.  
**Course Notes:** IPP242 may be repeated for a total of nine (9) credits.

IPP250AA  
**Special Topics: Interpreter Preparation**  
1 credit(s) 1 period(s) lecture + lab  
Explores a special topic related to interpreter preparation. Topics vary and include concepts relevant to those pursuing career in (American Sign Language) ASL/English Interpreting and Transliterating.  
**Prerequisites:** Acceptance into the Interpreter Preparation Program or permission of Program Director.  
**Course Note:** IPP250AA may be repeated for credit.

IPP250AB  
**Special Topics: Interpreter Preparation**  
2 credit(s) 2 period(s) lecture + lab  
Explores a special topic related to interpreter preparation. Topics vary and include concepts relevant to those pursuing career in (American Sign Language) ASL/English Interpreting and Transliterating.  
**Prerequisites:** Acceptance into the Interpreter Preparation Program or permission of Program Director.  
**Course Note:** IPP250AB may be repeated for credit.

IPP250AC  
**Special Topics: Interpreter Preparation**  
3 credit(s) 3 period(s) lecture + lab  
Explores a special topic related to interpreter preparation. Topics vary and include concepts relevant to those pursuing career in (American Sign Language) ASL/English Interpreting and Transliterating.  
**Prerequisites:** Acceptance into the Interpreter Preparation Program or permission of Program Director.  
**Course Note:** IPP250AC may be repeated for credit.

LAS101  
**Introduction to Law**  
3 credit(s) 3 period(s) lecture  
Legal terminology and basic legal principles in the areas of tort, contract, and criminal law. Interrelationships among lawyers, the court system, and law enforcement and administrative agencies. Development of a case for trial, adjudication, and post-verdict procedures in the civil and criminal systems.  
**Prerequisites:** None.

LAS109  
**Civil Procedures I**  
3 credit(s) 3 period(s) lecture  
Pretrial procedural issues in both Arizona and the federal system. Emphasis on Arizona Rules of Civil Procedure 1-37, 41, 55, 56, and 72-76. Coverage of applicable time limits, filing requirements, and proficiency in locating appropriate provisions in the Arizona Rules of Civil Procedure. Drafting of pleadings and motions and the application of procedural rules pertinent to the early stages of civil litigation.  
**Prerequisites:** Acceptance into the Paralegal Studies program.  
**Prerequisites or Corequisites:** LAS101 and (BPC110 or CIS105 or permission of Program Director).

LAS110  
**Civil Procedures II**  
3 credit(s) 3 period(s) lecture  
Application of the procedural aspects of discovery, trial preparation, and post-trial work as part of a litigation team. Emphasis on practical concerns, such as interviewing of witnesses; preparation of discovery documents, exhibits, and transmittal memoranda; summarizing and indexing depositions; organization of files; preparation of trial notebooks; and participation in a mock trial.  
**Prerequisites:** LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS115  
**Criminal Trial Procedure**  
3 credit(s) 3 period(s) lecture  
Procedural aspects of the criminal trial process in Arizona state courts from preliminary proceedings through trial. Emphasis on application of the rules of criminal procedure and preparation of common trial documents by paralegals. Documents include the charging instrument, pre-trial motions, and jury instructions.  
**Prerequisites:** LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS131  
**Legal Writing**  
3 credit(s) 3 period(s) lecture  
The use of proper grammar, punctuation, and spelling in the construction of sentences and the development of paragraphs. Use of case briefs to study effective writing and analytical techniques. Analysis and application of the writing process to produce well-written documents commonly used in the practice of law.  
**Prerequisites or Corequisites:** LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS203  
**Ethics and Professional Practice**  
3 credit(s) 3 period(s) lecture  
Rules of professional responsibility and ethical requirements with an emphasis on their application to legal assistants. Sources of power to regulate the practice of law. Issues related to unauthorized practice of law. Examination of professionalism in the legal profession.  
**Prerequisites:** LAS131 and (BPC110 or CIS105 or permission of Program Director).

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

LAS208  
**Probate**  
3 credit(s) 3 period(s) lecture  
Emphasis on various ways in which property can be held and passed on. Requirements for valid wills and trusts. Steps involved in estate administration and appropriate forms to be used. Includes drafting basic wills and simple trusts.  
**Prerequisites:** LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS211  
**Legal Research**  
3 credit(s) 3 period(s) lecture  
Use of print and electronic media to locate public documents, statutes, administrative regulations, and cases from county, state, and federal jurisdictions. Reading and interpreting research results. Shepardizing. Use of proper citation forms.  
**Prerequisites or Corequisites:** LAS109 and (BPC110 or CIS105 or permission of Program Director).
LAS212
Tort Law
3 credit(s) 3 period(s) lecture
Basic elements of negligence, strict liability, intentional torts; defenses; damages; insurance coverage. Evaluation of records and personal injury claims; review of insurance policies; settlement brochure; preparation of case intake memorandum. Prerequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS214
Business Organizations
3 credit(s) 3 period(s) lecture
Analysis and evaluation of business organizations with practical application of the law to analyze the utility, form, and function of Sole Proprietorships, General Partnerships, Limited Partnerships, Limited Liability Companies, and Corporations. Preparation of documents to create the most effective and feasible business organization under a given set of circumstances. Prerequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).

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

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

LAS221AB
Paralegal Internship
2 credit(s) 10 period(s) lab
Field work through placement at a law firm or other law-related organization where student will gain experience working in a legal setting. Supervision and evaluation by on-the-job supervisor as well as college program director. Prerequisites: Permission of Program Director. Corequisite: LAS220. Course Notes: LAS221AB requires a minimum of 160 hours of field experience in a legal setting.

LAS225
Legal Research, Analysis, and Writing
3 credit(s) 3 period(s) lecture
Integration and further development of legal research and writing skills with an emphasis on critical thinking, issue analysis, and motion practice. Focus on integrating research, writing, and legal argument development. Prerequisites: LAS131 and LAS211 and (BPC110 or CIS105 or permission of Program Director).

LAS229
Litigation Technologies
3 credit(s) 3 period(s) lecture
Use of presentation software; use of timekeeping, calendaring, and docketing software; use of litigation support software to organize case files; use of electronic trial presentation software in an electronic courtroom; ethical issues. Prerequisites: LAS110 and (BPC110 or CIS105 or permission of Program Director).

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

LAS261
Bankruptcy
3 credit(s) 3 period(s) lecture
Examination of bankruptcy laws and procedures and the role of paralegals in bankruptcy practice, including the commencement of a case, preparation of common forms, review of bankruptcy litigation including contested matters and adversary proceedings, and debtors' and creditors' rights and obligations. Prerequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS265
Regulatory Compliance
3 credit(s) 3 period(s) lecture
Examination of, and requirements for, organizations maintaining compliance with regulatory schemes. Emphasis on federal regulations and the role of non-lawyer personnel, such as paralegals, in obtaining, organizing, analyzing, and presenting recommendations for acting on factual information and legal research related to regulatory requirements. Prerequisites: LAS109 and (BPC110 or CIS105 or permission of Program Director).

LAS280
Paralegal Studies Portfolio Capstone
1 credit(s) 1 period(s) lecture
Demonstration of acquired skills and knowledge through review, revision, and supplementation of electronic portfolio containing evidence of program competencies; preparation, revision, and review of work product samples to facilitate the transition from student to entry-level paralegal. Prerequisites: LAS110, LAS203, LAS204, LAS214 and (BPC110 or CIS105 or permission of Program Director). Prerequisites or Corequisites: (LAS225, LAS229, and LAS237) or permission of Program Director.

LBA – Laboratory Assisting

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

LBA152
Laboratory Assisting: Principles and Procedures
2 credit(s) 6 period(s) lecture + lab
Principles and procedures for pre-analytical processing of laboratory specimens. Performance of specimen processing, pre-analytical processes, and point-of-care testing. Application of quality assurance, quality control, infection control, and laboratory safety. Use of laboratory supplies, instrumentation, and information systems. Performing clerical and computer functions using medico-legal guidelines for documentation. Prerequisites or Corequisite: LBA150.
LBA158
Laboratory Assisting Practicum
2 credit(s) 6 period(s) lab
Practicum in laboratory assisting based in healthcare facilities or reference laboratories. Performance of clinical skills for pre-analytical processing of laboratory specimens, initial testing phases, and point-of-care testing using laboratory instrumentation, information systems, and supplies. Application of quality assurance, quality control, infection control, and laboratory safety. Performance of clerical and computer functions using medico-legal guidelines for documentation. Use of professional and ethical conduct in all interpersonal communications. Prerequisites: LBA150 and LBA152 and permission of Program Director.

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 MAS120) and permission of Program Director.

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

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

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

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

MAS210
Aseptic Techniques
1 credit(s) 3 period(s) lecture + lab
Fundamentals of microbial control. Includes procedures for sanitation, disinfection, and sterilization. Specimen collection and handling. Compliance with Occupational Safety and Health Administration (OSHA), the United States Centers for Disease Control and Prevention (CDC), and Clinical Laboratory Improvement Amendments (CLIA). Prerequisites: A grade of “C” or better in (MAS127, MAS128, and MAS129), acceptance into the Medical Assisting program, and permission of Program Director. Corequisites: MAS126 and MAS220, and permission of Program Director.

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

MAS230
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: MAS200 and permission of Program Director.
MAS240
Applied EKG
1 credit(s) 1.5 period(s) lecture + lab
Entry-level training to professionally perform, process, and explain the electrocardiogram. Overview of cardiac anatomy, physiology, and conduction systems. Overview of commonly encountered drugs in cardiac medicine. Data collection, selection, processing, and presentation for the appropriate medical/clinical professional to review. Selected specific non-invasive cardiac testing procedures. Prerequisites: Acceptance into the Medical Assisting program or permission of Program Director. Corequisites: MAS260 or permission of Program Director.

MAS260
Clinical Procedures
3 credit(s) 5 period(s) lecture + lab
Principles and procedures for the medical assistant. Methods of assisting clinicians with physical examinations, procedures, treatments, and minor surgical procedures in the medical office. Includes vital signs, height, and weight, collection of patient data and documentation. Prerequisites: (Acceptance into the Medical Assisting program), (a grade of "C" or better in MAS125, MAS126, MAS127, MAS128, MAS129, MAS210, and SPA117), and permission of Program Director. Corequisites: MAS230 and MAS240.

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

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, MAT121, MAT122, MAT140, MAT141, MAT142, MAT150, MAT151, MAT152, MAT152, MAT157, MAT206, MAT212, MAT213, MAT217, MAT218, MAT220, MAT221, MAT225, MAT230, MAT231, MAT240, MAT256, MAT257, and MAT270.

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: Satisfactory score on district placement exam. Course Notes: Student may receive credit for only one of the following: MAT051 and MAT052 and MAT053 and MAT054, or MAT081, or MAT082.

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: An appropriate mathematics placement score, OR a grade of "C" or better for MAT081, or MAT082, OR (an appropriate diagnostic score, or a grade of "C" or better in each of the following courses: MAT051, MAT052, MAT053, and MAT054). Course Notes: Student may receive credit for only one of the following: MAT055 and MAT056 and MAT057, or MAT090, or MAT091, or MAT092.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit(s)</th>
<th>Period(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT091</td>
<td>Introductory Algebra</td>
<td>4</td>
<td>4</td>
<td>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. <strong>Prerequisites:</strong> An appropriate mathematics placement score, OR a grade of &quot;C&quot; or better for MAT081, or MAT082, OR an appropriate diagnostic score, or a grade of &quot;C&quot; or better in each of the following courses: MAT051, MAT052, MAT053, and MAT054). <strong>Course Notes:</strong> Student may receive credit for only one of the following: MAT055 and MAT056 and MAT057, or MAT090, or MAT091, or MAT092.</td>
</tr>
<tr>
<td>MAT092</td>
<td>Introductory Algebra</td>
<td>3</td>
<td>3</td>
<td>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. <strong>Prerequisites:</strong> An appropriate mathematics placement score, OR a grade of &quot;C&quot; or better for MAT081, or MAT082, OR an appropriate diagnostic score, or a grade of &quot;C&quot; or better in each of the following courses: MAT051, MAT052, MAT053, and MAT054). <strong>Course Notes:</strong> Student may receive credit for only one of the following: MAT055 and MAT056 and MAT057, or MAT090, or MAT091, or MAT092.</td>
</tr>
<tr>
<td>MAT108</td>
<td>Tutored Mathematics</td>
<td>2</td>
<td>2</td>
<td>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. <strong>Prerequisites:</strong> None. <strong>Corequisites:</strong> MAT082, or MAT090, or MAT091, or MAT092, or MAT120, or MAT121, or MAT122, or MAT140, or MAT141, or MAT142, or MAT150, or MAT151, or MAT152, or permission of department chair. <strong>Course Note:</strong> MAT108 may be repeated for a total of ten (10) credits.</td>
</tr>
<tr>
<td>MAT112</td>
<td>Mathematical Concepts and Applications</td>
<td>3</td>
<td>3</td>
<td>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. <strong>Prerequisites:</strong> An appropriate mathematics placement score OR a grade of &quot;C&quot; or better for MAT090 or MAT091, or MAT082 or (an appropriate diagnostic score or grade of &quot;C&quot; or better in each of the following courses: MAT055, MAT056, MAT057).</td>
</tr>
<tr>
<td>MAT120</td>
<td>Intermediate Algebra</td>
<td>5</td>
<td>5</td>
<td>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. <strong>Prerequisites:</strong> An appropriate mathematics placement score OR a grade of &quot;C&quot; or better for MAT090 or MAT091, or MAT092 OR (an appropriate diagnostic score or grade of &quot;C&quot; or better in each of the following courses: MAT055, MAT056, MAT057). <strong>Course Note:</strong> Students may receive credit for only one of the following: MAT120, MAT121, or MAT122.</td>
</tr>
<tr>
<td>MAT121</td>
<td>Intermediate Algebra</td>
<td>4</td>
<td>4</td>
<td>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. <strong>Prerequisites:</strong> An appropriate mathematics placement score OR a grade of &quot;C&quot; or better for MAT090 or MAT091, or MAT092 OR (an appropriate diagnostic score or grade of &quot;C&quot; or better in each of the following courses: MAT055, MAT056, MAT057). <strong>Course Note:</strong> Students may receive credit for only one of the following: MAT120, MAT121, or MAT122.</td>
</tr>
<tr>
<td>MAT122</td>
<td>Intermediate Algebra</td>
<td>3</td>
<td>3</td>
<td>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. <strong>Prerequisites:</strong> An appropriate mathematics placement score OR a grade of &quot;B&quot; or better for MAT090 or MAT091, or MAT092 OR (an appropriate diagnostic score or grade of &quot;B&quot; or better in each of the following courses: MAT055, MAT056, MAT057). <strong>Course Note:</strong> Students may receive credit for only one of the following: MAT120, MAT121, or MAT122.</td>
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<tr>
<td>MAT140</td>
<td>College Mathematics</td>
<td>5</td>
<td>5</td>
<td>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. <strong>Prerequisites:</strong> An appropriate mathematics placement score OR a grade of &quot;C&quot; or better for MAT090 or MAT091, or MAT092 OR (an appropriate diagnostic score or grade of &quot;C&quot; or better in each of the following courses: MAT055, MAT056, MAT057) or a grade of &quot;C&quot; or better in MAT120 or MAT121 or MAT122. <strong>Course Notes:</strong> Students may receive credit for only one of the following: MAT140, MAT141, or MAT142.</td>
</tr>
<tr>
<td>MAT141</td>
<td>College Mathematics</td>
<td>4</td>
<td>4</td>
<td>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. <strong>Prerequisites:</strong> An appropriate mathematics placement score OR a grade of &quot;C&quot; or better for MAT090 or MAT091, or MAT092 OR (an appropriate diagnostic score or grade of &quot;C&quot; or better in each of the following courses: MAT055, MAT056, MAT057) or a grade of &quot;C&quot; or better in MAT120 or MAT121 or MAT122. <strong>Course Notes:</strong> Students may receive credit for only one of the following: MAT140, MAT141, or MAT142.</td>
</tr>
</tbody>
</table>
MAT142 SUN= MAT 1142
College Mathematics
3 credit(s) 3 period(s) lecture
College-level mathematics and its applications to real-life problems. Emphasis on understanding mathematical concepts and their applications. Topics include set theory, probability, statistics, finance, and geometry. Prerequisites: An appropriate mathematics placement score or a grade of "B" or better for MAT090 or MAT091, MAT092, or an appropriate diagnostic score or grade of "B" or better in each of the following courses: MAT155, MAT056, MAT057 or a grade of "C" or better in MAT120 or MAT121 or MAT122. Course Notes: Students may receive credit for only one of the following: MAT140, MAT141, or MAT142.

