



# COLLEGE CATALOG

2014-2015



*Learning Today,  
Leading Tomorrow*



**COLLEGE MISSION**

Vision.....2  
 Mission.....2  
 Directions.....2  
 Accreditation.....2  
 Declaration of Civility for a Learning College.....3

**STUDENT SERVICES**

**Admission Information**.....5  
 Residency Guidelines.....6  
 Classification of Students.....8  
 Transfer Students.....8  
 Admission Catalog.....8  
 Program Requirements.....8

**Academic Advising**.....9  
 Placement Testing.....9  
 Reading Requirement.....9  
 Academic Load.....9  
 New Student Orientation.....10  
 Transfer of Credits.....10

**Registration Information**.....10  
 Ontime Registration.....11  
 Online Registration.....11  
 Dropping or Adding a Class.....11  
 Withdrawing from Classes/College.....11  
 Auditing.....11  
 Repetition of Courses.....11  
 Academic Calendar.....259  
 Numbering System.....12  
 Refunds.....12

**Financial Aid**.....12  
 Financial Aid and Scholarships.....12  
 Federal Financial Aid Programs.....12  
 Title IV Programs.....12  
 Institutional Scholarship Programs.....14  
 Co-curricular Scholarship Programs.....15  
 CAC Foundation Scholarships.....16  
 Promise for the Future Scholarship.....16  
 Financial Aid Contact Information.....21  
 Veterans Educational Benefits.....21

**Student Records**.....21  
 Family Educational Rights Privacy Act.....21  
 Applying for Graduation.....22  
 Catalog under Which a Student Graduates.....22  
 Credit by Examination.....22  
 Credit by Evaluation.....23  
 Tech Prep.....23  
 Conferring a Second Degree from  
     Central Arizona College.....23  
 Academic Standards.....24  
 Plagiarism Statement.....24

**Attendance**.....24  
 Absence Policy.....24  
 Attendance Requirements.....24  
 Grading Information.....24  
 Grade Change.....26  
 Academic Progress.....26  
 Academic Honors Recognition.....26

**Student Services**.....27  
 Career & Student Employment Services.....27  
 Career Exploration.....27  
 Customer Service and Technical Support.....28  
 Food Services.....28  
 Catering.....28  
 General Educational Development (GED) Classes.....29  
 GED Test.....29  
 Intercollegiate Athletics.....29  
 Athletic Records.....29  
 Learning Support Department.....29  
 Library.....30  
 Disability Resource Services.....30  
 TRIO Student Success Program.....30  
 TRIO Summer Bridge.....30  
 WIA Youth Program.....30  
 Residence Life.....30

**Student Engagement and Activities**  
 Student Leadership Organization.....31  
 Student Activities.....31  
 Student Clubs and Organizations.....31

**DEGREES & CERTIFICATES INFORMATION**

Transfer Degree Information for Arizona.....33  
 Arizona Shared Unique Numbering (SUN) System.....34  
 Arizona General Education Curriculum (AGEC).....34  
 Transfer Agreement Options.....35  
 AAS to BAS Transfer Model.....35  
 Articulation & Transfer Options for Degree Completers.....36  
 Arizona State University (ASU).....37  
 Northern Arizona University (NAU).....38  
 University of Arizona (UA).....39  
 Associate of Arts (A.A.).....40  
 Associate of Business (A.BUS.).....42  
 Associate of Science (A.S.).....43  
 Arizona General Education Curriculum (AGEC)  
     Course List.....45  
 Associate of Applied Science (A.A.S.)  
     Degree.....53  
 Associate of General Studies Degree (A.G.S.).....54  
 Common Student Learning Outcomes.....55  
 Certificates.....55  
 Arizona General Education Curriculum for Arts.....56  
 Arizona General Education Curriculum for Business.....57  
 Arizona General Education Curriculum for Science.....58



# TABLE OF CONTENTS

## Programs of Study .....59

### Accounting

Accounting (A.A.S.) .....	61
Accounting (Certificate) .....	62

### Administration of Justice

Administration of Justice Studies (A.A.) .....	62
Administration of Justice Studies (A.A.S.) .....	63
Administration of Justice (Certificate) .....	64

### Agriculture

Agriculture (A.A.) .....	65
Agriculture (A.S) .....	66
Agriculture Business (Certificate) .....	67
Agriculture General (A.A.S.) .....	68
Agriculture General (Certificate) .....	69

### Animal Science

Equine Management and Training (A.A.S.) .....	69
Equine Management and Training (Certificate) .....	70

### Biology

Biotechnology (A.S.) .....	71
----------------------------	----

### Business

Business (A.A.S.) .....	72
Business (Certificate) .....	73
Management (Certificate) .....	74
Hotel and Restaurant Management (A.A.S.) .....	74
Hotel and Restaurant Management (Certificate) .....	76
Recreation Management (Certificate) .....	128
<i>See Sports and Fitness</i>	

### Chemistry

Chemistry (A.S.) .....	76
------------------------	----

### Communications

Communication Skills for the Professional (Certificate) .....	77
Communication Studies (Certificate) .....	78

### Computer

Application Development and Web Design (Certificate) .....	78
Computer Aided Design (Certificate) .....	130
<i>See Technology</i>	
Computer Applications for Business Users (Certificate) .....	79
Computer Programming (A.A.S) .....	79
Computer Programming (Certificate) .....	80
Geographic Information Systems –GIS (A.A.S.) .....	80
GIS Drafting and Mapping (Certificate) .....	81
Microcomputer Business Applications (A.A.S.) .....	82
Microcomputer Business Application Specialist (Certificate) .....	82
Network Administration (Certificate) .....	83
Network Systems Administration (A.A.S.) .....	83

### Creative Arts

Entertainment Industry Technology (EIT) -Artist and Venue Management (A.A.S) .....	84
Entertainment Industry Technology (EIT) -Artist and Venue Management (Certificate) .....	85
Entertainment Industry Technology Live Audio and Lighting (A.A.S) .....	85
Entertainment Industry Technology Live Audio and Lighting (Certificate) .....	86
Entertainment Industry Technology Popular Music Performance (A.A.S) .....	87
Entertainment Industry Technology Popular Music Performance (Certificate) .....	87
Entertainment Industry Technology Recording Engineering (A.A.S) .....	88
Entertainment Industry Technology Recording Engineering (Certificate) .....	89
Fine Arts (A.A.) .....	89
Graphic Design (A.A.S.) .....	90

### Culinary Arts

Baking and Pastry (Certificate) .....	91
Culinary Arts (A.A.S.) .....	92
Culinary Arts I (Certificate) .....	93
Culinary Arts II (Certificate) .....	93

### Diesel/Heavy Equipment

Diesel and Heavy Equipment Technology (A.A.S.) .....	94
Diesel/Heavy Equipment Technology (Certificate) .....	95
Heavy Equipment Operator (A.A.S.) .....	96
Heavy Equipment Operator (Certificate) .....	97

### Education

Early Childhood Education Family Childcare (A.A.S.) .....	98
Early Childhood Education Family Childcare (Certificate) ..	98
Early Childhood Education Infant-Toddler (A.A.S) .....	99
Early Childhood Education Infant-Toddler (Certificate) .....	99
Early Childhood Education Management (A.A.S.) .....	100
Early Childhood Education Management (Certificate) .....	101
Early Childhood Education Preschool (A.A.S) .....	101
Early Childhood Education Preschool (Certificate) .....	102
Elementary Education (A.A.E.E.) .....	103

### Emergency Medical Services

Basic EMT (Certificate) .....	105
Critical Care for Paramedics (Certificate) .....	105
Paramedicine (A.A.S.) .....	106

### Fire Services

Driver Operator (Certificate) .....	107
Fire Officer 1 (Certificate) .....	108
Firefighter Operations (Certificate) .....	108
Fire Science Technology (A.A.S.) .....	109
Wildland Firefighter I (Certificate) .....	110

### Geology and Planetary Science

Geology and Planetary science (A.S.) .....	110
--	-----





**Health Careers**

Clinical Laboratory Assistant (Certificate) ..... 111  
 Coding and Reimbursement (Certificate) ..... 112  
 Community Public Health (A.S.) ..... 112  
 Health Information Technology (A.A.S.) ..... 113  
 Massage Therapy (A.A.S.) ..... 114  
 Massage Therapy (Certificate) ..... 115  
 Medical Assistant (A.A.S.) ..... 116  
 Medical Assistant (Certificate) ..... 117  
 Pharmacy Technician (Certificate) ..... 118

**Manufacturing**

Field Programmable Gate Array (Certificate) ..... 118  
 Labview Programming (Certificate) ..... 119  
 Manufacturing Electronics (Certificate) ..... 119  
 Manufacturing Engineering (A.A.S.) ..... 119  
 Nanofabrication Technology (A.A.S.) ..... 120

**Nutrition and Dietetics**

Community Nutrition Worker (Certificate) ..... 121  
 Diabetes Care and Education (Certificate) ..... 122  
 Dietary Manager Training Program (Certificate) ..... 122  
 Dietetic Technician (A.A.S.) ..... 123  
 Nutrition and Health Promotion (Certificate) ..... 124

**Renewable Energy Technology**

Biofuels Technician (Certificate) ..... 124  
 Renewable Energy Technology (A.A.S.) ..... 125  
 Solar Photo Voltaic Technician (Certificate) ..... 126

**Sports and Fitness**

Athletic Studies (A.A.) ..... 126  
 Group Fitness Instructor (Certificate) ..... 127  
 Human Performance (Certificate) ..... 128  
 Recreation Management (Certificate) ..... 128  
 Sports Information (Certificate) ..... 129  
 Sports Management (A.A.S.) ..... 129

**Technology**

Computer Aided Design (Certificate) ..... 130  
 Welding Technology (A.A.S.) ..... 131  
 Welding (Certificate) ..... 132

**Degrees and Certificates with Special Requirements**

**Corrections**

Advanced Corrections (Certificate) ..... 133  
 Corrections (A.A.S.) ..... 133

**Diesel/Heavy Equipment**

Heavy Equipment Mechanic’s Apprenticeship  
 (Certificate) ..... 134  
 John Deere Construction and Forestry Equipment  
 Technology (A.A.S.) ..... 135  
 Operator’s Apprenticeship Program (Certificate) ..... 135

**Health Careers**

Nursing (A.A.S.) ..... 136  
 Radiologic Technology (A.A.S.) ..... 137

**COURSE DESCRIPTIONS**

Special Courses ..... 140  
 Arizona General Education Curriculum (AGEC) ..... 141  
 Accounting (ACC) ..... 142  
 Administration of Justice (AJS) ..... 142  
 Agriculture Business (AGB) ..... 144  
 Agriculture Science (AGS) ..... 145  
 Animal Science (ANS) ..... 146  
 Anthropology (ASB) ..... 148  
 Archaeology (ARH) ..... 148  
 Art (ART) ..... 149  
 Astronomy (AST) ..... 150  
 Automotive/Diesel (AUT) ..... 150  
 Biology (BIO) ..... 151  
 Business (BUS) ..... 152  
 Certified Nursing Assistant (CNA) ..... 154  
 Chemistry (CHM) ..... 155  
 Chinese (CHI) ..... 156  
 Civil Technology (CET) ..... 156  
 Communications (COM) ..... 156  
 Computer Business Applications (CBA) ..... 157  
 Computer Information Systems (CIS) ..... 159  
 Community Public Health (CPH) ..... 162  
 Counseling/Personal Development (CPD) ..... 162  
 Culinary Arts (CUL) ..... 163  
 Dance ..... 166  
 Diesel/Heavy Equipment (DIE) ..... 167  
 Drafting (DFT) ..... 169  
 Early Childhood Education (ECE) ..... 169  
 Economics (ECN) ..... 173  
 Education (EDU) ..... 174  
 Electricity (ELC) ..... 175  
 Electronics (ELT) ..... 176  
 Emergency Medical Services (EMS) ..... 177  
 Engineering (EGR) ..... 180  
 English (ENG) ..... 180  
 English Second Language (ESL) ..... 182  
 Entertainment Industry Technology (EIT) ..... 182  
 Environmental Science (ENV) ..... 184  
 Fire Science Technology (FSC) ..... 185  
 French (FRE) ..... 189  
 General Education Development (GED) ..... 190  
 Geographic Information Systems (GIS) ..... 190  
 Geography (GEO) ..... 192  
 Geology (GLG) ..... 192  
 Health Careers Center (HCC) ..... 192  
 Health Information Management (HIM) ..... 193  
 Health Knowledge & Skills (HKS) ..... 195  
 Health Patient Management (HPM) ..... 195  
 Heavy Equipment Operations (HEO) ..... 198  
 History (HIS) ..... 199  
 Honors (HNR) ..... 200