MAT150
College Algebra/Functions
5 credit(s) 5 period(s) lecture
Analysis and interpretation of the behavior and nature of functions including polynomial, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, 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 MAT120, or MAT121, or MAT122, or satisfactory score on a placement test. Course Notes: May receive credit for only one of the following: MAT150, MAT151, MAT152, or MAT187.

MAT152
College Algebra/Functions
3 credit(s) 3 period(s) lecture
Analysis and interpretation of the behavior and nature of functions including polynomial, rational, exponential, logarithmic, power, absolute value, and piecewise-defined functions; systems of equations, using multiple methods including matrices, modeling and solving real world problems, and defining and illustrating sequences and series. Prerequisites: A grade of "B" or better in MAT120, or MAT121, or MAT122, or satisfactory score on a placement test. Course Notes: May receive credit for only one of the following: MAT150, MAT151, MAT152, or MAT187.

MAT182
Plane Trigonometry
3 credit(s) 3 period(s) lecture
A study of measures of angles, properties of graphs of trigonometric functions, fundamental identities, addition and half-angle formulas, inverse trigonometric functions, solutions of trigonometric equations, complex numbers and properties of triangle solution. May receive credit for only one of the following: MAT182 or MAT187. Prerequisites: Grade of "C" or better in MAT150, or MAT151, or MAT152, or equivalent, or concurrent registration in MAT150, or MAT151, or MAT152, or satisfactory score on a placement exam. Course Notes: May receive credit for only one of the following: MAT150, MAT151, MAT152, or MAT187.

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

MAT206 SUN= MAT 1160
Elements of Statistics
3 credit(s) 3 period(s) lecture
Basic concepts and applications of statistics, including data description, estimation and hypothesis tests. Prerequisites: A grade of "C" or better in MAT140 or MAT141 or MAT142 or (a grade of "C" or better in MAT150 or MAT151 or MAT152) or equivalent, or satisfactory score on a placement test. Course Notes: May receive credit for only one of the following: MAT202 or MAT220.

MAT212 SUN= MAT 2212
Brief Calculus
3 credit(s) 3 period(s) lecture
Introduction to the theory, techniques and applications of the differential and integral calculus of functions with problems related to business, life, and the social sciences. Prerequisites: Grade of C or better in MAT150, or MAT151, or MAT152, or MAT187, or appropriate Math placement test score. Course Notes: Students may receive credit for only one of the following: MAT212 or MAT213.

MAT213
Brief Calculus
4 credit(s) 4 period(s) lecture
Introduction to the theory, techniques and applications of the differential and integral calculus of functions with problems related to business, life, and the social sciences. Prerequisites: Grade of "C" or better in MAT150, or MAT151, or MAT152, or MAT187, or appropriate Math placement test score. Course 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 MAT212 or MAT213.

MAT218
Mathematical Analysis for Business
4 credit(s) 4 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 MAT212 or MAT213.

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

SUN# – Consult with Academic Advisement for details.

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

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.

MAT231  Calculus with Analytic Geometry II
4 credit(s) 4 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.

MAT256  Investigating Quantity: Number, Operations and Numeration Systems
4 credit(s) 4 period(s) lecture
Explore number, numeration systems and operations on numbers. Techniques of problem solving with an emphasis on exploring a variety of strategies. Use a variety of visualization techniques to develop a conceptual understanding of these topics. Prerequisites: A grade of "C" or better in (MAT150 or MAT151 or MAT152 or higher), OR A grade of "C" or better in (MAT120 or MAT121 or MAT122) AND (MAT140 or MAT141 or MAT142 or higher), OR [A grade of "C" or better in (MAT140 or MAT141 or MAT142) AND satisfactory score on District placement exam to permit enrollment in (MAT150 or MAT151 or MAT152 or higher)]. Course Notes: MAT256 is designed to meet requirements for prospective elementary education teachers.

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

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

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) 3 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.

-- Consult with Academic Advisement for details.

For additional information on MCCCD course competencies, visit: https://asa.maricopa.edu/departments/center-for-curriculum-transfer-articulation
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
Prerequisites: A grade of "C" or better in MDL242, acceptance into the Medical Laboratory Science program, and permission of the Program Director.

MDL245
Practicum: Clinical Immunohematology and Immunology
1 credit(s) 6 period(s) lab
Practicum in immunohematology and immunology in healthcare facilities or reference laboratories. Performance of clinical skills in immunity and immunologic testing, testing for disorders of the immune system, blood group antigens, antibodies, and genetics. Observation of donor blood collection, component preparation, and transfusion therapies. Performance of testing techniques and evaluation of data.
Prerequisites: A grade of "C" or better in MDL244, acceptance into the Medical Laboratory Science program, and permission of the Program Director.

MDL246
Clinical Microbiology
6 credit(s) 9 period(s) lecture + lab
Emphasis on microbial infectious and bioterrorism agents, classification, morphology, phenotyping, diseases, biotechnology and molecular technology, quality assurance and quality control, epidemiological significance, and regulatory standards. Application of antimicrobial, biochemical, and differential testing, drug resistance, selection, inoculation and incubation of culture media, isolation techniques, cell culture and viral detection tests, and macroscopic and microscopic evaluation. Emphasis on staining, rapid and commercial testing methods, safety precautions, specimen collection, handling, storage, and disposal of biological material, pretreatment, decontamination, and concentration techniques, specimen type, source, and common microbial flora, specimen acceptability, and instrumentation.
Prerequisites: A grade of "C" or better in MDL246, acceptance into the Medical Laboratory Science program, and permission of the Program Director.

MDL247
Practicum: Clinical Microbiology
1 credit(s) 9 period(s) lab
Practicum experience in clinical microbiology based in healthcare facilities or reference laboratories. Emphasis on microbial infectious and bioterrorism agents, classification, morphology, phenotyping, diseases, biotechnology and molecular technology, quality assurance and quality control, epidemiological significance, and regulatory standards. Application of antimicrobial, biochemical, and differential testing, drug resistance, selection, inoculation and incubation of culture media, isolation techniques, cell culture and viral detection tests, and macroscopic and microscopic evaluation. Procedures for staining, rapid and commercial testing methods, safety precautions, specimen collection, handling, storage, and disposal of biological material, pretreatment, decontamination, and concentration techniques, specimen type, source, and common microbial flora, specimen acceptability, and instrumentation.
Prerequisites: A grade of "C" or better in 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 MDL246, 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 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 MDL248, 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

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: 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. 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 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.
MGT276  
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: 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: (MTC105 and MTC106) 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: ENGS101, or ENGS107, 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: MTC155 and MTC156, or permission of Instructor.

MHL242  
Music History and Literature 1750 to Present  
3 credit(s) 3 period(s) lecture  
In-depth study of music history from the Classical period through the Contemporary period. Prerequisites: MHL241 or permission of Instructor.

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 leadership skills such as cultural understanding, goal setting, time management, stress management and comprehensive fitness relate to leadership, officership and the Army profession. Focuses on developing basic knowledge and comprehension of Army leadership dimensions, attributes and core leader competencies while gaining an understanding of the Army ROTC program, its purpose in the Army, and its advantages for the student. Includes physical training assessments, tactical training, as well as lecture-based instruction. Prerequisites: None.

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: 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: MIS102.
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 six (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: 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: 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, nurbs, and polygons. 3-D translation, scaling, materials, and rendering. Prerequisites: 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: CIS/MMT140, or permission of Instructor.

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

MTC – Music: Theory/Composition

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

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

MTC105
Music Theory I
3 credit(s) 3 period(s) lecture
The chronological study of music theory including: harmony, melody, texture, structure and timbre through analysis, original compositions and basic exercises to demonstrate musical concepts. Prerequisites: MTC100 or MTC101 or permission of Instructor. 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: (TCM100 and TCM136) or permission of Instructor.

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

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

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

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

MTC193
Computer-Based Sound Synthesis
3 credit(s) 4 period(s) lecture + lab
Principles of sound synthesis using computer-based methods. Synthesis methods include subtractive, additive, frequency modulation, sample and synthesis, and hybrid. Emphasis on synthesis techniques for use in electronic music. Prerequisites: MTC191 or permission of Instructor.

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

MTC206
Advanced Sound Design for Film and Video
3 credit(s) 5 period(s) lecture and lab
Explores techniques and advanced applications used in designing sound using original student footage on a non-linear editing system. Prerequisites: MTC/TCM120 or permission of Instructor.

MTC240
Composition
3 credit(s) 0.6 period(s) lecture + lab
Introduction to the basics of music composition, stressing techniques and procedures for developing original ideas. May be repeated for total of twelve (12) credit hours. Prerequisites: (MTC106 and MTC108, or equivalent), and permission of Instructor.

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

MTC256
Aural Perception IV
1 credit(s) 2 period(s) lecture + lab
A continuation of Aural Perception III, including extended chords. Prerequisites: None. Corequisites: MTC255.
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: MUC110, or MUC110AA, or TCM/VTM105, or permission of Instructor.

MUC112 Digital Audio Workstation II (DAW II)
3 credit(s) 5 period(s) lecture + lab
Use of digital mixing and automation software in conjunction with editing and recording. Includes computer operation, troubleshooting, and file management. Prerequisites: MUC111, and (MUC111 or MUC111AA).

MUC122 Sound Design I
3 credit(s) 5 period(s) lecture + lab
Introduction to Sound Design and Audio Post-Production for Multimedia. Includes creating and editing Sound Effects, ADR, Foley, Music, and Ambience, for multiple mediums such as Film, TV, Video Gaming, Theatre, and Dance. Emphasis on computer assisted production using Digital Audio Workstations and sound design techniques using industry-standard equipment. Prerequisites: MTC191 or TCM/VTM105. Prerequisites or Corequisites: MUC111 or permission of Instructor.

MUC195 Studio Music Recording I
3 credit(s) 5 period(s) lecture + lab
Basic principles of studio sound recording. Emphasis on musical acoustics, operation of recording equipment, studio setups, and multitrack recording. Includes studio session process and musical production decisions. Prerequisites: None.

MUC196 Studio Music Recording II
3 credit(s) 5 period(s) lecture + lab
Emphasis on signal-processing equipment, mixing consoles, and advanced musical recording session procedures, production, and engineering. Includes mix-down and resultant master tape of a musical recording session. Prerequisites: MUC195 or MUC195AA.

MUC197 Live Sound Reinforcement I
3 credit(s) 3 period(s) lecture + lab
Basic principles of live sound engineering. Emphasis on signal flow, acoustic, sound reinforcement set-ups and installation, signal processing, microphone selections and placement. Includes setting up sound systems and mixing live music. Prerequisites: None.

MUC198 Live Sound Reinforcement II
3 credit(s) 3 period(s) lecture
Emphasis on musical production decisions. Front-of-house and monitor console placement, loudspeaker arrangements, power considerations, program material and sound pressure levels. Includes setting up of sound system and mixing live performances with various styles of music. In addition to mixing at alternate locations. Prerequisites: MUC197.

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

MUC222 Sound Design II
3 credit(s) 5 period(s) lecture + lab
Intermediate level Sound Design and Audio Post-Production for Multimedia. Topics include: creating and editing Sound Effects, Automated Dialogue Replacement, Foley, Music, and Ambience for multiple mediums such as Film, TV, Video Gaming, Theatre, and Dance. Emphasis on computer assisted production using Digital Audio Workstations and acoustic forces. Prerequisites: (MUC122 or MTC/TCM120), 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 and how recording projects are organized from pre-production through delivery of the final mix. Prerequisites: MUC196 and (MUC111 or permission of Instructor).

MUC297AA 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: MUC297AA may be repeated for a total of twelve (12) credit hours.

MUC299AA Music Business 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.
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<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Periods</th>
<th>Instructor</th>
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<tr>
<td>MUE240</td>
<td>Introduction to Choral Methods</td>
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<tr>
<td>MUP130</td>
<td>Beginning Group Piano</td>
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<td>MUP131</td>
<td>Class Piano I</td>
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<td>MUP132</td>
<td>Class Piano II</td>
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<td>Class Voice I</td>
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<td>MUP134</td>
<td>Class Voice II</td>
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<td>MUP135</td>
<td>Concert Choir</td>
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<tr>
<td>MUP150</td>
<td>Community Chorus</td>
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<td>MUP151</td>
<td>Community Band</td>
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<td>MUP152</td>
<td>Jazz Ensemble</td>
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**MUE – Music: Education**

**MUE240**  
Introduction to Choral Methods  
2 credit(s) 3 period(s) lecture + lab  
Overview of techniques, methods, materials, style characteristics, and repertoire used in directing choral music at the secondary level including simulated teaching, conducting, and the demonstration of vocal and choral performance practices.  
**Prerequisites:** None.

**MUP – Music: Performance**

**MUP101, MUP151, MUP201, MUP251**  
Private Instruction  
1 credit(s) 0.6 period(s) lecture + lab  
Private Instruction emphasizing developmental improvement of musicianship and technique from an entering skill level. Four course sequence required of all music majors meeting departmental requirements. Instruction provided on voice, piano, harpsichord, organ, guitar, trumpet, French horn, trombone, 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:** MUP123AD may be repeated for credit.

**MUP123AD**  
Studio Class: Instrumental  
0.5 credit(s) 0.5 period(s) lecture + lab  
Performance and laboratory class for students enrolled in private instrumental instruction. Emphasis on demonstration and discussion of specific instrumental problems.  
**Prerequisites:** None.  
**Corequisites:** Private Instrumental Instruction.  
**Course Notes:** MUP123AD may be repeated for credit.

**MUP130**  
Beginning Group Piano  
2 credit(s) 3 period(s) lecture + lab  
Basic introduction to playing piano through music reading, chords, rhythmic, and written activities. Designed for those with little or no piano experience.  
**Prerequisites:** None.

**MUP131**  
Class Piano I  
2 credit(s) 3 period(s) lecture + lab  
Development of beginning piano techniques and the fundamentals of music including basic hand position, music reading skills of melodic and harmonic material, major scales, transposition, and harmonizations including the I, IV, V7 chords.  
**Prerequisites:** None.

**MUP132**  
Class Piano II  
2 credit(s) 3 period(s) lecture + lab  
Continuation of Piano I with emphasis on elementary piano techniques including major and minor scales, transposition, improvisation, and sight reading.  
**Prerequisites:** MUP131 or permission of Instructor.

**MUP133**  
Class Voice I  
2 credit(s) 3 period(s) lecture + lab  
Introduction to the fundamentals of vocal production. Emphasis on breathing techniques, tone production and performances in class of solo vocal literature.  
**Prerequisites:** None.

**MUP134**  
Class Voice II  
2 credit(s) 3 period(s) lecture + lab  
Continuation of Class Voice I including the elements of stage presence and diction.  
**Prerequisites:** MUP133 or permission of Instructor.

**MUP135**  
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.

**MUP137**  
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.  
**Prerequisites:** None.  
**Course Notes:** MUP157 may be repeated for credit.

**MUP150**  
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:** MUP150 may be repeated for credit. Auditions may be required.

**MUP152**  
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.

**MUP153**  
Concert Choir  
2 credit(s) 5 period(s) lecture + lab  
A mixed choir designed to emphasize choral techniques and performance of all 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.  
**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) 2 period(s) lecture  
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
Intermediate theoretical and performance skills in many styles of jazz improvisation. May be repeated for a total of six (6) credit hours. Prerequisites: MUP164 or permission of Instructor.

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

MUP182
Chamber Singers
1 credit(s) 3 period(s) lecture + lab
Practical and performance experience in various styles of vocal music. Prerequisites: None. Course Notes: MUP182 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. Concerts presented throughout the semester. Percussion techniques are studied and refined as they relate to the literature performed. Emphasis placed on reading and listening skills, increased aesthetic discrimination. Informed performance practice and skills on all percussion instruments and traditions. Prerequisites: None. Course Note: MUP190 may be repeated for up to six (6) credits.

MUP209
Elements of Conducting
2 credit(s) 2 period(s) lecture
Essentials of conducting techniques used in choral and instrumental ensembles including terminology, interpretation, and styles. Prerequisites: None.