# TABLE OF CONTENTS

Hospitality Management (HRM) .....201  
 Humanities (HMC) .....202  
 Interdisciplinary Studies (IDS) .....203  
 Literature (LIT) .....203  
 Manufacturing Engineering Technology (MET) .....204  
 Mass Communications (MSC).....206  
 Mathematics (MAT) .....208  
 Music History and Literature (MHL).....210  
 Music Performance (MUP).....211  
 Music Theory and Composition (MTC).....212  
 Nursing (NUR).....213  
 Nutrition/Dietetics (NTR) .....214  
 Office Automation Systems (OAS).....217  
 Philosophy (PHI) .....218  
 Physical Education (PED).....218  
 Physical Education Activity (PAC) .....220  
 Physical Education Health (PEH) .....225  
 Physical Education Varsity Sports (PEV) .....226  
 Physics (PHY).....227  
 Political Science (POS).....228  
 Psychology (PSY) .....229  
 Radiology (RAD).....229  
 Reading (RDG) .....231  
 Real Estate (REA).....232  
 Recreation (REC) .....232  
 Renewable Energy Technology (RET) .....233  
 Sign Language (SLG) .....234  
 Skills – Workforce (SKL) .....234  
 Social Work Undergraduate (SWU) .....236  
 Sociology (SOC) .....236  
 Spanish (SPA) .....237  
 Theater (THE).....238  
 Welding (WLD) .....240  
 Women and Gender Studies (WGS) .....241

## GENERAL INFORMATION

Board of Governors.....243  
 College Administration.....243  
 Faculty and Staff .....244  
 Emeritus Faculty and Staff.....255  
 Academic Calendar 2014-15.....259  
 Index .....260



# College Mission



2014 All-Arizona Academic Team members – Carly Thalman, Steven Shedd, CAC President Doris Helmich, Sean Kolder, Lorena Villanueva, Aline Kraus and Kandace Kelly



## OUR VISION

Central Arizona College is the leader of innovative learner success and the center for educational opportunities in our diverse communities.

## OUR MISSION

Central Arizona College engages our diverse communities in quality learning experiences for lifelong success by providing accessible educational, economic, cultural, and personal growth opportunities.

## OUR DIRECTIONS

- Students
- Quality Programs
- Academic Involvement K-12
- Facilities that Foster Learning
- Advanced Degrees
- Responsibility to Community
- Employee Development

## ACCREDITATION

Central Arizona College is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. For information about Central Arizona College's accreditation, you can contact the Higher Learning Commission of the North Central Association of Colleges and Schools at 30 North LaSalle Street, Suite 2400, Chicago, IL 60602-2504, 312-263-0456 or online at [ncahlc.org](http://ncahlc.org). You may also contact Central Arizona College, 8470 North Overfield Road, Coolidge, AZ 85128 or call 520-494-5444. In addition, several CAC programs maintain external accreditations.

## Education

### Early Childhood Education – Preschool Degree

National Association for the Education of Young Children  
Commission on Early Childhood Associate Degree  
Accreditation (NAEYC)

1313 L. Street NW, Suite 500

Washington, DC 20005-4101

202-350-8862

[www.naeyc.org](http://www.naeyc.org)

## Health Careers

### Dietetic Technician Degree

Accreditation Council for Education in Nutrition and Dietetics  
(ACEND)

120 S. Riverside Plaza, Suite 2000

Chicago, IL 60606-6995

800-877-1600

<http://www.eatright.org/ACEND/>

### Dietary Managers Training Program Certificate

Association of Nutrition and Foodservice Professionals  
(ANFP)

406 Surrey Woods Drive

St. Charles, IL 60174

800-323-1908

[www.ANFPonline.org](http://www.ANFPonline.org)

### Health Information Technology Degree

The Commission on Accreditation for Health Informatics and  
Information Management Education (CAHIIM)

233 N. Michigan Ave. 21<sup>st</sup> Floor

Chicago, IL 60601-5800

312-233-1100

[www.cahiim.org](http://www.cahiim.org)

### Medical Assistant Degree

Commission on Accreditation of Allied Health Education  
Programs (CAAHEP) upon the recommendation of the Medical  
Assisting Education Review Board (MAERB)

1361 Park Street

Clearwater, FL 33756

727/210-2350 727/210-2350

[www.caahep.org](http://www.caahep.org)

### Nursing Certificate and Degree

Arizona State Board of Nursing

4747 North 7th Street, Suite 200

Phoenix, AZ 85014

602-889-5150

<https://www.azbn.gov>

Accreditation Commission for Education in Nursing, Inc.

3343 Peachtree Road NE, Suite 850

Atlanta, GA 30326

404-975-5000

[www.acenursing.org](http://www.acenursing.org)

### Radiography Degree

Joint Review Committee on Education in Radiologic  
Technology (JRCERT)

20 N. Wacker Dr., Suite 2850

Chicago, IL 60606-3182

312-704-5300

[www.jrcert.org](http://www.jrcert.org)

## Technology

### Diesel and Heavy Equipment Technology

Associated Equipment Distributors Foundation

615 W. 22nd Street

Oak Brook, IL 60523

630-574-0650

[www.aednet.org](http://www.aednet.org)





## Heavy Equipment Operators

National Center for Construction Education and Research  
(NCCER)

13614 E. Progress Blvd.

Alachua, FL 32615

386-518-6500

<http://www.nccer.org>

## Welding

National Center for Construction Education and Research  
(NCCER)

13614 E. Progress Blvd.

Alachua, FL 32615

386-518-6500

<http://www.nccer.org>

**The programs and classes in this catalog have been approved for veteran's benefits.**

This publication and its provisions do not constitute, and should not be regarded as, a contract between CAC and any party or parties. At the time of publication, reasonable effort was made to ensure the factual accuracy of the information. However, this publication is not a complete statement of all policies, procedures, rules, regulations, academic requirements, and tuition and fees applicable to CAC, its students, or its programs. In addition, changes or additions may be made to the policies, procedures, rules, regulations, and academic requirements set out in this publication. CAC reserves the right to make these changes and additions to the information in this publication without prior notice. When a curriculum or graduation requirement is changed, it is not made retroactive unless the change is to the student's advantage and can be accommodated within the span of years normally required for graduation. *See an academic advisor for additional CAC policies.*

## DECLARATION OF CIVILITY FOR A LEARNING COLLEGE

We affirm that all members of a learning college ought to be held in mutual respect; that they aspire to achieve and belong as do all people regardless of their title, job classification, or degree; that all members of the CAC community--student and teacher, manager and employee--are engaged in a common endeavor: the creation of an environment dedicated to learning.

We further affirm that the vitality of a learning college depends on a community where dialogues are both honest and civil, where tough questions are raised and we can disagree without being disagreeable. Thus, it is the duty of every member of the community to actively and consciously help make this possible, committing each of us to personally uphold the virtues that lead to such a culture and to hold others accountable as well, both

privately and publicly. We should all be role models and hold each other to a consistent standard.

To achieve these ends, a behavior, which we shall call civility, must not only be practiced but form the basis for a new era of respect and trust among the members of this community. For without this civility--this respect and trust--the goal of becoming a place where learning is cherished will never be achieved. Civility as we understand it flows from these basic virtues:

### Integrity, including

- Honesty
- Fairness
- Sincerity

### Fidelity, including

- Faithfulness to the spirit of a learning college
- Allegiance to the public trust

### Charity, including

- Kindness
- Caring
- Good will
- Tolerance
- Compassion

### Responsibility, including

- Reliability
- Accountability
- Trustworthiness

### Self-discipline, including

- Acting with reasonable restraint
- Not indulging in excessive behavior

Finally, we affirm that these virtues must be modeled first and foremost by those members who wear the mantle of leadership. It must be modeled foremost by the leaders within the student body, faculty, staff, and administration because it is to them that the rest of the community looks for direction, for support, and for wisdom in our common endeavor to make this a place of learning.

**Central Arizona College provides equal opportunity in employment and educational programs and activities. Discrimination is prohibited on the basis of race, color, religion, sex, age, disability, national origin, military status or genetic test information.**



# Student Services



2014 CAC Graduation Ceremony



## Admission Information

Central Arizona College provides equal opportunity in employment and educational programs and activities. Discrimination is prohibited on the basis of race, color, religion, sex, age, disability, national origin, military status or genetic test information.

### Admission Requirements

#### Regular Admission

Regular admission to the college is granted to any person who meets one of the following criteria:

- Graduate of a regionally accredited high school as defined by the United States Office of Education or any other appropriate state educational agency
- Earned a high school certificate of equivalency (GED)
- 18 years of age or older and demonstrates evidence of potential success in the community college
- Transfer student in good academic standing from another college or university

#### Admission of Students Under the Age of 18

No person under age 18 shall be denied admission because of age, lack of a high school diploma or high school certificate of equivalency, grade in school, lack of permission of school officials or lack of concurrent enrollment in a public or private school if the student meets one of the following test scores:

- SAT (Scholastic Aptitude Test) composite (verbal and math) score of 930 or above;
- ACT (American College Test) composite score of 22 or above.

Students who are participants in a special program or class sponsored by the college, such as the First Step Program and Early College, or who are currently in dual enrollment course(s) in both their high school and Central Arizona College may be considered for Special Admissions. A student admitted under this criterion is not guaranteed admission to a specific degree program or to all courses offered at the college. The number of credits in which a student may enroll may be limited.

Students seeking admission to the college as their primary institution must provide evidence of:

- Completion of the Admission Student Information Form;
- Completion of Request for Special Admission Form;
- Submission of a letter stating the reason for the special admission request;
- Completion of college placement exam (COMPASS/ASSET);
- Consultation with a member of the college academic advising staff and/or;
- Consultation with an approved Special Admit designated official.



#### Admission of Students in Special Status

Persons not meeting any of the provisions stated above may be admitted on an individual basis with the approval of college officials, so long as such students meet the established requirements of the course(s) for which they enroll and the College officials determine that such admission is in the best interest of the student. An admission form must be completed and a letter stating the reason for the special admission request is required.

#### Admission of F-1 Nonimmigrant Students – International Students

International students seeking admission based on F-1 student visa status must achieve the following:

- Completion of Admission Form/Registration Student Information form;
- Graduation from a high school equivalent to the 12th grade level in the United States. It is recommended that students have graduated in the upper 50 percent of their secondary school (high school or equivalent) in order to ensure success in academic classes at this college. Official high school transcripts must be mailed directly to the Records Office;
- Completion of Test of English as a Foreign Language (TOEFL) with a score of at least 450 paper test or 133 on the computer test. The score must be submitted directly from the testing agency to the Records Office. Questions about the TOEFL should be directed to the Educational Testing Services at the following address: TOEFL Services, PO Box 6155, Princeton, NJ, 08541-6155;
- Evidence of financial support or deposit of tuition. The college has no provision for scholarships for international students; therefore, students must be prepared to meet the necessary financial obligations for the entire time they will be in the United States. It is estimated that each student will need at least \$10,000 per academic year in order to meet all expenses, exclusive of travel;
- Proof of health insurance that will cover medical expenses in the United States or purchase of health/accident insurance after arriving at CAC;
- Translation of documents into English, if required.