MUP225
Class Guitar I
2 credit(s) 3 period(s) lecture + lab
Emphasis on note-reading and folk-style harmonic accompaniment. Includes finger-style playing. Stresses development of efficient practicing techniques and proper sitting and hand positions. Prerequisites: None.

MUP226
Class Guitar II
2 credit(s) 3 period(s) lecture + lab
Note-reading range including second position and parts of higher positions. Classical, popular, Latin, and other styles of music. Theory including scales, keys, and chord construction. Technical exercises of both hands. Prerequisites: MUP225 or permission of Instructor.

MUP227
Class Guitar III
2 credit(s) 3 period(s) lecture + lab
Additional fingerboard positions. Ensemble techniques and performance. Prerequisites: MUP226 or permission of Instructor.

MUP228
Class Guitar IV
2 credit(s) 3 period(s) lecture + lab
Advanced fingerboard positions. Duet and trio performances. Advanced ensemble techniques. Prerequisites: MUP227 or permission of Instructor. Course Notes: MUP228 may be repeated for credit.

MUP231
Class Piano III
2 credit(s) 3 period(s) lecture + lab
Development of intermediate piano techniques including selected solo literature, transposition of harmonic patterns, and secondary dominants. Prerequisites: MUP132 or permission of Instructor.

MUP232
Class Piano IV
2 credit(s) 3 period(s) lecture + lab
Continuation of Piano III including modulation techniques, improvisation of piano accompaniments, advanced chromatic harmony, and sight reading of advanced literature. Prerequisites: MUP231 or permission of Instructor.

MUP233
Class Voice III
2 credit(s) 3 period(s) lecture + lab
Interpretive singing through a closer examination of coloring, tone production, dynamics, and tempo indications. Prerequisites: MUP134.

MUP234
Class Voice IV
2 credit(s) 3 period(s) lecture + lab
Emphasis on the preparation of solo vocal literature for the purpose of evaluation and the integration of the music with the drama of the music. Prerequisites: MUP233 or permission of Instructor. Course Notes: MUP234 may be repeated for credit.

MUP250AB
Survey of Diction for Singers (Italian/Latin)
1 credit(s) 2 period(s) lecture + lab
Introduction to the use of phonetics in the study of Italian/Latin song literature. Prerequisites: None.

MUP250AC
Survey of Diction for Singers (German)
1 credit(s) 2 period(s) lecture + lab
Introduction to the use of phonetics in the study of German song literature. Prerequisites: None.

NAV – Navajo

NAV101
Elementary Navajo I
4 credit(s) 4 period(s) lecture
Basic grammar, pronunciation, and vocabulary of the Navajo language. Practice of listening, speaking, reading, and writing skills. Includes the study of the Navajo culture with participation in an off-campus Navajo cultural event. Prerequisites: None.

NAV102
Elementary Navajo II
4 credit(s) 4 period(s) lecture
Continued study of grammar, pronunciation, and vocabulary of the Navajo language. Emphasis on listening, speaking, reading, and writing skills. Prerequisites: NAV101 or permission of department. Completion of prerequisites within the last three years is required. Course Note: Includes the study of the Navajo culture with participation in an off-campus Navajo cultural event.

NUR – Nursing Science: Basic

NUR152
Nursing Theory and Science I
9 credit(s) 19 period(s) lecture and lab
Introduction of Nurse of the Future competencies as a foundational framework for development of the professional nurse. Basic care concepts and the nursing process are utilized to meet the needs of adult and older adult patients. Prerequisites: Admission into the Nursing Program.

NUR172
Nursing Theory and Science II
9 credit(s) 16 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: (BIO202 and NUR152) or permission of Nursing Department Chair.
NUR252
Nursing Theory and Science III
9 credit(s) 16 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: (CRE101 and NUR172 and PED101) or permission of Nursing Department Chair.

NUR283
Nursing Theory and Science IV
9 credit(s) 16 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: (BIO205 and NUR282) or permission of Nursing Department Chair.

NVH – Navajo Humanities

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: PAD100 or permission of Instructor.

PED – Physical Education

PED101s
Physical Activities: Basic
1 credit(s) 2 period(s) lecture + lab
Individual, dual, or team sports activities at the basic level. Prerequisites: None. Course Note: PED101 may be repeated for credit.

PED102s
Physical Activities: Intermediate
1 credit(s) 2 period(s) lecture + lab
Individual, dual, or team sports activities at the intermediate level. Prerequisites: None. Prior experience recommended. Course Note: PED102 may be repeated for credit.

PED103s
Physical Activities: Basic
0.5 credit(s) 1 period(s) lecture + lab
Individual, dual, or team sports activities at the basic level. Prerequisites: None. Course Note: PED103 may be repeated for credit.

PED105
Army Master Fitness
1 credit(s) 3 period(s) lecture + lab
Introduces the student to the Army Master Fitness Program. Designed to enhance the student’s level of individual fitness and wellness. Prerequisites: None. Course Note: The course is taught at the ASU Tempe Campus. Contact the Army ROTC Department.

PED111
Aerobics
1.5 credit(s) 3 period(s) lecture + lab
Aerobic activity and wellness study to help develop a lifetime of regular exercise, stress management, and proper nutrition. Includes warm-up/stretch, aerobic exercise, selected strength exercises, and cool down/stretch. Prerequisites: None.

PED114
Fitness
1.5 credit(s) 3 period(s) lecture + lab
Fitness activity and wellness study to help develop a lifetime of regular exercise, stress management, and proper nutrition. Workout includes warm-up/stretch, aerobic exercise, selected strength exercises, and cool down/stretch. Prerequisites: None. Course Note: PED114 may be repeated for credit.

PED115
Lifetime Fitness
2 credit(s) 4 period(s) lecture + lab
Increase personal fitness, strength, and vitality. Current principles of cardiovascular exercise, weight training, flexibility, and balance exercises applicable to lifetime fitness goals. Personalized fitness plans developed and implemented with support of highly trained fitness professionals. Techniques to make sessions more effective and enjoyable. Prerequisites: None. Course Note: PED115 may be repeated for a total of eight (8) credit hours.

PED116
Cardiovascular Fitness
2 credit(s) 4 period(s) lecture + lab
Blends an effective warm-up, challenging cardiovascular and strength/endurance training strategies and a relaxing cool-down. Tailored by certified fitness professionals to personal goals. Prerequisites: None. Course Note: PED116 may be repeated for a total of eight (8) credits.

PED117
Weight Training for Wellness
2 credit(s) 4 period(s) lecture + lab
Strength training and muscular fitness activity to help develop a lifetime of regular exercise and muscular strength maintenance. Development of full body strength and stability of the body’s core musculature, translating to increased power, balance, and functional movement ability including assessment of current strength and goal-specific program design to increase strength and muscular fitness. Prerequisites: None. Course Note: PED117 may be repeated for a maximum of eight (8) credits.

PED201s
Physical Activities: Advanced
1 credit(s) 2 period(s) lecture + lab
Individual, dual, or team sports activities at the advanced level. Prerequisites: None. Prior experience at competitive level recommended. Course Note: PED201 may be repeated for credit.
### PHI – Philosophy

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHI101</td>
<td>Introduction to Philosophy</td>
<td>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.</td>
</tr>
<tr>
<td>PHI103</td>
<td>Introduction to Logic</td>
<td>3 credit(s) 3 period(s) lecture. Informal logic, logical fallacies, elementary symbolic logic, analysis of argument forms, and construction of proofs for validity. Prerequisites: ENG101 or ENG107 or equivalent.</td>
</tr>
<tr>
<td>PHI105</td>
<td>Introduction to Ethics</td>
<td>3 credit(s) 3 period(s) lecture. A survey of ethical theory in Western Philosophy, including the major normative theories and selected metaethical theories. Prerequisites: None.</td>
</tr>
<tr>
<td>PHI122</td>
<td>Contemporary Moral Issues</td>
<td>3 credit(s) 3 period(s) lecture. Philosophical consideration of such moral issues as civil disobedience, preferential treatment, abortion, privacy, sexual morality, and poverty and hunger. Prerequisites: None.</td>
</tr>
<tr>
<td>PHI123</td>
<td>Medical and Bio-Ethics</td>
<td>3 credit(s) 3 period(s) lecture. A philosophical consideration of moral problems that arise in relation to medicine and biology, e.g., death, patient rights and biological experimentation. Prerequisites: None.</td>
</tr>
<tr>
<td>PHI126</td>
<td>Environmental Ethics</td>
<td>3 credit(s) 3 period(s) lecture. Philosophical consideration of diverse theories and perspectives on the environment and application of these theories to global moral issues such as animal rights, preservation of wilderness and species, population, world hunger and poverty, and air and water pollution. Prerequisites: None.</td>
</tr>
<tr>
<td>PHI128</td>
<td>Philosophy of Sexuality</td>
<td>3 credit(s) 3 period(s) lecture. Philosophical examination of sexuality in human life. Historical and critical survey of philosophical and theological views. Comparison and evaluation of contemporary theories about the nature of sexual desire and sexual acts. Implications of theories for contemporary moral problems. Prerequisites: ENG101, or ENG107, or permission of Instructor. Student must be 18 years or older.</td>
</tr>
</tbody>
</table>

### PHS – Physical Science

<table>
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<th>Code</th>
<th>Title</th>
<th>Notes</th>
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<tbody>
<tr>
<td>PHS110</td>
<td>Fundamentals of Physical Science</td>
<td>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.</td>
</tr>
</tbody>
</table>

### PHY – Physics

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<th>Code</th>
<th>Title</th>
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<tr>
<td>PHY101</td>
<td>Introduction to Physics</td>
<td>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.</td>
</tr>
<tr>
<td>PHY111</td>
<td>General Physics I</td>
<td>4 credit(s) 6 period(s) lecture and lab. Includes motion, energy, and properties of matter. Prerequisites: 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 &quot;C&quot; or better or permission of Department or Division. Course Note: PHY111 is recommended for preprofessional and is suggested for certain other majors. Students may receive credit for only one of the following: PHY111 or PHY111AA.</td>
</tr>
<tr>
<td>PHY112</td>
<td>General Physics II</td>
<td>4 credit(s) 6 period(s) lecture and lab. Includes electricity, electromagnetism, and modern physics. Prerequisites: PHY111.</td>
</tr>
<tr>
<td>PHY121</td>
<td>University Physics I: Mechanics</td>
<td>4 credit(s) 6 period(s) lecture and lab. Kinematics, Newton’s laws, work, energy, momentum, conservation laws, dynamics of particles, solids, fluids, mechanical waves, and sound. Prerequisites: MAT220, or MAT221, or permission of Department or Division. One year of High School physics or PHY111 and PHY112 suggested but not required.</td>
</tr>
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</table>

### PLB – Phlebotomy

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>PLB109</td>
<td>Phlebotomy: Basic Skills</td>
<td>2 credit(s) 4 period(s) lecture + lab. Theory and practice of basic phlebotomy including laboratory test codes, equipment, and procedures. Prerequisites: Acceptance into the Medical Assisting or Phlebotomy program, a grade of &quot;C&quot; or better in HCC130 and HCC145AA, and permission of Program Director.</td>
</tr>
<tr>
<td>PLB110</td>
<td>Practicum: Fundamental Phlebotomy Skills</td>
<td>0.5 credit(s) 3 period(s) lab. Application of fundamental phlebotomy techniques in a clinical laboratory setting or health care environment. Prerequisites: PLB109, submit to a drug screening and demonstrate negative results, and acceptance into the Medical Assisting or Phlebotomy program, or permission of Program Director. Course Notes: PLB110 may be repeated for credit.</td>
</tr>
<tr>
<td>PLB110A</td>
<td>Practicum: Basic Phlebotomy: Training for Law Enforcement Officers</td>
<td>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.</td>
</tr>
<tr>
<td>PLB111</td>
<td>Specimen Processing and Advanced Techniques in Phlebotomy Procedures</td>
<td>2 credit(s) 4 period(s) lecture + lab. Theory and practice of advanced techniques in phlebotomy and specimen processing including laboratory test codes, equipment, and procedures. Prerequisites: PLB109 and permission of Program Director.</td>
</tr>
</tbody>
</table>
PLB112 Practicum: Specialized Phlebotomy Techniques
0.5 credit(s) 3 period(s) lab
Application of specialized phlebotomy techniques in a clinical laboratory setting or health-care environment. Prerequisites: PLB109 and PLB110. Corequisites: PLB111 and PLB121, or permission of 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.

PLB121 Practicum: Basic Specimen Processing
2 credit(s) 8 period(s) lab
Application of specimen processing techniques in a clinical laboratory setting or health care environment. Prerequisites: PLB109 and PLB110. Corequisites: PLB111 and PLB112 or permission of Program Director. Course Notes: PLB121 supports Medical Assisting program completers seeking the Certificate of Completion in Phlebotomy and requires formal acceptance into the program.

PLB122 Practicum: Phlebotomy and Specimen Processing
3 credit(s) 12 period(s) lab
Application of phlebotomy and specimen processing techniques in a clinical laboratory setting or health care environment. Prerequisites: PLB109 or permission of Program Director. Prerequisites or Corequisites: PLB111 or permission of Program Director.

POS – Political Science

POS115 Issues in American Politics
3 credit(s) 3 period(s) lecture
Examination of major issues in current affairs in the fields of politics, economics, social relations, foreign affairs, aesthetics, and others through the reading and viewing of secondary information sources. Prerequisites: ENG101 or ENG107 or equivalent.

POS120 World Politics
3 credit(s) 3 period(s) lecture
Introduction to the principles and issues relating to the study of international relations. Evaluation of the political, economic, national, and transnational rationale for international interactions. Prerequisites: None.

POS125 Issues in World Politics
3 credit(s) 3 period(s) lecture
Contemporary issues and factors in international relations. Stress conditions in civil order, trade and international institutions. May be repeated for a total of six (6) credit hours. Prerequisites: None.

POS130 State and Local Government
3 credit(s) 3 period(s) lecture
Survey of state and local government in the United States. Special attention on Arizona State Government. Prerequisites: None.

POS140 Comparative Government
3 credit(s) 3 period(s) lecture
Overview and evaluation of the sub-field of comparative politics. Covers various national governments from around the world: their structure, system, method of governance. Examines methods of assessing these governments. Prerequisites: None.

POS180 United Nations Studies
3 credit(s) 3 period(s) lecture + lab
Historical origins, structural makeup, political and operational characteristics, and legal activities of the United Nations. Analysis of the overall institution's ongoing utility, productivity and creativity. Prerequisites: None.

POS210 Political Ideologies
3 credit(s) 3 period(s) lecture
An exploration of the diversity of textual, historical, and cultural traditions of the political thought that has shaped the human experience. Prerequisites: (A grade of "C" or better in RDG091 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).

POS220 U.S. and Arizona Constitution
3 credit(s) 3 period(s) lecture
Examination of the United States Constitution and the constitution and government of the State of Arizona. Prerequisites: None.

POS221 Arizona Constitution
1 credit(s) 1 period(s) lecture
Examination of the Constitution of the State of Arizona. Equivalent to the second part of POS220. May not enroll in POS220 and POS221 concurrently. Prerequisites: None.

POS222 U.S. Constitution
2 credit(s) 2 period(s) lecture
Examination of the United States Constitution. Equivalent to the first part of POS220. May not enroll in POS220 and POS222 concurrently. Prerequisites: None.

POS223 Civil Rights 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: (A grade of "C" or better in RDG091 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).

POS230 Public Policy and Civic Engagement: César Chávez Legacy
3 credit(s) 3 period(s) lecture
Exploration of democratic citizenship in a multicultural society. Focus on the role of the activist in public policy service, community organizing, and social change strategies such as communication, social movement theory perspectives, and how leaders maintain movement momentum. Interpretation of the vision, philosophy, and work of César E. Chávez; and accomplishments by citizens (individually and collectively) in social change and opposition. Special emphasis on community engagement participation. Prerequisites: None. Course Notes: POS230 requires a minimum of 16 hours of civic engagement participation with community partners.

POS281AB Public Policy/Service Internship
3 credit(s) 3 period(s) lab
Field experience in community service, public policy or public service. May be repeated for a total of nine (9) POS281 credit hours; may not repeat specific internship assignment. Prerequisites: Minimum of 15 credit hours at college granting internship with minimum GPA of 3.0 and permission of Instructor. Prerequisite or Corequisite: POS280.
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.

PSY201
Clinical Psychology
3 credit(s) 3 period(s) lecture
Focuses on the study of abnormality and treatment of psychological disorders. Prerequisites: PSY201 with a grade of ‘C’ or better or permission of Instructor.