## Admission of students supplementing secondary school or home school with college courses

- Completion of Admission/Registration Student Information Form;
- Submission of completed Approval for Enrollment of High School Student Form;
- Submission of a letter stating the reason for the special admission request;
- Completion of the college placement exam (COMPASS/ASSET), if required for the courses in which the student plans to enroll;
- Consultation with academic advising staff and/or consultation with an approved Special Admit designated official.

## Students enrolling in a program sponsored by the college or in courses for dual credit

- Completion of Admission/Registration Student Information Form;
- Completion of the college placement exam (COMPASS/ASSET), if required for the courses in which the student plans to enroll.

## Students returning to CAC following an absence of more than one year

- Completion of Admission/Registration Student Information Form.

## Residency Guidelines

Students are classified for tuition purposes under one of the following resident classifications:

- Resident, in-state
- Non-resident (includes out-of-state, F-1 nonimmigrant students and students without legal immigration status)

Residency regulations are published in their entirety under Official Residency Guidelines.

## Resident status will be assigned under the following conditions:

- Students who are U.S. citizens;
- Dependent students who have lived in Arizona for less than a year, but reside with their parents or legal guardians who have established domicile in Arizona for one year and claim the student as an exemption for state and federal tax purposes;
- Financially independent students who have resided in Arizona for at least 12 months prior to the start of the semester in which they are enrolling and have established Arizona as their permanent domicile;
- Students who have transferred to Arizona by their employer for employment purposes;

- Students or spouses who are members of the Armed Forces of the United States, stationed in Arizona pursuant to military orders;
- Students who are members of Native American tribes whose reservation lands lie in Arizona and extend into another state and who are residents of that reservation.

## Non-resident status will be assigned under the following conditions:

- Students who are claimed as exemptions by parents or legal guardians for U.S. federal or state income tax purposes and the parent or guardians are not residents of Arizona;
- Persons who have lived in Arizona less than one calendar year;
- Students who have not established Arizona as their permanent domicile after moving to Arizona;
- Winter visitors who have not established Arizona as their permanent domicile, even if residing in Arizona for more than one year;
- Students who are not U.S. citizens.

## Official Residency Guidelines

The following guidelines concerning the determination of residency for tuition purposes are a compilation of statutory law (and A.R.S. 15-1801). Due to the complexity in interpreting these laws, students having difficulty in determining their residency should contact the Records Office for further explanation.

Proposition 300, A.R.S. §15-1803(B) now holds that “a person who is not a citizen or legal resident of the United States or who is without lawful immigration status is not entitled to classification as an in-state student pursuant to section 15-1802 or entitled to classification as a county resident pursuant to section 15-1802.01.”

A.R.S. §15-1825 requires that a person who is not a “citizen of the United States, who is without lawful immigration status and who is enrolled as a student” at a public university or community college “is not entitled to tuition waivers, fee waivers, grants, scholarship assistance, financial aid, tuition assistance or any other type of financial assistance that is subsidized or paid in whole or in part with state monies.”

Please contact the Records and Financial Aid Offices for further details.

## Implementation of Guidelines

- Each student shall have the question of legal residence determined **prior** to the time of registration and payment of fees. It is the responsibility of the student to register under the correct resident determination.
- Enforcement of residency requirements shall be the responsibility of the President of Central Arizona College. The President has designated the Records Office to make



the initial domicile classification. In determining a student's classification, the college may consider all evidence, written or oral, presented by the student and any other information received from any source that is relevant to determining classification. The college may request written sworn statements or sworn testimony of the student.

- A request for a review of the initial classification may be made to the Records and Registration Office. The request must be in writing, signed by the student and accompanied by a sworn statement of all facts relative to the matter. The request must be filed within 10 days of receipt of notification of classification as a non-resident. Failure to properly file a request for review within the prescribed time limit constitutes a waiver of review for the current enrollment period. The decision of the Records and Registration Office shall be final.
- Central Arizona College has policies relative to Title IX that support nondiscrimination and prohibit discriminatory behavior including sexual harassment and sexual violence. Such policies apply to all educational programs, services, activities, and facilities. Inquiries concerning the application of Title IX policies or the filing of a specific complaint may be referred to CAC's Title IX Coordinator, Dr. James D. Moore, Vice President of College Affairs, (520) 494-5406, at [james.moore7@centralaz.edu](mailto:james.moore7@centralaz.edu).

### Definitions

- "Armed Forces of the United States" means the: Army, Navy, National Guard, the Air Force, Marine Corps, Coast Guard, Commissioned Corps of the United States Public Health Services and National Oceanographic and Atmospheric Administration.
- "Continuous attendance" means student is enrolled at an Arizona educational institution; as such term is defined by the institution's governing body, for a normal academic year. Such person need not attend summer sessions or other such intercessions beyond the normal academic year in order to maintain continuous attendance.
- "Domicile" means a person's true, fixed and permanent home and place of habitation. It is the place where he/she intends to remain and to which he/she expects to return when he/she leaves without intending to establish a new domicile elsewhere.
- "Emancipated person" means a person who is neither under a legal duty of service to his parent nor entitled to the support of such parent under the laws of this state.
- "Parent" means a person's father or mother; if one parent has custody, that parent (or if there is no surviving parent or the whereabouts of the parents are unknown) or a guardian of an unemancipated person. There may not be circumstances indicating that such guardianship was created primarily for the purpose of conferring the status of an in-state student on such unemancipated person.

### Proof of Residency

When a student's residency is questioned, or when a student wishes to have his/her residency status reviewed, the following proof will be required:

- A complete domicile affidavit signed by the student must be filed with the Records and Registration Office;
- Submitting evidence of at least three of the following items will be used in determining a student's domicile in Arizona:
  - a. Arizona income tax return
  - b. Arizona voter registration
  - c. Arizona automobile registration
  - d. Arizona driver's license
  - e. Place of high school graduation
  - f. Source of financial support
  - g. Dependency as indicated on federal income tax return
  - h. Notarized statement from landlord or employer
  - i. Bank accounts
  - j. Other relevant information
  - k. Birth certificate
- Student who is honorably discharged from the armed forces and demonstrated evidence of intent to be a resident of Arizona.