PSY250
Social Psychology
3 credit(s) 3 period(s) lecture
The scientific study of how people’s thoughts, feelings, and behaviors are influenced by other people and situations. Includes how we think about ourselves and others, persuasion and influence, sexual and romantic attraction, friendship and helping others, aggression and prejudice. Prerequisites: PSY101 with a grade of ‘C’ or better or permission of the Instructor.

PSY205
Abnormal Psychology
3 credit(s) 3 period(s) lecture
Distinguishes between normal behavior and psychological disorders. Subjects may include stress disorders, problems with anxiety and depression, unusual and abnormal sexual behavior, schizophrenia and addictive behaviors. Causes and treatments of psychological problems and disorders are discussed. Prerequisites: PSY101 with a grade of ‘C’ or better, or permission of Instructor.

PSY277
Psychology of Human Sexuality
3 credit(s) 3 period(s) lecture
Survey of psychological and physiological aspects of human sexual behavior. Emphasis placed on the integration of the cognitive, emotional, and behavioral factors in sexual functioning. Prerequisites: PSY101 with a grade of ‘C’ or better, or permission of Instructor. Student must be 18 years or older.

PSY290AB
Research Methods
4 credit(s) 6 period(s) lecture and lab
Planning, execution, analysis, and written reporting of psychological research using American Psychological Association guidelines (APA). Surveys the literature, procedures, and instruments in representative areas of psychological research. Prerequisites: ENG101 or ENG107. Prerequisites or Corequisites: PSY230 with a grade of ‘C’ or better, or permission of Instructor.

PSY298
Special Projects
1-3 credit(s) 1-3 period(s) lab
Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites: None.
RDG – Reading

In college, most courses involve reading and studying. 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 238.

RDG08
Phonics
3 credit(s) 3 period(s) lecture
Designed for students who are learning English as a second language. Includes the study of the speech sounds used in English as represented by the written symbols of the alphabet; recognition of spelling patterns and resulting pronunciation; and diacritical markings. Prerequisites: Reading placement score (CELSA).

RDG/ESL016
Reading English as a Second Language I
3 credit(s) 3 period(s) lecture
Designed for students who are learning English as a second language. Skills needed to become proficient readers in English. Sound symbol relationships of the English alphabet. Essential vocabulary for daily communication both in isolation and context. Development of reading comprehension skills. Prerequisites: Appropriate ESL placement test score.

RDG/ESL026
Reading English as a Second Language II
3 credit(s) 3 period(s) lecture
Designed for students who are learning English as a second language. Continued development of vocabulary and reading comprehension skills. Prerequisites: Appropriate ESL placement test score, or grade of “C” or better in ESL/RDG016, or permission of Instructor.

RDG/ESL036
Reading English as a Second Language III
3 credit(s) 3 period(s) lecture
Designed for students who are learning English as a second language. Instruction for more advanced vocabulary and reading comprehension skills. Prerequisites: Appropriate ESL placement test score, or grade of “C” or better in ESL/RDG026, or permission of Instructor.

RDG/ESL046
Reading English as a Second Language IV
3 credit(s) 3 period(s) lecture
Developed for students of English as a second language. Development of advanced vocabulary, comprehension skills, and culture awareness. Prerequisites: Appropriate ESL placement test score, or grade of “C” or better in ESL/RDG036, or permission of Instructor.

RDG071
Basic Reading
3 credit(s) 3 period(s) lecture
Provide opportunities for practice and application of basic reading skills. Includes phonetic 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.

RDG091
College Preparatory Reading
3 credit(s) 3 period(s) lecture
Designed to improve basic reading and study skills, vocabulary and comprehension skills. Prerequisites: Appropriate reading placement test score, or grade of “C” or better in RDG081, or permission of Instructor. Course Note: RDG091 is recommended to all students whose placement test scores indicate a need for reading instruction.

RDG095
Intensive Foundations for College Reading
6 credit(s) 6 period(s) lecture
Accelerated format to improve basic reading skills, study skills, and information literacy skills including vocabulary development, main idea identification, patterns of organization recognition, and comprehension improvement. Prerequisites: Appropriate reading placement test score, or a grade of “B” or better in RDG071, or permission of Instructor. Course Notes: RDG095 is an accelerated and intensive learning program for students and meets the requirements for RDG081 and RDG091 in one semester.

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.
REL – Religious Studies

REL100 World Religions
3 credit(s) 3 period(s) lecture
The development of various religions from the prehistoric to modern times. Political, economic, social and geographic relationships among world religions. Consideration of both Eastern and Western religions. Prerequisites: None.

REL203/AIS213 American Indian Religions
3 credit(s) 3 period(s) lecture
An examination of the historical and cultural background of diverse lifeways and worldviews belonging to the peoples indigenous to the North American continent over time, including a study of modern day American Indian beliefs and practices. Prerequisites: ENG101 or ENG107 or equivalent.

REL205 Religion and the Modern World
3 credit(s) 3 period(s) lecture
Introduction to the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world. Prerequisites: ENG101, or ENG107, or equivalent.

REL212 Introduction to Islam
3 credit(s) 3 period(s) lecture
Introduction to history, scriptures, practices and impact of Islam. Prerequisites: None.

REL270 Introduction to Christianity
3 credit(s) 3 period(s) lecture
The nature and content of the Christian tradition developed over time, with overview of the New Testament, major historical trends and figures, major Christian ideas and practices, and survey of denominations. Prerequisites: None.

SBS – Small Business Management

SBS213 Hiring and Managing Employees
1 credit(s) 1 period(s) lecture
Methods and techniques for managing employees in a small business. Includes supervisor’s role, leadership styles, interpersonal communications, staff planning, employee work styles, techniques for handling problem employees, and employee motivation. Focuses on real life situations to enable the business owner to gain high performance from their employee team. Includes segment on hiring, new employee orientation, training, benefits, and developing future staffing needs assessment. Prerequisites: None.

SBS214 Small Business Customer Relations
1 credit(s) 1 period(s) lecture
Developing and improving customer relations for the small business. Planning and delivering quality customer service. Includes topics on attitude of employees, customer perceptions and motivations, handling customer dissatisfaction, and developing customer, supplier, vendor, and distributor loyalty. Prerequisites: None.

SBS216 Planning for a Small Business
2 credit(s) 2 period(s) lecture
Relates business management issues to a specific small business through development of an individual study plan. Provides on-site review of business operation by trained instructor. Prerequisites: SBS200 and SBS204 or permission of instructor.

SBS217 Starting/Managing a Home Business
1 credit(s) 1 period(s) lecture
Analysis of the successful operation of a home-based business. Includes study of economic feasibility, practicality, and adjustments for the family. Analysis of the advantages/disadvantages of operating a home based business, versus a ‘store-front’ business. Review of current trends in home business opportunities and franchises. Descriptions of home businesses that have succeeded in local, national, and international markets. Prerequisites: None.

SBS220 Internet Marketing for Small Business
2 credit(s) 2 period(s) lecture
Focuses on ‘e-Commerce’-doing business on the Internet and planning a website. Topics include: how the Internet can help growth and success of business; examples of successful marketing on the Internet; availability of Internet services; necessary hardware and software for marketing on the Internet; determining products/services appropriate for Internet marketing; budget constraints and ongoing operations of the Internet site. Prerequisites: None.

SBU – Society and Business

SBU200 Society and Business
3 credit(s) 3 period(s) lecture
The study and scientific inquiry of issues and demands placed on business enterprise by owners, customers, government, employees and society. Included are social, ethical and public issues and analysis of the social impact of business responses. Prerequisites: None.

SLG – Sign Language

Also see Interpreter Preparation, IPP on page 265.

SLG090AA Speedy Sign Language I
1 credit(s) 1 period(s) lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit(s)</th>
<th>Period(s)</th>
<th>Lecture Type</th>
</tr>
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<tbody>
<tr>
<td>SLG090AB</td>
<td>Speedy Sign Language II</td>
<td>1</td>
<td>1</td>
<td>Lecture</td>
</tr>
<tr>
<td>SLG101</td>
<td>American Sign Language I</td>
<td>4</td>
<td>4</td>
<td>Lecture</td>
</tr>
<tr>
<td>SLG102</td>
<td>American Sign Language II</td>
<td>4</td>
<td>4</td>
<td>Lecture</td>
</tr>
<tr>
<td>SLG103</td>
<td>Introduction to the Deaf Community</td>
<td>1</td>
<td>1</td>
<td>Lecture</td>
</tr>
<tr>
<td>SLG120</td>
<td>Fingerspelling II</td>
<td>2</td>
<td>2</td>
<td>Lecture</td>
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<tr>
<td>SLG200</td>
<td>Issues and Resources</td>
<td>3</td>
<td>3</td>
<td>Lecture</td>
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<tr>
<td>SLG201</td>
<td>American Sign Language III</td>
<td>4</td>
<td>4</td>
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<tr>
<td>SLG202</td>
<td>American Sign Language V</td>
<td>4</td>
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<tr>
<td>SLG203</td>
<td>American Sign Language V</td>
<td>4</td>
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<tr>
<td>SLG212</td>
<td>Deaf Culture</td>
<td>3</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>SLG204</td>
<td>Comparative Linguistics: ASL/English</td>
<td>3</td>
<td>3</td>
<td>Lecture</td>
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<td>SLG205</td>
<td>Linguistics of American Sign Language</td>
<td>4</td>
<td>4</td>
<td>Lecture</td>
</tr>
<tr>
<td>SLG206</td>
<td>American Sign Language IV</td>
<td>4</td>
<td>4</td>
<td>Lecture</td>
</tr>
<tr>
<td>SOC101</td>
<td>Introduction to Sociology</td>
<td>3</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>SOC110</td>
<td>Drugs and Society</td>
<td>3</td>
<td>3</td>
<td>Lecture</td>
</tr>
</tbody>
</table>

**SLG101: American Sign Language I**
4 credit(s) 4 period(s) lecture
Prerequisites: None. SLG103 suggested as a corequisite but not required.

**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.

**SLG120: Fingerspelling II**
2 credit(s) 2 period(s) lecture
Continued skill development including speed, dexterity, clarity, and loan signs. Advanced use of numbers, prefixes, suffixes, and polysyllabic words. Prerequisites: SLG102 and SLG110 with a grade of C or better or permission of Department or Division. Completion of prerequisites within the last three years is required.

**SLG200: Issues and Resources**
3 credit(s) 3 period(s) lecture
Implications of laws pertaining to educational choices and rights of deaf and hearing impaired individuals. Local, state, and national organizations, activities, and agencies affecting the deaf community. Prerequisites: SLG102 with a ‘C’ or better, or permission of Department or Division. Completion of prerequisites within the last three years is required.

**SLG201: American Sign Language III**
4 credit(s) 4 period(s) lecture
Linguistics of American Sign Language (A.S.L.) including non-manual behaviors and signing English idioms with conceptual accuracy. Emphasis on practical application of A.S.L. skills, expanded vocabulary, and cross-cultural communication. Prerequisites: SLG102 with a grade of C or better, or permission of Department or Division. Suggested but not required: (ENG101 or ENG107) and (CRE101, or CRE111, 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 CRE111, or exemption by score on the reading placement test). 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.

**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
Explores drugs as a social problem. 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. Explores prevention, intervention, and treatment. Examines public policies concerning drug related issues. Prerequisites: None.
SOC 157 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 U.S. and their importance, major challenges and changing trends. Explores being single, dating and attraction, love, cohabitation and marriage, family planning and parenthood, conflict and crisis within the family, and divorce. Prerequisites: None.

SOC/AIS 160 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.

SOC 180 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.

SOC 212 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.

SOC 221 Elementary Spanish Conversation II
3 credit(s) 3 period(s) lecture
Continued study of basic pronunciation, vocabulary, sentence structure, and cultural awareness, necessary to develop speaking and listening skills in Spanish. Prerequisites: None.

SOC 251 SOC 2250 Social Problems
3 credit(s) 3 period(s) lecture
A sociological exploration of selected social problems and inequalities. Analyzes issues in health care, dependencies, crime/violence, inequalities in race/class/gender/region/age, family, education, work, the economy, population migration/immigration, the environment, war and global insecurity. Prerequisites: None.

SPA – Spanish

SPA 101 SUNG 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.

SPA 102 SUNG SPA 1102 Elementary Spanish II
4 credit(s) 4 period(s) lecture
Continued study of grammar and vocabulary of Spanish-speaking cultures. Emphasis on speaking, reading, and writing skills. Prerequisites: A grade of "C" or better in SPA 101 or SPA 101AA, or permission of Department or Division. Completion of prerequisites within the last three years is required.

SPA 103 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.

SPA 104 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: SPA 103 or equivalent or departmental approval. Completion of prerequisites within the last three years is required.

SPA 115 Beginning Spanish Conversation I
3 credit(s) 3 period(s) lecture
Basic pronunciation, vocabulary, sentence structures, and cultural awareness, necessary to develop speaking and listening skills in Spanish. Prerequisites: None.

SPA 116 Beginning Spanish Conversation II
3 credit(s) 3 period(s) lecture
Continued study of basic pronunciation, vocabulary, sentence structures, and a cultural awareness necessary to develop speaking and listening skills in Spanish. Prerequisites: SPA 115, or SPA 115AA, or permission of Department or Division. Completion of prerequisites within the last three years is required.

SPA 117 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.

SPA 118 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: SPA 117 or permission of Department or Division. Completion of prerequisites within the last three years is required.

SPA 119 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.
SPH – Spanish Humanities

SPH245
Hispanic Heritage in the Southwest
3 credit(s) 3 period(s) lecture
A survey of Hispanic heritage in the Southwest. Cultural and social institutions and their contribution to the development of the region and its heritage. Prerequisites: None.

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

SWU/BHS130
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.

SWU225
Statistics for Social Research/Justice and Government
3 credit(s) 3 period(s) lecture
Introductory course in descriptive and inferential statistics for social research. Designed to serve as preparation for interpreting and understanding research related to Justice and Government related agencies. Prerequisites: MAT092 or completion of higher level mathematics course.

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.

Course Notes:

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.

SWU291
Social Services Seminar
1 credit(s) 1 period(s) lecture
Special topics in social services with an emphasis on current issues not covered in other Social Work courses. Prerequisites: None. Course Note: May be repeated for a total of four 4 credit hours.

SWU291
Social Service Delivery Systems
3 credit(s) 3 period(s) lecture
Purposes, structures, and delivery systems of human service agencies. Includes 40 hours of volunteer experience in local human service agencies. Prerequisites or Corequisites: SWU102, or SWU171, or permission of the department.
SWU292
Effective Helping in a Diverse World
3 credit(s) 3 period(s) lecture
Introduction to professional helper communication skills with respect to cross-cultural practice and diversity issues, in a social work setting. Prerequisites: None. (SOC101 and SWU102) or SWU171 suggested but not required.

TCM – Telecommunications

TCM100
Digital Multimedia
3 credit(s) 3 period(s) lecture + lab
Introduction to the major components of a multimedia project. Prerequisites: None.

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, ambiance, special effects and music. Emphasis on analog and digital recording techniques in the field as well as in a controlled environment. Prerequisites: (TCM100 and TCM136) or permission of Instructor.

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: MTC/ TCM120 or permission of Instructor.

TCM224
Professional Portfolio in Film and Television
2 credit(s) 4 period(s) lecture + lab
Explores techniques and applications used in editing an individual project on an editing system. Prerequisites: (TCM241 and independent footage) or permission of Instructor. Course Note: TCM224 may be repeated for a total of six (6) credits.

TCM282
Advanced Non-Linear Editing Techniques
4 credit(s) 6 period(s) lecture + lab
Explores techniques and advanced applications used in creating and editing an advanced project on a non-linear editing system. Prerequisites: TCM241 or permission of Instructor.

TCM290
Professional Media Marketing
3 credit(s) 3 period(s) lecture + lab
Designed to equip media students with marketing tools for career development and promotion. Prerequisites: TCM136 or permission of Instructor.

TEC – Textiles and Clothing

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.

TEC106
History of Fashion
3 credit(s) 3 period(s) lecture
Consideration of historic factors influencing fashion and fashion change with special emphasis on historic costume. Prerequisites: None.

TEC110
Basic Sewing Skills
3 credit(s) 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: None. Course Notes: 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.

TEC112A
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: TEC111 or permission of Instructor. Course Notes: TEC112A may be repeated for a total of six (6) credit hours with Instructor permission.

TEC112A
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: TEC111 or permission of Instructor. Course Note: TEC112A 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 screening 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 watercolor and ombre, marbleizing, stenciling, stamping and various resist methods such as gutta and tapping. 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: 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: None.

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: 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.

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: None. Course Notes: TEC128 may be repeated for credit.

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: None.

TEC131 Fashion Illustration I
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: TEC134 or permission of Instructor. Course Notes: TEC131 may be repeated for a total of nine (9) credits.

TEC132 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. Further development of skills in portfolio presentation. Prerequisites: TEC135 or permission of Instructor. Course Notes: TEC132 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: TEC135 or permission of Instructor. Course Notes: TEC136 may be repeated for a total of nine (9) credits.

TEC137 Fashion Illustration IV
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. Development of skills in portfolio presentation. Prerequisites: TEC135 or permission of Instructor. Course Notes: TEC137 may be repeated for a total of nine (9) credits.

TEC139 Pattern Design I
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
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: TEC135 or permission of Instructor. Course Notes: TEC139 may be repeated for a total of nine (9) credits.

TEC140 Pattern Design II
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
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. Development of skills in portfolio presentation. Prerequisites: TEC135 or permission of Instructor. Course Notes: TEC140 may be repeated for a total of nine (9) credits.

TEC2201 Computer-Assisted Fashion Design
3 credit(s) 5 period(s) lecture + lab
(Not offered every semester)
The use of computer hardware and software in the fashion design industry. Create and illustrate fashion designs using computer hardware and software. Color and design principles applied in creating an apparel line and developing a portfolio. Prerequisites: TEC125 or permission of Instructor.

TEC222 Textiles
3 credit(s) 3 period(s) lecture
Study of textile fibers, yarns, fabrication, color and finishes and their impact on product performance. Includes labeling laws, fiber manufacturing processes, technical textiles, fiber properties, care, end use, and global sustainability efforts. Prerequisites: None.

TEC223 Tailoring
3 credit(s) 6 period(s) lecture + lab
Principles of tailoring as applied in the construction of a coat or suit. Alteration of patterns and fitting techniques. Prerequisites: TEC124 or permission of Instructor. Course Note: TEC223 may be repeated for a total of 12 credit hours with permission of Instructor.

TEC224 Pattern Drafting
2 credit(s) 3 period(s) lecture + lab
(Not offered every semester)
Draft patterns 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: 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
(Not offered every semester)
Creation of pattern designs by flat pattern methods. Produce a variety of styles. Production of an original pattern design and garment. Prerequisites: TEC110 or 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: TEC110 or 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: 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: 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: 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: 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: TEC224 and TEC225, or permission of Instructor.  
Course Notes: TEC232 may be repeated for a total of twelve (12) credit hours with permission of Instructor.

TEC233 Computer-Assisted Pattern Making  
3 credit(s) 5 period(s) lecture + lab  
(Not offered every semester)  
Pattern making using the computer and various software programs. Includes measuring, block patterns, pattern development, production patterns, modifications for size and fit, and markers.  
Prerequisites: TEC225 or permission of Instructor.  
Course Notes: TEC233 may be repeated for a total of twelve (12) credit hours with permission of Instructor.

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.

THE202 THE220 Modern Drama  
3 credit(s) 3 period(s) lecture  
(Spring only)  
Analysis of dramatic literature studied within political, historical, and cultural contexts and examined from the perspective of the playwright’s structure and style.  
Prerequisites: ENG101 or ENG107 or equivalent.

THE274AC Theatre Study Tour  
3 credit(s) 15 period(s) lab  
A tour that focuses on theatre production outside of the metropolitan Phoenix area. Includes a variety of experiences and activities to enhance knowledge about theatre production.  
Prerequisites: Department approval.

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.  
Prerequisites: Permission of Department or Division.  
Course Notes: Theatrical Study Tours are made available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development.

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.
THP112 Acting I
3 credits (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.

THP203 Technical Theatre Production
3 credits (s) 6 period(s) lab
Designed to give college credit to the technical production crews of college theatre productions. Prerequisites: None. Course Note: THP203 may be repeated for up to a maximum of four (4) credits.

THP212 Acting II
3 credits (s) 4 period(s) lecture + lab
Fundamental techniques of acting through script analysis, rehearsal, and performance. Prerequisites: THP112 or departmental approval.

THP214 Directing Techniques
3 credits (s) 4 period(s) lecture + lab
Contemporary theory and practice in directing, the evolution of present-day directing procedures, and a sampling of scripts for directing practice. Principles of script analysis, blocking, casting, rehearsing, and performing. Prerequisites: THP112 or THE220, or permission of Instructor.

THP216 Beginning Stage Lighting
3 credits (s) 4 period(s) lecture + lab
Basic theories of stage lighting for all production types. Emphasis on technical/theoretical facts, artistic/design concept development, and "teamwork" structure of theatre. Examines stage lighting optics, instrument selection and application, color theory, circuiting and control systems, and basic design. Prerequisites: THP213 or permission of Instructor.

THP217 Introduction to Design Scenography
3 credits (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.

THP225 Visual Script Analysis
2 credits (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.

THP264 Entertainment Industry Design II: 3D CAD
3 credits (s) 6 period(s) lecture + lab
Introduction to construction, manipulating, and rendering three-dimensional (3D) objects and theatrical stage spaces using CAD software and post-production software. Prerequisites: THP263.
THP265
Introduction to Stage Management
3 credit(s) 6 period(s) lecture + lab
The focus of this course is the role of the stage manager. Topics include all aspects of preparation and implementation of rehearsals and performances for the stage manager position. Prerequisites: None.

THP266
Production Careers in Technical Theatre
1 credit(s) 2 period(s) lecture + lab
Provides the continuing design, stage management and technical student with opportunities to explore the versatility of the job opportunities within the Tech Theatre industry. Emphasis on presenting the work and talent both in person and on paper. Development of a professional resume and vita. Prerequisites: None.

THP267
Painting Techniques for Film, TV and Theatre
3 credit(s) 4 period(s) lecture + lab
Theory and skills in scenic artistry. Techniques of painting two-dimensional and three-dimensional scenery, tools, and the use of color. Prerequisites: THP213.

THP269
Technical Theatre Portfolio Development
1 credit(s) 1 period(s) lab
The analysis and preparation of all elements of a Technical Theatre/Design Portfolio including the use of digital portfolios and application to specific disciplines. Practice with portfolio presentation and maintaining and updating portfolio materials. Prerequisites: None.

THP296WC
Cooperative Education
3 credit(s) 15 period(s) lab
Work-college experiences that involve the combined efforts of educators and employers to accomplish an outcome related to the career objectives of the students. Prerequisites: Completion of at least twelve (12) college credits, minimum 2.6 grade point average, and be able to obtain a position related to student’s academic or career goals (student’s present job may qualify); or permission of Instructor. Corequisites: Must be concurrently enrolled in at least one class which is related to student’s major or career interest or with permission of the Instructor.

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: TCM/VT105 or TCM/VT108.

WED – Wellness Education

WED125
Reiki: Healing and Symbols
2 credit(s) 2 period(s) lecture + lab
Introduction to Reiki as a Japanese technique for stress reduction and relaxation that also promotes healing. Instruction in the Usui method of Reiki and its applications to personal health and everyday life. Prerequisites: None. Course Notes: WED125 may be repeated for a total of ten (10) credits.

WED151
Introduction to Alternative Medicine
3 credit(s) 3 period(s) lecture
Definition of health; exploration of mind-body-spirit connection in health; various therapeutic modalities; identification of strengths and limitations of alternative therapies. Also includes development of ability to critically review written material in the alternative therapy area. Prerequisites: None.

WED160
Ethics of Touch Massage
0.5 credit(s) 0.5 period(s) lecture
Basic ethical principles used in the practice of massage. Major emphasis on personal and professional boundaries, the role of dual relationships, effective communication, and special considerations in massage. Prerequisites: None.

WED162
Meditation and Wellness
1 credit(s) 1 period(s) lecture
Physiology of meditation and its effects on physical and mental health; scholastic abilities and interpersonal relationships; differentiation between meditation and other relaxation techniques. Prerequisites: None.

WED165
Overview of Massage Therapy
2 credit(s) 2 period(s) lecture
History of massage; overview of bodywork systems; benefits and indications of massage; legal requirements for practice in Arizona. Prerequisites: None.

WED170
Principles of Homeopathy
1 credit(s) 1 period(s) lecture
Origins of homeopathy; key concepts; perceptions of disease; schools of homeopathy; scientific studies; preparation of remedies; case taking. Prerequisites: None.

WED172
Survey 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:** WED165 and WED220, 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 functions 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:** 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:** WED231.  
Corequisite: WED250, or permission of Program Director.

WED250  
Clinical Practicum  
3 credit(s) 6 period(s) lab  
Application of fundamental massage techniques.  **Prerequisites:** WED231.  
Corequisites: 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:** 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:** 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.

WST244
Women in Muslim Societies
3 credit(s) 3 period(s) lecture
Overview of Muslim women’s religious and secular roles and rights. Relationship of the Qur’an and Hadiths’ teachings on women to the interpretations of those teachings within the variegated cultural contexts of Islam. Prerequisites: None.

WST/ENH285
Contemporary Women Writers
3 credit(s) 3 period(s) lecture
Explores twentieth century literature (short stories, essays, plays, and poetry) written by women and about women. Focus on themes relevant to women’s lives regardless of age, creed, or ethnic background. Prerequisites: None.

WST/REL290
Women and World Religions
3 credit(s) 3 period(s) lecture
Focus on the role of women in several organized religions and/or religious sects. Study of myth and symbols as they are used to establish, maintain, and enforce sex-roles within specific cultural contexts around the world. Prerequisites: None.

Types and Levels of Courses

Courses offered by Maricopa colleges are of two general types depending on the kind of competencies they cover and the student goals they serve. Academic Courses are designed to provide general education and knowledge; Occupational Courses are designed to provide workforce readiness and to develop occupational or paraprofessional skills. Additionally, Maricopa courses provide content at different levels of knowledge and skill. Developmental courses generally cover pre-college-level competencies and prepare students to take college-level courses; First-year courses generally cover competencies that do not require previous experience or knowledge of the subject and are often introductory and survey courses; and Second-year courses generally cover competencies for which some previous experience or knowledge may be desirable, sometimes including prerequisite courses.

Questions:

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/
Career Services

Career Services Staff
Dr. Felicia Ramirez-Perez, 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 - Thursday: 8:00 a.m. - 6:00 p.m.
Friday: 10:00 a.m. - 4:30 p.m.

Summer semesters: Monday - Thursday: 8:00 a.m. - 6:00 p.m.
Closed Fridays

The Career Services Center is located in the Hannelly Center, Room 113
http://www.phoenixcollege.edu/careerservices
Phone: 602.285.7420 • Fax: 602.285.7951
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 114-118 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.
Residential Faculty
(First Year of Service to MCCC)


AMBROSIK, KORY (1997) Mathematics
–B.A., Evergreen State College; M.A.T., Northern Arizona University.

BAILEY, TIFFANY (2014) Fine and Performing Arts

–B.S.N., University of Arizona; M.S.N., University of Phoenix.

BELL, AMY (2013) Biosciences
–B.A., University of Arizona; M.A., Arizona State University.

BERGE, ERIC D. (2011) English
–B.S.Ed., Northern Arizona University; M.F.A., Lesley University.

–B.S., Pennsylvania State University; J.D., Villanova School of Law.

BRANDON, CHARLYNN (2017) Applied Technology, Family and Consumer Sciences

BROMLEY, RAYMOND (1991) Liberal Arts
–B.A., M.A., Ph.D., University of California at Los Angeles.

BRYAN, TIMOTHY M. (1990) Mathematics
–B.S., California State University, San Bernardino; M.A., California State University, Long Beach.

CARNAHAN, DARRELL (1998) Business
–A.A.S., Salt Lake City Community College; B.A., University of Utah; M.S., Arizona State University.

CARRILLO, JENNIFER (2017) Mathematics
–B.S., University of Scranton; M.S., Northern Arizona University.

CELOZA, ALBERT (1988) Liberal Arts
–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.

CHAPMAN, AMANDA S. (2011) Biosciences
–B.S., M.P.H., University of Arizona.

CHAVEZ, ENRIQUETA (1984) Counseling
–B.A., Arizona State University; M.A., Northern Arizona University.

CLARK, LOMAN B. (1994) Counseling
–B.S., M.Div., M.C., Arizona State University.

–A.A., Glendale Community College; B.S., M.B.A., Arizona State University.

COOK-TIDWELL, NANCY (2010) Nursing
–A.S.N., Miami Dade College; A.A., Hillsborough Community College; B.S.N., University of Arizona; M.S.N., Northern Arizona University.

CORKINS, JAMES A. (2011) Physical Sciences
–B.S., M.S., Ph.D., Arizona State University.


CORONEL, ADRIANNA (2011) Dental

COTTER, ROBIN L. (2005) Biosciences
–B.A., DePauw University; Ph.D., University of Nebraska Medical Center.

DARROW, LaQUERICA (2014) Dental
–B.S., University of Minnesota-St. Paul; M.Ed., Northern Arizona University.

DEELA, KRISTINA J. (2016) Dental
–A.A.S., Rio Salado College; B.S., Northern Arizona University.

DOMINO, TRACY L. (2011) Health Professions, Fitness, and Wellness
–A.A.S., Belleville Area College; B.S., Stephens College; M.Ed., Northern Arizona University.

DOPPE, GEORGE DAWSON (2010) Business
–B.S., Arizona State University; M.Ed., Northern Arizona University.

–B.A., Oakland University; M.S., Wayne State University.

ELDOT, JEFF (2005) English
–B.A., University of Wisconsin; M.A., Northern Arizona University.

ENCISO, MARIA D. (1991) Liberal Arts

ERMOIAN, DEBORAH (1999) Mathematics
–B.S., Grand Canyon University; M.Ed., Ph.D., Arizona State University.

ETCHART, MARTIN (1995) English

FINKENSTADT, PATRICIA M. (2005) Biosciences
–B.S., Southeast Missouri State University; Ph.D., Johns Hopkins University School of Medicine.

–A.A.S., Wayne County Community College; B.S.N., Oakland University; M.S.N., Grand Canyon University.

FULTON, APRIL L. (2016) Nursing
–A.A.S., Scottsdale Community College; B.S.N., M.S.N., Western Governors University.

GALLOWAY, LAURA (1987) Communication, Reading, ASL, and Education
–A.A., Lake Forest College; B.A., M.A., M.C., Arizona State University.

GALLUCCI, MATTHEW J. (2015) Biosciences
–B.S., M.S., University of Arizona.

GEDDIS, DIANNE (2002) Health Professions, Fitness and Wellness
–A.A., Phoenix College; B.A., M.S., Arizona State University.
GEDDIS, SCOTT (1984) Health Professions, Fitness and Wellness
–A.A.S., Phoenix College; B.A.S., Arizona State University;
M. Adm., Northern Arizona University.

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

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.F.A., University of Arizona; M.F.A., Arizona State
University.

and Legal Studies
– B.S., Embry-Riddle University; M.B.A., University of New
Mexico; J.D., University of Dayton.

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

HEMMILA, LINDA A. (2014) Nursing
– B.S.N., Carlow University; M.S.N., Capital University.


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, HERSHAMAN 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.

KIMBUENDE, JOSEPH (2000) English
– B.A., National University of Zaire; M.A., M.Ed., Ed.D.,
Northern Arizona University.

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

KLECKA, DAWN (2012) Nursing
– A.A.S., GateWay Community College; B.S.N., M.S.N.,
M.B.A., Grand Canyon University.

LAFFOON, JENNIFER (2006) Fine and Performing Arts
University; M.F.A., University of Arizona.

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

LaVOY, KATHLEEN (2013) Dental
– B.H.A., University of St. Francis; M.Ed., Northern Arizona
University; Public Dental Health Certificate, Northern
Wisconsin Technical College.

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.


LITTLE, BRET (2003) Criminal Justice, Emergency Response, and
Legal Studies
– B.S., Weber State University.

LOGAN, ELIZABETH (1998) Health Professions, Fitness and
Wellness
– B.S., Northern Arizona University; B.S.N., Grand Canyon
University; M.A., University of Santa Monica; M.S., Arizona
State University.

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

Sign Language, and Education

MARFAI, FRANK (2013) Mathematics
– B.A., Occidental College; M.A., California State University;
Ph.D., Arizona State University.