### Concurrent Enrollment: Non-resident Tuition

- It is unlawful for any non-resident student to register concurrently in two or more public institutions of higher education in this state, including any university or community college, for a combined student credit hour enrollment of more than six semester hours without payment of non-resident tuition at one of the institutions.
- Any non-resident student desiring to enroll concurrently in two or more public institutions of higher education in this state, including any university or community college, for a combined total of more than six semester hours shall pay the non-resident tuition at the institution of his choice in an amount equivalent to non-resident tuition for the combined total semester hours at all institutions in which he/she is currently enrolled.

### Western Undergraduate Exchange Program

Students from 16 Western states are eligible to participate in the Western Undergraduate Exchange Program (W.U.E.). The program allows full-time students who are seeking degrees or certificates to pay 150 percent resident tuition, rather than out-of-state tuition. Central Arizona College participates in the program along with other colleges and universities in Arizona, Alaska, California, Colorado, Common Wealth of the Northern Marianas Islands, Hawai'i, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington and Wyoming.



## New Mexico Resident Tuition Waiver Program

Central Arizona College and Western New Mexico University in Silver City have established a tuition waiver agreement, which is subject to renewal. A New Mexico resident who attends Central Arizona College may qualify to be assessed in-state tuition. There are a limited number of waivers available. Contact the Records and Registration Office for an application form or additional information.

## Out-of-County Residence Affidavit

An Arizona resident attending classes in Pinal County from Apache, Gila, Greenlee or Santa Cruz counties must submit a completed Out-of-County Residence Affidavit every semester.

## Classification of Students

- **Freshman:** A student with less than 30 semester hours of college credit.
- **Sophomore:** A student who has completed 30 or more hours of college credit.
- **Part-Time Student:** A student enrolled for less than 12 semester hours.
- **Full-Time Student:** A student enrolled for 12 or more semester hours.

## Transfer Students

Transfer students are required to supply official transcript(s) from any previous college(s) for the purpose of evaluation of transfer credit(s). The college reserves the right to determine what credit(s) will be granted for courses transferred to the college to satisfy certificate or degree requirements.

## Readmission of Academically Dismissed Students

Students who are academically dismissed and wish to be considered for readmission, must seek approval from the Chief Academic Officer. A request for readmission must be made in writing and must include reasons why readmission should be considered. If approved, the student will be required to meet with an academic advisor to formulate a detailed plan for completion of course work. Students who are admitted will have a restricted academic load. The Chief Academic Officer has the final decision and will notify appropriate areas of the decision and any academic restrictions. Readmission to the college does not necessarily mean readmission to a specific program.

## Catalog Year of Admission

Admitted students should follow the College Catalog graduation requirements in effect at the time of their initial enrollment. Students who enter the college and are continuously enrolled without a break through subsequent fall and spring semesters (summers excluded) are subject to the

graduation requirements of the catalog upon their initial entrance or a current year catalog.

Students who enter the college, then miss more than two semesters and return, are subject to the requirements of the catalog based upon the date of their return.

Transfer students' initial enrollment is the date upon which they enter Central Arizona College.

Nursing students' catalog year is based upon the year they are accepted into the nursing program.

Tech Prep students' catalog year is based upon the year they enter the Tech Prep program. These students must continue enrollment with no more than a one-year break after high school to maintain their catalog of initial enrollment. All students have the option to choose the *current year catalog* for degree or certificate graduation requirements or follow their initial enrollment catalog. Students who complete a degree program and elect to pursue another degree are subject to the degree requirements of the catalog at the time they select the new degree. This catalog is for information only, and shall not be construed to create any contractual rights. Central Arizona College reserves the right, with or without notice, to change any or all fees, tuition or other charges; or to add, delete or modify any course or program offering, services, requirements for graduation, regulations, or any other information contained herein.

## Program Requirements

There are a number of programs at CAC, including the nursing program, that have specific program requirements in order to meet the criteria for their particular accrediting bodies and licensing boards. In the case of these programs, the requirements may differ from the requirements of the college. It is necessary that students meet all program requirements for the individual disciplines according to the policies in place for each specific program.







## Academic Advising

Students are encouraged to actively participate in their learning experience. Advising is a developmental process by which students are offered the opportunity to understand the nature and purpose of higher education and to plan courses and activities that support their career objectives. Students are encouraged to schedule return visits with their academic advisor to receive continuous support, resources, and services. The developmental advising model supports student's personal, academic and professional growth. Students are encouraged to participate in programs, classes and activities that help students develop a sense of community and identity with the college.

- *New Student Orientation* is a program designed to introduce all students to the campus environment and provides information, resources, and connections that help students through the transition to college life.
- Advisors, faculty and staff are available to work with students in many capacities; they can help students become acquainted with the college and provide information and referrals.

### Placement Testing

Prior to meeting with an academic advisor and registering for classes, most students will complete placement testing. Students in the following categories must test:

- All new students enrolling in a degree or certificate program;
- Students registering in English, mathematics, or reading;
- Students registering in courses with a prerequisite in one of those fields.

Students may contact the Testing Center to make an appointment for placement testing.

Students may be exempt from the reading and writing placement tests if they have earned 9 or more transferable, academic and literacy intensive\* college credits (with a grade of C or higher) from a regionally accredited college or university as recognized by the U.S. Department of Education. Those students who have earned this exemption will be classified as having met the reading requirement for graduation. *\*Academic and literacy intensive shall be defined as courses that require college-level reading and writing activities as part of their core curriculum.*

### Basic Skills

Students cannot “fail” their placement tests. Test results in writing, mathematics and reading are indicators of current student skill levels which assist in selecting appropriate courses. Students may need to enroll in developmental courses to help gain the academic skills necessary for success at the college level.

### Course Sequence and Prerequisite Courses

Courses numbered 100 to 199 are usually first-year (freshman level) courses; courses numbered 200-299 are usually second-year (sophomore level) courses. Courses with lower numbers may be prerequisites for courses with higher numbers and should be completed first. All prerequisite courses must be completed with a grade of “C” or higher to advance to the next course level. Course prerequisites are listed with the course descriptions in the back of the catalog.