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

MARIN, AMY J. (1995) Behavioral Sciences
– B.A., University of California, Irvine; M.A., Ph.D., Arizona
State University.

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

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

Martínez, Cleopatra (1985) Mathematics
– B.A., University of Denver; M.A., Ph.D., University of
Colorado.

– 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.,
Pescott College.
<table>
<thead>
<tr>
<th>Name</th>
<th>Degree Details</th>
<th>Institutions</th>
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<tr>
<td>MIHALJEVIC, JANA</td>
<td>(2014) Health Professions, Fitness, and Wellness</td>
<td>A.A.S., Cuyahoga Community College.</td>
</tr>
<tr>
<td>ORTIZ, ELENA</td>
<td>(2005) Biosciences</td>
<td>B.A., University of California, Santa Cruz; M.S., Universidad de Puerto Rico, Rio Piedras; Ph.D., Arizona State University.</td>
</tr>
<tr>
<td>PARISEK, BETTY M.</td>
<td>(2004) Nursing</td>
<td>B.S.N., Grand Canyon University; M.S.N., University of Phoenix; Ed.D., Walden University; R.N.</td>
</tr>
<tr>
<td>PARKER, CYNTHIA J.</td>
<td>(2005) Applied Technology, Family and Consumer Sciences</td>
<td>B.S., Arizona State University; M.A., California State University, Dominguez Hills; Ph.D., Northern Arizona University.</td>
</tr>
<tr>
<td>PODJASKI, JO ANN</td>
<td>(2015) Nursing</td>
<td>B.S.N., Marian College; M.S.N., University of Phoenix; D.N.P., Arizona State University; R.N.</td>
</tr>
<tr>
<td>POWERS, CONSTANCE</td>
<td>(2014) Nursing</td>
<td>A.S., Mesa-Boswell Community College; B.S.N., M.S.N., Grand Canyon University.</td>
</tr>
<tr>
<td>SCHAMPEL, JOHN</td>
<td>(2006) Biosciences</td>
<td>B.S., University of Wisconsin; M.S., University of Minnesota.</td>
</tr>
<tr>
<td>SINNER, JAMES E.</td>
<td>(2012) Biosciences</td>
<td>A.P., Olney Community College; B.L.S., University of Missouri-Rolla; B.S., National University of Health Sciences; D.C., National College of Chiropractic.</td>
</tr>
<tr>
<td>SKEEN, KRISTY L.</td>
<td>(2016) English</td>
<td>B.S., West Virginia University; M.A., Northern Arizona University.</td>
</tr>
</tbody>
</table>
– B.S., Austin Peay State University; M.L.S., George Peabody College for Teachers.

SOUZA, JAMES (2002) Mathematics
– B.A., Sonoma State University; M.S., California State University at Hayward.

STARK, DIANE (1997) Business

SUEYOSHI, JOE (1991) Mathematics
– B.A., University of California at Berkeley; M.S., University of Minnesota.

SUMPTER, RASHEL M. (2012) Physical Sciences
– Ph.D., University of North Dakota.

THORPE, STEVE G. (2001) Liberal Arts
– B.A., M.A., Ph.D., University of Colorado, Boulder.

– B.S., Grand Canyon University.

USSERY, JENNIFER (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.

VALDIVIA, KATHERINE (2013) Communication, Reading, ASL, and Education
– B.A., Arizona State University; M.Ed., Northern Arizona University.

VASQUEZ, KARA (2010) Communication, Reading, ASL, and Education
– M.A., Whitworth University.

VAZQUEZ, JULIAN (1999) Liberal Arts

VETTO, NORA (2013) Nursing
– B.S.N., M.S.N., Grand Canyon University; R.N.

VILLEGAS-GOLD, ROBERTO Y. (2016) Counseling

WALKER, ROLAND McALLEN (1999) Liberal Arts

WANG, YUN DAN (2016) Physical Sciences
– B.S., St. John’s University.

WEBSTER, DEBORAH A. (2012) Behavioral Sciences

WEINGART, CARMEL ANN (2007) Dental
– R.D.H.; B.S., Loyola University; M.Ed., Northern Arizona University.

WELTER, MARTIN (2006) Health Professions, Fitness and Wellness
– B.S., M.A., University of Iowa.

WHITE, JAMES J. (2004) Physical Sciences
– B.A., Idaho State University; M.S., Ph.D., University of Arizona.

WILBURN, JANET (1995) Dental
– A.S., San Diego Mesa College; B.S., Texas Woman’s University; C.D.A.

– A.A.S., Phoenix College.

– A.A.S., Phoenix College; B.G.S., M.Ed., Northern Arizona University.

WINTERS, GENEVIEVE (2001) English
– B.A., University of Arizona; M.P.A., Arizona State University; M.A., Northern Arizona University.

– B.M.E., Sam Houston State University; M.M., University of Arizona.

ZAHAROPOULOS, DOULA (2005) Business
– B.S.B.A., M.B.A., University of Wisconsin; Ph.D., Grand Canyon University.

**Emeritus Faculty**

(Years of Service to MCCCD)


ANDERSON, KRISTIN (1981-2008) Dental Hygiene


AWE, FLORETTA S. (1960-1983) District Director, Allied Health & Nursing

BAILEY, LOWELL, JR. (1965-1989) Physical Education


BENHAM, MILFORD J. (1946-1983) Physics, Geology

BLAKE, WILBERT (1970-1998) Social Science

BOGUE, JAMES W. (1960-1982) Library


BRATT, MARION (1976-1989) English


BRUNDAGE, JOE R. (1946-1973) Engineering Technology

<table>
<thead>
<tr>
<th>Name</th>
<th>Years</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAÑEZ, OFELIA</td>
<td>(2001-2007)</td>
<td>Education</td>
</tr>
<tr>
<td>CARPENTER, AFTON J.</td>
<td>(1963-1983)</td>
<td>Reading</td>
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<td>CLIFTON, LORAYNE</td>
<td>(1961-1983)</td>
<td>Nursing</td>
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<td>Biology</td>
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<td>DRISCOll, JOHN EDWARD</td>
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<td>(1958-1989)</td>
<td>Business</td>
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<td>Art</td>
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<td>JOHNSon, ANN</td>
<td>(retired 1972)</td>
<td>Psychology</td>
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<td>(1951-1978)</td>
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<td>(1940-1966)</td>
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<td>NAPLES, DOROTHY J.</td>
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<td>(1966-1995)</td>
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<td>ORMAN, ARTHUR</td>
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<td>PFEEFERBAUM, ROSE L.</td>
<td>(1972-2012)</td>
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<td>POLICHINO, LOUIS M.</td>
<td>(1956-1977)</td>
<td>Speech</td>
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<td>REPP, ANN</td>
<td>(1972-1992)</td>
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<td>ROE, WILLIAM</td>
<td>(1984-2014)</td>
<td>Behavioral Sciences</td>
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<td>ROWE, RICHARD F.</td>
<td>(1964-1997)</td>
<td>Geography, Geology</td>
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<td>SHARPE, CHARLES K.</td>
<td>(1948-1977)</td>
<td>Audiovisual Services</td>
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</tbody>
</table>
SHEEHAN, DENNIS (1995-2014) Business
TADANO, MARIAN Y. (1973-2004) Clinical Laboratory Sciences, Chemistry
TANKERSLEY, CATHERINE M. (1985-2008) Counseling
TATE, PHILIP (1984-1997) Biology
VERONDA, CARLO (1971-1997) Music
VILLEGAS, AMALIA (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

Emeritus Administration
(Years of Service to MCCCD)
WALLACE, WILLIAM B. (1961-1989) Dean of Administrative Services

Retired Faculty
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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
CIPRIANO, CHERYL (2010-2014) Nursing
CRANDALL, JEWELL (retired 1979) Home Economics
DOLPHIN, HARRIET (1977-1989) Art
DRUDING, C. EDWIN (1965-1983) Psychology
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
GARCIA, LINDA (1991-2007) Dental Hygiene
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
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
O'BRIEN, ELIZABETH (1990-2017) Communication, Reading, ASL, and Education
OSBORN, APRIL (1977-1997) Dental Hygiene
PEPE, PHILIP (1984-2009) Biosciences
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
SOLLER, SARA THORNHILL (1990-2008) Communication and Theatre
SPEED, DON (1985-2017) Physical Sciences
SUNG, HSIAO-HUA (1986-2012) Mathematics
TRAMEL, LINDA (1990-2001) Applied Arts and Human Sciences
VANDE PUTTE, SUZANNE (1990-2013) Nursing
WEAVER, LETA (retired 1971) Library
WELLS, SANDRA (1995-2011) Center for Teaching, Learning, and Technology (CTLT)
WESTCOT, MABEL (retired 1968) Home Economics
WICH, SARAH J. (1968-1986) Nursing
WITHINGTON, HENRY (retired 1979) Social Science
WILSON, MICHAEL (1997-2017) Liberal Arts
ZACCARDO, PATRICIA (2000-2011) English
Retired Administration
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ARCHIBALD, EILEEN (2002-2015) Director, Institutional Advancement


HALFORD, SHARON (2004-2016) Dean, Industry and Public Service

HARRISON, MYRNA (1988-1993) President

MOORE, JAMES D. (1994-2007) Vice President, Administrative Services

SOLLEY, ANNA (1976-2015) President

Phoenix College Administration

President, Interim ................. Chris Haines, M.Ed.
Vice President, Academic Affairs ........... Casandra Kakar, Ed.D.
Vice President, Administrative Services ....... Paul DeRose, M.Ed.
Vice President, Student Affairs, Interim ...... Meredith L. Warner, M.A.
Dean, Student Affairs .............. Heather Kruse, Ed.D.
Dean, Information Technology .......... R. Mark Koan, Ed.D.
Dean of Arts and Sciences .......... Wilbert Nelson, M.S.W.
Dean of Industry and Public Service ........ Maria Reyes, M.S.E.
Associate Dean, College Fiscal Services ...... Angela Genna, B.I.S.
Director, Institutional Advancement ......... Michelle Klinger, B.A.

District Administration

Chancellor ................. Maria Harper-Marinick, Ph.D.
Interim Executive Vice Chancellor and Provost .... Paul Dale, Ed.D.
Vice Chancellor, Human Resources ............ LaCoya Shelton, M.A., SPHR
Chief Information Officer, Information Technology Services ........ Edward Kelty, M.Ed.
Vice Chancellor, Business Services ............ Gaye Murphy, M.P.A.
Chief Executive Officer, Maricopa Community Colleges Foundation .... Christina Schultz, M.A.
Interim President, Chandler-Gilbert
Community College .................. William Guerrierio, Ed.D.
President, Estrella Mountain
Community College ..................... Ernie Lara, Ph.D.
President, GateWay
Community College .................... Steven R. Gonzales, Ed.D.
Interim President, Glendale
Community College .................... Teresa Leyba Ruiz, Ed.D.
Interim President, Mesa
Community College .................... Sasan Poureetezadi, M.Ed.
President, Paradise Valley
Community College .................... Paul Dale, Ed.D.
Interim President, Phoenix College ............ Chris Haines, M.Ed.
President, Rio Salado College ............. Chris A. Bustamante, Ed.D.
President, Scottsdale
Community College ..................... Jan L. Gehier, Ed.D.
President, South Mountain
Community College ..................... Shari L. Olson, Ph.D.

Maricopa County Community Colleges District Governing Board

Mr. Laurin Hendrix, President ................. term expires 12/2020
Mr. Alfredo Gutierrez .................. term expires 12/2020
Ms. Johanna Haver, Secretary ............. term expires 12/2018
Ms. Tracy Livingston .................. term expires 12/2018
Ms. Jean McGrath .................. term expires 12/2018
Mr. Dana G. Saar .................. term expires 12/2020
Dr. Linda Thor .................. term expires 12/2020
Index

A
Absences .................................................. 45
Abuse-Free Environment .......................... 55, 78, 90
Academic Advisement ............................. 8, 38
Academic Advising and New Student Orientation .... 39
Academic Calendar ........................................ 5
Academic Certificate (AC) Requirements ....... 113
Academic Certificates at Phoenix College ....... 203
Academic Load .......................................... 45, 71, 86
Academic Misconduct ............................... 49
Academic Probation .................................... 47
Academic Renewal ..................................... 47
Accident Insurance ....................................... 8
Accounting
Course Descriptions (ACC) ...................... 219
Program ............................................... 141
Accreditation ............................................. 4
Administration
District ................................................... 307
Phoenix College ..................................... 307
Administration of Justice
Course Descriptions (AJS) ...................... 221
Program ............................................... 193
Administrative Professional
Course Descriptions (CIS) ...................... 234
Program ............................................... 145
Administrative Regulations ........................ 22
Admission Classifications .......................... 23
Admission Information .............................. 24
Admission Policy ....................................... 23
Admission/Registration/Enrollment ............. 23
Admissions, Registration and Records ........... 8
Adolescent Studies
Course Descriptions (CFS) ...................... 231
Program ............................................... 180
Advanced Emergency Medical Technology (Paramedic)
Course Descriptions (EMT) ..................... 246
Program ............................................... 172
Advanced Placement .................................. 29, 31, 32
Advancing Academic Achievement
Course Descriptions (AAA) .................... 219
Adult Basic Education (College Bridge Pathways) .... 10
Advisement ............................................. 8, 39
Aerospace Studies (Air Force ROTC)
Course Descriptions (AES) ..................... 220
Program ............................................... 199
Affirmative Action Statements .................. 81
African American Studies
Course Description (AFR) ...................... 220
Alcoholic Beverages ................................. 56, 78
Allied Health or Nursing Program (MCCCD) .... 153
Alumni and Development ........................... 8
American Indian Studies
Course Descriptions (AIS) ...................... 220
Program ............................................... 203
American Sign Language (See Deaf Studies and Interpreter Preparation)
Americans with Disabilities Act ................. 81
Anthropology
Course Descriptions (ASB, ASM) .............. 228
Apparel Construction
Course Descriptions (TEC) ...................... 291
Program ............................................... 134
Arabic Humanities
Course Description (AHU) ....................... 220
Architecture
Course Description (ARC) ....................... 223
Arizona General Education Curriculum (AGEC) .... 94, 122
Arizona Medical Marijuana Act .................. 90
Art
Course Descriptions (ART) ....................... 224, 227
Art Humanities (ARH)
Course Descriptions .................................. 223
Art Programs: See
Computer Graphic Design ....................... 132
Digital Photography ................................ 186
Media Arts Programs ............................... 187-191
Transfer Programs ................................... 207
Articulation and Transfer Agreements .......... 36
Articulation Transfer Credit ....................... 29
Assessment (Student Course Placement) ........ 17, 38
Associate Degrees Designed for University Transfer, Academic Policies .................. 97
Associate in Applied Science (AAS) Degree .... 111
Associate in Arts Degree (AA) .................... 98
Associate in Arts Elementary Education (AAEE) .... 100, 210
Associate in Business Degree, General Requirements (ABus/GR) ................ 106, 209
Associate in Business Degree, Special Requirements (ABus/SR) ................. 107, 209
Associate in Fine Arts (AAFA), Art ................ 102, 207
Associate in Fine Arts (AAFA), Dance ........... 103
Associate in Fine Arts (AAFA), Theatre .......... 105, 214
Associate in General Studies (AGS) Degree .... 108
Associate in Science Degree (AS) .............. 99
Astronomy
Course Descriptions (AST) ....................... 229
Athletics .................................................... 9
Attendance Policy ..................................... 45
Audio Production Technologies
Course Descriptions (MTC, MUC) .............. 278, 279
Program ............................................... 138
Auditing a Course ..................................... 46

B
Baking and Pastry
Course Descriptions (CUL, FON) ............... 240, 254
Program ............................................... 175
<table>
<thead>
<tr>
<th>Banking and Finance</th>
<th>Course Descriptions (ACC, GBS)</th>
<th>219, 256</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programs</td>
<td></td>
<td>151</td>
</tr>
<tr>
<td>Biology</td>
<td>Course Descriptions (BIO)</td>
<td>229</td>
</tr>
<tr>
<td>Bookstore</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Business</td>
<td>Course Descriptions (ACC, CIS)</td>
<td>219, 234</td>
</tr>
<tr>
<td>Programs</td>
<td></td>
<td>209</td>
</tr>
<tr>
<td>Transfer Programs</td>
<td></td>
<td>209</td>
</tr>
<tr>
<td>Business-Personal Computers</td>
<td>Course Descriptions (BPC)</td>
<td>230</td>
</tr>
</tbody>
</table>

| Cafeteria (Bear Cave Café) |                                | 9        |
| Calendar                |                                | 5        |
| Cambridge International Examinations (CIE) | 34-35 |
| Campus Map              |                                | 317      |
| Career and Technical Education | Bachelor of Science in Education Transfer Option | 211 |
| Career Services         | 9, 298, 299                     |
| Career Work Experience  | Course Description (CWE)        | 242      |
| Catalog Under Which a Student Graduates | 37, 92 |
| CEEB Advanced Placement Exams | 29   |
| Certificates and Degrees List | 48, 93, 128-129 |
| Chemistry              | Course Descriptions (CHM)      | 233      |
| Program                |                                | 209      |
| Chicana and Chicano Studies | Course Descriptions (CCS, HIS) | 231, 262 |
| Program                |                                | 203      |
| Child Care (see Family Care and Head Start Center) | 10   |
| Child/Family Studies   | Course Descriptions (CFS)      | 231      |
| Children on Campus     |                                | 58       |
| CLEP Examination       | 29, 32-33                      |
| College Bridge Pathways (Adult Basic Education) | 10   |
| College Environment    |                                | 50       |
| College Grounds, Use of | 57, 59                         |
| College Safety (See Public Safety) | 16   |
| College Level Examination (CLEP) | 29, 30, 32, 33 |
| College-Specific Fees  |                                | 43       |
| Comic and Sequential Art | Course Descriptions (ART, CRW) | 224, 238 |
| Program                |                                | 185      |
| Commercial Food Preparation | Course Descriptions (CUL, FON) | 240, 254 |
| Program                |                                | 176      |
| Communication          | Course Descriptions (COM)      | 237      |
| Transfer Program       |                                | 209      |
| Community Emergency Response Team (CERT) Program | 173 |
| Complaints             | 11, 84                         |
| Computer Applications  | Course Descriptions (BPC)      | 230      |
| Program                |                                | 146      |
| Computer Art/Illustration, Media Arts Programs | 187-188 |

| Computer Graphic Design | Course Descriptions (ART) | 224 |
| Program                | 132                         |
| Computer Information Systems | Course Descriptions (CIS) | 234 |
| Program                | 162                         |
| Concurrent Enrollment  | 28                          |
| Conduct (See Disciplinary Standards Statement) | 60   |
| Confidentiality        | 84                          |
| Consensual Relationships |                                | 79  |
| Copyright Compliance   | 55, 75, 76                  |
| Costuming              | Course Description (TEC)     | 291 |
| Program                | 134                         |
| Counseling Department  | 10                          |
| Counseling and Personal Development Course Descriptions (CPD) | 237 |
| Course Applicability System (Arizona Transfer Resources) | 121 |
| Program                | 219                         |
| Course Equivalency Guide |                                | 121 |
| Course Fees            | 42                          |
| Course Index by Subject |                                | 218 |
| Creative Writing       | Course Descriptions (CRW)    | 238 |
| Program                | 204                         |
| Credit by Evaluation   | 29                          |
| Credit for Prior Learning (Prior Learning Assessment Credit) | 28 |
| Credit/No Credit Graded Courses (P/Z) | 46  |
| Crime and Accident Scene Photography | Course Descriptions (AJS) | 221 |
| Program                | 194                         |
| Crime Scene Investigation | Course Descriptions (AJS) | 221 |
| Program                | 194                         |
| Crime Scene Technology | Course Descriptions (AJS)    | 221 |
| Program                | 194                         |
| Crime Awareness and Campus Security Act | 58  |
| Critical Reading and Critical Thinking Course Description (CRE) | 238 |
| Culinary Studies       | Course Descriptions (CUL, FON) | 240, 254 |
| Program                | 176                         |
| Cultural Geography     | Course Descriptions (GCU)    | 257 |
| Program                | 176                         |
| Curriculum for Young Children | Course Descriptions (CFS) | 231 |
| Program                | 149                         |

| Dance, Associate in Arts, Fine Arts (AAFA) | 103 |
| DANTES Subject Standardized Test (DSST) Examinations | 30, 35 |
| Deadlines for Students | 44 |
| Deaf Studies | Course Descriptions (SLG) | 287 |
| Program (Also see Interpreter Preparation) | 178 |
| Degrees | MCCCD | 92 |
| Phoenix College | 128 |
| Delivery of Instruction | 11 |
Dental Assisting
  Course Descriptions (DAE) ........................................ 242
  Programs ................................................................. 169

Dental Hygiene
  Course Descriptions (DHE) ........................................ 243
  Program ................................................................. 171

Dental Office Management
  Course Descriptions (DAE) ........................................ 242

Department Chairpersons ............................................. 124-126

Digital Animation, Media Arts Programs ................................ 188

Digital Imaging, Media Arts Programs ................................ 189

Digital Photography
  Course Descriptions (ART - Photography) ...................... 227
  Program ................................................................. 186

Disaster Preparedness and Emergency Response
  Course Descriptions (DPR) ........................................ 244

Disciplinary Standards.................................................... 59

Disability Complaint ..................................................... 11, 56, 82

Disability Resources and Services ................................... 11, 69

Dress Code ..................................................................... 13

Driver Operator
  Course Descriptions (FSC) ........................................ 254
  Program ................................................................. 196

Early Childhood Classroom Management
  Course Descriptions (CFS, ECH) .................................. 231, 245
  Program ................................................................. 150

Early Childhood Education and Administration:
  Birth through Age Five
  Course Descriptions (CFS, ECH) .................................. 231, 245
  Programs ................................................................. 150

Early Childhood Education
  Course Descriptions (ECH) ........................................ 245

Early Education
  Course Descriptions (EED) ......................................... 246

Early Outreach Programs ............................................... 13

Economics
  Course Descriptions (ECN) ........................................ 245

Education
  Course Descriptions (EDU) ........................................ 246
  Programs:
    Associate in Arts in Elementary Education (AAEE) .......... 100, 210
  Educational Planning Worksheet .................................... 120

Electronic Music
  Course Descriptions (MTC, MUC) ................................. 278, 279
  Program ................................................................. 204

Emergency Communications and Deployment
  Course Descriptions (EMT) ........................................ 246
  Program ................................................................. 173

Emergency Medical Technology
  Course Descriptions (EMT) ........................................ 246
  Program ................................................................. 191

Emergency Preparedness ............................................... 90

Emergency Response and Operations
  Course Descriptions (EMT) ........................................ 246
  Program ................................................................. 196

Emissions Control Compliance ......................................... 55

Employment, Student ................................................... 66

Engineering
  Transfer Options ....................................................... 210

Engineering Science
  Course Descriptions (ECE) ........................................ 244

English
  Course Descriptions (ENG) ........................................ 250

English Humanities
  Course Descriptions (ENH) ........................................ 251

English as a Second Language
  Course Descriptions (ESL) ........................................ 252

Enrollment Center ....................................................... 14

Environmental and Natural Resource Conservation
  Program ..................................................................... 132

Environmental and Natural Resource Stewardship
  Program ..................................................................... 205

Environmental and Natural Resource Sustainability
  Program ..................................................................... 131

Equal Opportunity Statement .......................................... 14, 50, 81

Evidence Technology
  Course Descriptions (AJS) ........................................ 221
  Program ................................................................. 195

Expressive Activity ....................................................... 59

E F

Faculty of Phoenix College ............................................. 300-306

Faculty Office Hours at Phoenix College ......................... 14

Family and Consumer Sciences Transfer Option .............. 211

Family Care and Head Start Center ................................ 10

Family Development
  Course Descriptions (CFS) ........................................ 231
  Programs ................................................................. 180

Family Support
  Course Descriptions (CFS) ........................................ 231
  Program ................................................................. 182

Fashion Design
  Course Descriptions (TEC) ........................................ 291
  Programs ................................................................. 134

Fashion Illustration
  Course Descriptions (TEC) ........................................ 291
  Program ................................................................. 135

Fashion Merchandising
  Course Descriptions (MGT, MKT) ................................. 275, 277
  Programs ................................................................. 137

Fees, Tuition and ......................................................... 39, 41

FERPA Appeal Process ................................................. 66, 90

Financial Aid and Scholarships ....................................... 14, 45, 85

Fine Arts, Associate in Arts in
  Art ................................................................. 102, 207
  Dance ................................................................. 103
  Theatre ............................................................... 105, 214

Fingerprint Classification and Identification
  Course Descriptions (AJS) ........................................ 221
  Program ................................................................. 195

Firefighter Operations
  Course Descriptions (FSC) ........................................ 254
  Program ................................................................. 198

Fire Investigation
  Course Descriptions (FSC) ........................................ 254
  Program ................................................................. 192

Fire Officer Leadership
  Course Descriptions (FSC) ........................................ 254
  Program ................................................................. 198
<table>
<thead>
<tr>
<th>G</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gainful Employment Disclosures</td>
<td>15</td>
</tr>
<tr>
<td>G.E.D. (High School Equivalency)</td>
<td>10</td>
</tr>
<tr>
<td>General Business</td>
<td>256</td>
</tr>
<tr>
<td>Course Descriptions (GBS)</td>
<td></td>
</tr>
<tr>
<td>Programs</td>
<td>142</td>
</tr>
<tr>
<td>General Education Designations</td>
<td>49, 94</td>
</tr>
<tr>
<td>General Education Statement</td>
<td>48, 93</td>
</tr>
<tr>
<td>General Regulations</td>
<td>22</td>
</tr>
<tr>
<td>Geology</td>
<td>257</td>
</tr>
<tr>
<td>Course Descriptions (GLG)</td>
<td></td>
</tr>
<tr>
<td>Governing Board for MCCCD</td>
<td>307</td>
</tr>
<tr>
<td>Grading</td>
<td>46</td>
</tr>
<tr>
<td>Graduation (Commencement) Fees</td>
<td>42</td>
</tr>
<tr>
<td>Graduation Requirements</td>
<td>47, 92</td>
</tr>
<tr>
<td>Graphic Design–See Computer Graphic Design Programs</td>
<td></td>
</tr>
<tr>
<td>Grants</td>
<td>15, 85</td>
</tr>
<tr>
<td>Grievance Processes</td>
<td>47, 88</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>H</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous Materials Response</td>
<td>254</td>
</tr>
<tr>
<td>Courses (FSC)</td>
<td></td>
</tr>
<tr>
<td>Program</td>
<td>199</td>
</tr>
<tr>
<td>Hazing Prevention</td>
<td>68</td>
</tr>
<tr>
<td>Head Start</td>
<td>10</td>
</tr>
<tr>
<td>Health Care Integrated Educational Systems (HCIES)</td>
<td>30, 153</td>
</tr>
<tr>
<td>Health Care Related</td>
<td>259</td>
</tr>
<tr>
<td>Course Descriptions (HCR)</td>
<td></td>
</tr>
<tr>
<td>Health Concerns</td>
<td>56</td>
</tr>
<tr>
<td>Health Core Curriculum</td>
<td>258</td>
</tr>
<tr>
<td>Course Descriptions (HCC)</td>
<td></td>
</tr>
<tr>
<td>Health Information: Long Term Care Settings</td>
<td>260</td>
</tr>
<tr>
<td>Course Descriptions (HIM)</td>
<td></td>
</tr>
<tr>
<td>Program</td>
<td>155</td>
</tr>
<tr>
<td>Health Information Technology</td>
<td>260</td>
</tr>
<tr>
<td>Course Descriptions (HIM)</td>
<td></td>
</tr>
<tr>
<td>Program</td>
<td>154</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>24</td>
</tr>
<tr>
<td>Health Science</td>
<td>259</td>
</tr>
<tr>
<td>Course Descriptions (HES)</td>
<td></td>
</tr>
<tr>
<td>Histologic Technology</td>
<td>263</td>
</tr>
<tr>
<td>Course Descriptions (HST)</td>
<td></td>
</tr>
<tr>
<td>Programs</td>
<td>156</td>
</tr>
<tr>
<td>History</td>
<td>262</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification cards</td>
<td>17</td>
</tr>
<tr>
<td>Important Deadlines for Students</td>
<td>44</td>
</tr>
<tr>
<td>Important Numbers</td>
<td>19-20</td>
</tr>
<tr>
<td>Improving a grade/repeating a course</td>
<td>46</td>
</tr>
<tr>
<td>Incomplete, grade of</td>
<td>46</td>
</tr>
<tr>
<td>Incident Computer Usage Guidelines</td>
<td>85</td>
</tr>
<tr>
<td>Incident Telephone Usage Guidelines</td>
<td>85</td>
</tr>
<tr>
<td>Index of Courses by Subject</td>
<td>218</td>
</tr>
<tr>
<td>Index of Phoenix College Occupational Programs</td>
<td>128</td>
</tr>
<tr>
<td>Instructional Departments</td>
<td>124-126</td>
</tr>
<tr>
<td>Instructional Grievance Process</td>
<td>47, 88</td>
</tr>
<tr>
<td>Insurance, Accident</td>
<td>8</td>
</tr>
<tr>
<td>Interior Design</td>
<td>264</td>
</tr>
<tr>
<td>Course Descriptions (INT)</td>
<td></td>
</tr>
<tr>
<td>Program</td>
<td>135</td>
</tr>
<tr>
<td>Interior Merchandising</td>
<td>264</td>
</tr>
<tr>
<td>Course Descriptions (INT)</td>
<td></td>
</tr>
<tr>
<td>Program</td>
<td>136</td>
</tr>
<tr>
<td>International Baccalaureate Credit</td>
<td>30, 33-34</td>
</tr>
<tr>
<td>International Business</td>
<td>264</td>
</tr>
<tr>
<td>Course Description (IBS)</td>
<td></td>
</tr>
<tr>
<td>International Education Program</td>
<td>15</td>
</tr>
<tr>
<td>International Studies</td>
<td>284</td>
</tr>
<tr>
<td>Course Descriptions (POS)</td>
<td></td>
</tr>
<tr>
<td>Program</td>
<td>205</td>
</tr>
<tr>
<td>Interpreter Preparation</td>
<td>265</td>
</tr>
<tr>
<td>Course Descriptions (IPP)</td>
<td></td>
</tr>
<tr>
<td>Programs (Also see Deaf Studies)</td>
<td>178</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>J</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Placement (Career Services)</td>
<td>9, 298, 299</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>L</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Assisting</td>
<td>268</td>
</tr>
<tr>
<td>Course Descriptions (LBA)</td>
<td></td>
</tr>
<tr>
<td>Program</td>
<td>158</td>
</tr>
<tr>
<td>Leadership</td>
<td>269</td>
</tr>
<tr>
<td>Course Descriptions (LDR)</td>
<td></td>
</tr>
<tr>
<td>Leading Commons</td>
<td>15</td>
</tr>
<tr>
<td>Learning Communities</td>
<td>16</td>
</tr>
<tr>
<td>Legal Assisting (see Paralegal Studies)</td>
<td>146</td>
</tr>
<tr>
<td>Liberal Arts Programs</td>
<td>211</td>
</tr>
<tr>
<td>Library</td>
<td>16</td>
</tr>
<tr>
<td>Licensure Disclaimer</td>
<td>48, 93</td>
</tr>
<tr>
<td>M</td>
<td>Management</td>
</tr>
<tr>
<td></td>
<td>Programs</td>
</tr>
<tr>
<td>M</td>
<td>Map of Phoenix College Campus</td>
</tr>
<tr>
<td>M</td>
<td>Maricopa-ASU Pathways Programs (MAPP)</td>
</tr>
<tr>
<td>M</td>
<td>Maricopa Community College District</td>
</tr>
<tr>
<td>M</td>
<td>Maricopa Community College District Common Policies</td>
</tr>
<tr>
<td>M</td>
<td>Maricopa Community Colleges Vision, Mission, and Values</td>
</tr>
<tr>
<td>M</td>
<td>Maricopa Emergency Management System (MEMS)</td>
</tr>
<tr>
<td>M</td>
<td>Marketing</td>
</tr>
<tr>
<td></td>
<td>Programs</td>
</tr>
<tr>
<td>M</td>
<td>Massage Therapy</td>
</tr>
<tr>
<td></td>
<td>Programs</td>
</tr>
<tr>
<td>M</td>
<td>Mathematics</td>
</tr>
<tr>
<td></td>
<td>Mathematics Flowchart</td>
</tr>
<tr>
<td>M</td>
<td>Media Arts</td>
</tr>
<tr>
<td></td>
<td>Programs</td>
</tr>
<tr>
<td>M</td>
<td>Medical Assisting</td>
</tr>
<tr>
<td></td>
<td>Programs</td>
</tr>
<tr>
<td>M</td>
<td>Medical Billing and Coding: Physician-Based</td>
</tr>
<tr>
<td></td>
<td>Program</td>
</tr>
<tr>
<td>M</td>
<td>Medical Coding: Hospital-Based</td>
</tr>
<tr>
<td></td>
<td>Program</td>
</tr>
<tr>
<td>M</td>
<td>Medical Laboratory Science</td>
</tr>
<tr>
<td></td>
<td>Programs</td>
</tr>
<tr>
<td>M</td>
<td>Medical Marijuana Act</td>
</tr>
<tr>
<td>M</td>
<td>Medical Records</td>
</tr>
<tr>
<td>M</td>
<td>Military Science (R.O.T.C.)</td>
</tr>
<tr>
<td></td>
<td>Program</td>
</tr>
<tr>
<td>M</td>
<td>Multimedia Programs (See Media Arts)</td>
</tr>
<tr>
<td>M</td>
<td>Multimedia Technology</td>
</tr>
<tr>
<td>M</td>
<td>Music</td>
</tr>
<tr>
<td></td>
<td>Music History/Literature (MHL)</td>
</tr>
<tr>
<td></td>
<td>Music: Theory/Composition (MTC)</td>
</tr>
<tr>
<td></td>
<td>Music: Commercial/Business (MUC)</td>
</tr>
<tr>
<td></td>
<td>Music: Performance (MUP)</td>
</tr>
<tr>
<td>N</td>
<td>Native American Studies</td>
</tr>
<tr>
<td></td>
<td>(See American Indian Studies)</td>
</tr>
<tr>
<td>N</td>
<td>Navajo</td>
</tr>
<tr>
<td></td>
<td>Course Descriptions (NAV)</td>
</tr>
<tr>
<td>N</td>
<td>Navajo Humanities</td>
</tr>
<tr>
<td>N</td>
<td>New Student Orientation (see Academic Advising)</td>
</tr>
<tr>
<td>N</td>
<td>Noncredit Courses, Refund</td>
</tr>
<tr>
<td>N</td>
<td>Nondiscrimination</td>
</tr>
<tr>
<td>N</td>
<td>Non-Instructional Complaint Resolution Process</td>
</tr>
<tr>
<td>N</td>
<td>Nursing (See also Pre-Nursing Program)</td>
</tr>
<tr>
<td></td>
<td>Course Descriptions (NUR)</td>
</tr>
<tr>
<td>O</td>
<td>Occupational Programs Matrix, Maricopa Community Colleges</td>
</tr>
<tr>
<td>O</td>
<td>Occupational Programs, Phoenix College</td>
</tr>
<tr>
<td>O</td>
<td>One-Stop Enrollment Center</td>
</tr>
<tr>
<td>O</td>
<td>Organizational Leadership</td>
</tr>
<tr>
<td></td>
<td>Program</td>
</tr>
<tr>
<td>O</td>
<td>Organizational Management</td>
</tr>
<tr>
<td></td>
<td>Program</td>
</tr>
<tr>
<td>O</td>
<td>Other Admission Information</td>
</tr>
<tr>
<td>P</td>
<td>Paralegal Studies</td>
</tr>
<tr>
<td></td>
<td>Programs</td>
</tr>
<tr>
<td>P</td>
<td>Paramedicine</td>
</tr>
<tr>
<td></td>
<td>Program</td>
</tr>
<tr>
<td>P</td>
<td>Parking</td>
</tr>
<tr>
<td>P</td>
<td>Pattern Design</td>
</tr>
<tr>
<td></td>
<td>Programs</td>
</tr>
<tr>
<td>P</td>
<td>PC Basics</td>
</tr>
<tr>
<td>P</td>
<td>Philosophy</td>
</tr>
<tr>
<td>P</td>
<td>Phlebotomy</td>
</tr>
<tr>
<td></td>
<td>Program</td>
</tr>
<tr>
<td>P</td>
<td>Phoenix College Information</td>
</tr>
<tr>
<td>P</td>
<td>Phoenix College Occupational Programs</td>
</tr>
<tr>
<td>P</td>
<td>Phoenix College-Specific Fees</td>
</tr>
</tbody>
</table>
### Index