### Academic Advising for New Students

New degree- and certificate-seeking students are encouraged to meet with an academic advisor or faculty advisor prior to registering for the first time. The student and advisor will discuss the student's life and academic goals, review placement test scores, and select a program and courses consistent with the student's interests and level of preparation. Students are highly encouraged to visit their academic advisor frequently to create a Master Academic Plan and review their progress.

### Academic Advising for Returning Students

Continuing students should see an advisor for assistance in developing a Master Academic Plan, and to track their progress toward completion of their degree or certificate. Advisors can help students with information regarding transfer to a four-year institution. Students who plan to transfer to one of Arizona's three public universities should consult AZ Transfer online at [www.aztransfer.com](http://www.aztransfer.com)

### Reading Requirement

Demonstrated proficiency in reading is a requirement for all degrees awarded. Students must achieve an appropriate score on their placement test or complete RDG 094 with a grade of “C” or better to meet the college graduation requirement.

Reading is a prerequisite or co-requisite for many courses and programs. When test scores indicate a reading class is necessary, an academic advisor can help students select additional appropriate courses.

### Academic Load

College level classes generally require two to three hours of outside preparation for each hour spent in class. To enable students to succeed in the classroom, the college monitors academic loads. Students may enroll in up to 20 credit hours without special permission. Students who wish to enroll in more than 20 credits during a regular semester must obtain approval from a Dean or designee.

Students carrying at least 12 credits during a regular semester are considered full-time students. During summer school, six credits per session are considered full time. Academic loads for short-term courses will vary with the required instructional time.



### New Student Orientation to College

Orientation to College (OTC) provides new and returning students and their families the opportunity to connect with other students, faculty and staff. One-day orientations include topics ranging from how to get connected to student activities, locate academic resources and be successful at Central Arizona College...just to name a few.

Call 800-237-9814, ext. 5597 for dates and times or register at [www.centralaz.edu/orientation](http://www.centralaz.edu/orientation).

### Transfer of Credits

The Arizona Commission for Postsecondary Education in conjunction with the Arizona Board of Regents developed the Arizona Higher Education Course Equivalency Guide (CEG) ([az.transfer.com](http://az.transfer.com)) to assist students in transferring courses from one college to another within the state of Arizona.

The CEG equivalency does not mean that the community college course is identical to the university course or vice versa, but that the course is regarded as fulfilling the requirement of the designated university or college course. Prospective transfer students, as well as College advisors may refer to this guide to choose courses appropriate to their major.

Due to changes that occur in the curriculum at the universities each year, students are encouraged to consult with the appropriate transfer institution's academic department for major course requirements before deciding on current class schedules.



### Transferring Credits from CAC

To transfer credits, students may request that an official transcript be sent from CAC to the Records Office at the transfer institution. Students must submit a written request to the Records Office including complete name, student ID number, a complete address of where the transcript is to be sent, along with the appropriate official transcript fee for each copy. Transcripts will not be released if students have any outstanding financial or institutional obligations.

Students can also request official transcripts online at [www.centralaz.edu](http://www.centralaz.edu). Online requests will be processed with priority.

### Transferring Credits to CAC

Students may request transfer credits to be evaluated by completing the Transcript Evaluation Request form and submitting the form to the Records and Registration Office.

Transfer courses must have been acquired through a regionally accredited college or university. Military courses and experiences in the Guide to the Evaluation of Educational Experiences in the Armed Services may be transferred if the credits are applicable to the student's degree objective.

Appropriate credit will be transferred from other institutions upon receipt of an official transcript. An official transcript must be in a sealed unopened envelope. Courses in which a grade of less than "C" was earned will not be accepted. Official transcripts must be submitted to the Records Office for evaluation.

### Shared Unique Numbering system (SUN)

SUN courses are primarily AGECE or Common Courses at CAC or the partnering public and tribal community colleges and universities, SUN courses transfer to CAC as a direct equivalent course unless CAC does not offer that course. In the case that CAC does not offer the SUN course, the SUN course will be accepted to fulfill comparable CAC requirements based on the course content and student learning outcomes. See the SUN List at: <https://aztransmac2.asu.edu/cgi-bin/WebObjects/ATASS.woa/4/wo/RjKK1DvVRg7cezRIezGqR0/0.0.11.1.1>.

## Registration Information

Registration is regarded as a commitment by the student to comply with all regulations of the College. Students may register either in-person or via online services.

Any previous debt owed to the college must be cleared by the Business Office before students can register for classes. Photo identification is required for all transactions.

Tuition and fees must be paid in full at the time of registration. Failure to make payment arrangements may result in the loss of registration. Purge dates (withdrawal for non-payment) for each academic term can be found on CAC's website at [www.centralaz.edu](http://www.centralaz.edu). Please note: If you are unable to pay the required tuition, there are other financial options such as a payment plan and/or financial aid.

Proposition 300 and the Arizona Revised Statutes require that all students must show proof of their citizenship, including employees taking courses. Students only need to provide citizenship proof once, not every time they register. The primary documents that are being requested are a copy of one of the following: a driver's license, a birth certificate, or a passport.



## On Time Registration (OTR)

No student will be permitted to enroll in any class that has already met. The last day to enroll in an online class is the official start date of the semester.

## Online Registration

New and continuing students may register via the Internet at [www.centralaz.edu](http://www.centralaz.edu) by accessing online student services. Most CAC courses have prerequisites. A prerequisite is a course or minimum placement score that you must have successfully completed before you can register in a higher-level course.

## Dropping or Adding a Class

Changes may be made to a current students' schedule before or during the first week of classes for semester-length classes. Please see refund information on the next page.

### Adding Classes

Current students may add classes via the web or by filling out a Drop/Add form, obtaining the necessary signatures (if required), and submitting the form to the Records and Registration Office for processing prior to the semester start. During the official Drop/Add period, classes must be added prior to the first class meeting.

### Dropping Classes

During the first week of the semester, students may drop a class that they no longer want to attend via the web or by completing a Drop/Add form and submitting it to the Records and Registration Office for processing. When the transaction is processed, there will be no record of the class on the college transcript. It is the student's responsibility to drop the class if they no longer want to attend. Please see the tuition and fee schedule for the appropriate tuition refund.