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photography</td>
<td>227</td>
</tr>
<tr>
<td>Course Descriptions (ART–Photography)</td>
<td>227</td>
</tr>
<tr>
<td>Programs (also see Digital Photography)</td>
<td>133</td>
</tr>
<tr>
<td>Transfer Information</td>
<td>211</td>
</tr>
<tr>
<td>Physical Education</td>
<td>282</td>
</tr>
<tr>
<td>Course Descriptions (PED)</td>
<td>282</td>
</tr>
<tr>
<td>Transfer Information</td>
<td>211</td>
</tr>
<tr>
<td>Physical Geography</td>
<td>258</td>
</tr>
<tr>
<td>Course Descriptions (GPH)</td>
<td>258</td>
</tr>
<tr>
<td>Physical Science</td>
<td>283</td>
</tr>
<tr>
<td>Course Description (PHS)</td>
<td>283</td>
</tr>
<tr>
<td>Physics</td>
<td>283</td>
</tr>
<tr>
<td>Course Descriptions (PHY)</td>
<td>283</td>
</tr>
<tr>
<td>Transfer Program</td>
<td>212</td>
</tr>
<tr>
<td>Planned Expressive Activity</td>
<td>59</td>
</tr>
<tr>
<td>Policy</td>
<td>81</td>
</tr>
<tr>
<td>Enforcement</td>
<td>84</td>
</tr>
<tr>
<td>Political Science</td>
<td>284</td>
</tr>
<tr>
<td>Course Descriptions (POS)</td>
<td>284</td>
</tr>
<tr>
<td>Pre-Health</td>
<td>212</td>
</tr>
<tr>
<td>Pre-Law</td>
<td>212</td>
</tr>
<tr>
<td>Pre-Nursing Program</td>
<td>212</td>
</tr>
<tr>
<td>Pre-Professional Programs</td>
<td>212</td>
</tr>
<tr>
<td>President’s Honors List</td>
<td>47</td>
</tr>
<tr>
<td>President’s Message</td>
<td>2</td>
</tr>
<tr>
<td>Prior Learning Assessment Credit (Credit for Prior Learning)</td>
<td>28</td>
</tr>
<tr>
<td>Probation</td>
<td>47</td>
</tr>
<tr>
<td>Procedure for Petition Signature Solicitation</td>
<td>90</td>
</tr>
<tr>
<td>Procedure for Solicitation</td>
<td>90</td>
</tr>
<tr>
<td>Professional Cooking Program (See Culinary Studies)</td>
<td>175</td>
</tr>
<tr>
<td>Programs and Awards Index</td>
<td>128-129</td>
</tr>
<tr>
<td>Programming and System Analysis</td>
<td>234</td>
</tr>
<tr>
<td>Course Descriptions (CIS)</td>
<td>234</td>
</tr>
<tr>
<td>Programs</td>
<td>183</td>
</tr>
<tr>
<td>Psychology</td>
<td>285</td>
</tr>
<tr>
<td>Course Descriptions (PSY)</td>
<td>285</td>
</tr>
<tr>
<td>Public Administration</td>
<td>282</td>
</tr>
<tr>
<td>Course Descriptions (PAD)</td>
<td>282</td>
</tr>
<tr>
<td>Public Safety (Security)</td>
<td>16</td>
</tr>
<tr>
<td>P/Z Grading (Credit/No Credit Courses)</td>
<td>46</td>
</tr>
<tr>
<td>Rights of Access to Educational Records</td>
<td>64</td>
</tr>
<tr>
<td>Rights and Responsibilities of Students</td>
<td>59</td>
</tr>
<tr>
<td>S</td>
<td>86-87</td>
</tr>
<tr>
<td>Satisfactory Academic Progress (SAP)</td>
<td>86-87</td>
</tr>
<tr>
<td>Scholarships</td>
<td>14, 45, 85</td>
</tr>
<tr>
<td>Scholastic Standards</td>
<td>45</td>
</tr>
<tr>
<td>Scholarships and Financial Aid</td>
<td>14, 45, 85</td>
</tr>
<tr>
<td>Servicemembers’ Opportunity Colleges</td>
<td>29</td>
</tr>
<tr>
<td>Sexual Harassment Policy for Employees</td>
<td>83</td>
</tr>
<tr>
<td>Sexual Harassment Policy for Students</td>
<td>50</td>
</tr>
<tr>
<td>Shared Unique Numbering System (SUN)</td>
<td>37, 250, 297</td>
</tr>
<tr>
<td>Sign Language</td>
<td>287</td>
</tr>
<tr>
<td>Course Descriptions (SLG)</td>
<td>287</td>
</tr>
<tr>
<td>Programs</td>
<td>178</td>
</tr>
<tr>
<td>Also see Interpreter Preparation</td>
<td>178</td>
</tr>
<tr>
<td>Small Business Management</td>
<td>287</td>
</tr>
<tr>
<td>Course Description (SBS)</td>
<td>287</td>
</tr>
<tr>
<td>Small Business Start-Up</td>
<td>287</td>
</tr>
<tr>
<td>Course Descriptions (SBS)</td>
<td>287</td>
</tr>
<tr>
<td>Program</td>
<td>145</td>
</tr>
<tr>
<td>Smoke-Free/Tobacco-Free Environment</td>
<td>78</td>
</tr>
<tr>
<td>Social Work</td>
<td>290</td>
</tr>
<tr>
<td>Course Descriptions (SWU)</td>
<td>290</td>
</tr>
<tr>
<td>Social Work and Human Services</td>
<td>206</td>
</tr>
<tr>
<td>College of St. Scholastica</td>
<td>213</td>
</tr>
<tr>
<td>Bachelor of Arts in Social Work Transfer Pathway</td>
<td>213</td>
</tr>
<tr>
<td>Sociology</td>
<td>287</td>
</tr>
<tr>
<td>Course Descriptions (SOC)</td>
<td>288</td>
</tr>
<tr>
<td>Solicitation</td>
<td>56</td>
</tr>
<tr>
<td>Southwest Human Development (Child Care for PC)</td>
<td>10</td>
</tr>
<tr>
<td>Southwest Studies</td>
<td>262</td>
</tr>
<tr>
<td>Course Descriptions (HIS)</td>
<td>262</td>
</tr>
<tr>
<td>Program</td>
<td>206</td>
</tr>
<tr>
<td>Spanish</td>
<td>289</td>
</tr>
<tr>
<td>Course Descriptions (SPA)</td>
<td>289</td>
</tr>
<tr>
<td>Spanish Humanities</td>
<td>290</td>
</tr>
<tr>
<td>Course Description (SPH)</td>
<td>290</td>
</tr>
<tr>
<td>Special Fees</td>
<td>42</td>
</tr>
<tr>
<td>Speech Communication (See Communication)</td>
<td>209, 237</td>
</tr>
<tr>
<td>Student Assessment and Course Placement</td>
<td>38</td>
</tr>
<tr>
<td>Student Clubs/Organizations</td>
<td>20, 68</td>
</tr>
<tr>
<td>Student Conduct Code</td>
<td>60</td>
</tr>
<tr>
<td>Student Employment</td>
<td>66</td>
</tr>
<tr>
<td>Student Financial Assistance</td>
<td>14, 45, 85</td>
</tr>
<tr>
<td>Student Governance</td>
<td>67</td>
</tr>
<tr>
<td>Student Grievance</td>
<td>11, 47, 88</td>
</tr>
<tr>
<td>Student Identification Cards</td>
<td>17</td>
</tr>
<tr>
<td>Student Life and Leadership</td>
<td>17</td>
</tr>
<tr>
<td>Student Records</td>
<td>64, 90</td>
</tr>
<tr>
<td>Student Right to Know</td>
<td>58</td>
</tr>
<tr>
<td>Student Rights and Responsibilities</td>
<td>59</td>
</tr>
<tr>
<td>Student Services (See Phoenix College Information)</td>
<td>8-20</td>
</tr>
<tr>
<td>Student Union</td>
<td>17</td>
</tr>
<tr>
<td>Students With Disabilities</td>
<td>11, 69</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>55</td>
</tr>
<tr>
<td>SUN System Course Information</td>
<td>37, 250, 297</td>
</tr>
<tr>
<td>Suspension</td>
<td>63</td>
</tr>
<tr>
<td>Sustainability/Social Sciences and Humanities</td>
<td>290</td>
</tr>
<tr>
<td>Course Descriptions (SSH)</td>
<td>290</td>
</tr>
</tbody>
</table>
Taping of Faculty Lectures ........................................ 76
Technical Theatre
  Course Descriptions (THE, THF, THP) ............ 293, 293, 294
  Program ....................................................... 191
Technology Accessibility .................................... 72
Technology Resource Standards ............................ 76
Telecommunications
  Course Description (TCM) ................................. 291
Testing Services .............................................. 17
Textiles and Clothing
  Course Descriptions (TEC) ................................. 291
Theatre Arts
  Course Descriptions (THE, THF, THP) ............ 293, 293, 294
  Transfer Program ............................................. 105, 213
Time Limit for Coursework .................................. 37, 92
Tobacco-Free Environment ................................... 78
Transcripts ...................................................... 18, 49
Transfer Credits from Outside of MCCCD .......... 94
Transfer Resources ............................................ 121-122
Transferring to the Maricopa Community Colleges .. 36
Tuition and Fees ............................................... 39, 41
Types and Levels of Courses .............................. 297

University Transfer Pathway Programs ............... 215
Use of College Grounds ...................................... 57, 59

Vaccinations ..................................................... 45
Values, MCCCD .................................................. 22
Verification of Information .................................... 86
Veteran Services ............................................... 18, 72
Video Production Technology
  Course Description (VPT) ................................ 295
Violations, Common Policy ................................... 83
Vision Statement
  MCCCD ......................................................... 22
  Phoenix College ................................................. 4

Web Design (see Media Arts: Web Design) ............ 190
Web Design
  Course Descriptions (BPC/CIS) ...................... 230, 234
  Programs ..................................................... 185, 190
Web Developer
  Course Descriptions (CIS) ................................. 234
  Program ....................................................... 185
Welcome Center ............................................... 18
Wellness Education
  Course Descriptions (WED) ................................. 295
Withdrawal ...................................................... 47, 89
  Student Withdrawal Procedures ......................... 89
  Faculty Withdrawal Procedures ......................... 89

Women's Studies
  Course Descriptions (WST) ................................. 296
Word Processing (See BPC and CIS for Course
  Descriptions) .................................................. 230, 234
Workplace Violence Prevention ............................ 58
World Wide Web Address .................................... 3, 218
MATHEMATICS FLOWCHART
Please consult an advisor. This chart is for reference only.

For many AAS and AGS degree and CERTIFICATE programs

MAT081/082 → MAT090/091/092 → MAT112

MAT108
Tutored Math for MAT082 to MAT15x

MAT108
Tutored Math for MAT082 to MAT15x

For many AA degree programs*

MAT081/082 → MAT090/091/092 → MAT140/141/142
MAT120/121/122 → MAT150/151/152

*Refer to your checksheet or contact your advisor to determine the appropriate track for your major and/or university.

For Business (ABUS-GR, ABUS-SR)

MAT081/082 → MAT090/091/092 → MAT120/121/122 → MAT150/151/152 → MAT212/213 → MAT217/218
See Advisor

For Elementary Education (AAEE)

MAT081/082 → MAT090/091/092 → MAT120/121/122
MAT140/141/142* or MAT150/151/152 → MAT256
MAT257

*Prerequisites: Grade of C or better in (MAT150/151/152/higher) or grade of C or better in (MAT120/121/122) & (MAT140/141/142/higher) or [grade of C] better in (MAT140/141/142 & satisfactory score on District placement exam in (MAT150/151/152/higher)].

MAT206
Elements of Statistics: Required for many professions.

For Math, Science, Engineering, and Computer Science
MAT225 is strongly recommended and now required for some majors.

MAT090/091/092 → MAT120/121/122 → MAT150/151/152 → MAT182
MAT187
For students who have taken HS Trigonometry
MAT225
See Advisor
MAT276
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PC Center for Nursing Excellence (NUR)
www.phoenixcollege.edu/nursing
3700 N. Third Avenue | Phoenix, AZ 85013

PC Center for Excellence in Healthcare Education (HE)
www.phoenixcollege.edu/healthcare
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