### No Show During Drop/Add Period

Students must make contact with their instructor during the first week of the semester. If contact is not made between the student and the instructor, all instructors are required to withdraw those students from class. To ensure CAC is in compliance with federal regulations the Financial Aid Office must check to see if it is necessary to recalculate the student's eligibility for federal student aid based on a revised enrollment status and cost of attendance.

## Withdrawing from Classes/College

### Regular/Short Term Courses:

Students can request an official withdrawal during the first two-thirds of the class based on the beginning and end date as listed in the schedule of classes. During this period a student may withdraw regardless of reason and must initiate and complete the withdrawal request through the registration office.

Instructor permission is not needed. During the final one-third of the course, if there are extenuating circumstances, a student can request an official withdrawal. The approval of both the instructor and division chair or program director will be required.

### Open Entry/Open Exit Courses:

Students can request an official withdrawal during the first two-thirds of the class based on the date of registration and last day of the semester. During this period a student may withdraw regardless of reason and must initiate and complete the withdrawal request through the registration office. Instructor permission is not needed. During the final one-third of the course, if there are extenuating circumstances, a student can request an official withdrawal. The approval of both the instructor and division chair or program director will be required.

### Withdrawal Timeline:

Length of Class	Must Withdraw by Friday of:
5 Week Course	3 <sup>rd</sup> Week
8 Week Course	5 <sup>th</sup> Week
10 Week Course	6 <sup>th</sup> Week
16 Week Course	10 <sup>th</sup> Week
Classes less than 5 weeks	Prior to the first day of class

### Administrative Withdrawal

The college reserves the right to withdraw students from classes at any time during the semester.

### Auditing

Students register to audit classes by indicating on the registration form that the course is to be audited. Auditing students register and pay tuition and fees in the same manner as students registering in courses for credit. No changes in student status from credit to audit or vice versa will be permitted after the student has registered.

### Repetition of Courses

Students may repeat courses in order to improve their grades or to update their knowledge of the course material. Unless the course is identified in the College Catalog course description as being repeatable for credit, (such as some physical education, music, or other activity courses) the course only may be counted once for graduation.

When other courses are repeated, or when a repeatable course is taken beyond the number of allowable repeats, credits for those courses will not be applied toward degree or certificate requirements and may not be funded through financial aid. All grades earned will be posted to students' transcripts, however, only the highest grade will be calculated in the grade point average.

Students should review academic transcripts for including/excluding of repeated courses.





### Academic Calendar

The college operates on a semester calendar with two 16-week semesters beginning in August and January and a shorter summer session beginning in May.

### Numbering System

All courses carry a three digit number. Levels of instruction are designated by the first digit.

- 070-079 Special Interests (non-degree)
- 080-099 Developmental
- 100-199 First Year Level
- 200-299 Second Year Level

### Refunds

**Regular semester-length classes:** 100% of tuition fees will be refunded for a regular semester-length class if the official withdrawal is made prior to the “Last Day of Semester Registration”. 90% of the tuition fees will be refunded for a regular semester-length class if the official drop is made within the official Drop/Add period (please refer to the academic calendar for specific dates). There are no refunds for classes dropped after the official Drop/Add period ends.

**Short-term classes:** Any student officially withdrawing before the first day of class will be entitled to a 100% refund. There are no refunds for short-term classes dropped after the class starts.

Students withdrawing for medical reasons or any extenuating circumstance can submit a Tuition Appeal accompanied by adequate supporting documentation to the Registrar. All refunds and deposits that may be due to a student will be first applied to any outstanding debts owed the college. When the college is responsible for a change, i.e., cancelled class, time change, etc., the Business Office will mail the appropriate refund to students within 10 days.



## Financial Aid

### Financial Aid and Scholarships

Central Arizona College offers a variety of financial aid and scholarship programs to assist students in meeting their educational financial obligations.

The following is a description of the federal financial aid programs and the institutional programs provided by CAC.

### Federal Financial Aid Programs

The federal government places the primary responsibility of educational costs on the student and the student’s family. The student and the student’s family are expected to contribute financially toward the student’s cost of attendance. The Expected Family Contribution (EFC) is based on the family’s income and assets. It is not uncommon for the EFC to be zero. Costs in excess of the expected contribution are considered financial need.

The federal government offers grant, work-study and loan programs to assist students in meeting their financial need. Generally, grant programs are offered only to students with a very low Expected Family Contribution (EFC). Student employment and loans are available to all students who have need. Some loan programs are not need-based.

Central Arizona College presently offers the following federal financial aid programs:

### Title IV Programs

#### Grants

- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant

#### Work-study

- Federal Work-study

#### Loans

- Federal Direct Stafford Student Loan
- Federal Direct PLUS Loan (Parent Loan for Undergraduate Dependent Students)

#### State Programs

- Leveraging Educational Assistance Partnership



## Student Eligibility for Federal Financial Aid Programs

To be eligible for federal financial aid, the student must:

- Be a degree seeking student in an Associate degree program or an eligible certificate program.
- Have financial need, except for some loan programs.
- Have a high school diploma, General Education Development (GED) Certificate, or have completed a secondary school education in a home school setting as defined under State law.
- Be admitted to the college as a “regular” student (see admission information).
- Be a U.S. citizen or eligible non-citizen.
- Have a valid social security number.
- Make satisfactory academic progress for financial aid purposes;
- Be enrolled in courses required for declared degree or certificate program;
- Sign a statement of educational purpose and a certificate statement on overpayment and default (on the Free Application for Federal Student Aid).
- Register with the Selective Service, if required.
- Not be in default on a federal student loan or not owe a repayment or overpayment to a federal grant program;
- Not have been convicted for sale or possession of illegal drugs while receiving Title IV Funds.

## How to Apply for Federal Financial Aid

The first step in applying for federal financial aid is completing the Free Application for Federal Student Aid (FAFSA); CAC’s Title IV school code is 007283. Students who applied in the previous year should be able to complete a renewal/partially pre-filled application. Application must be complete and accurate. Incomplete or incorrect information will delay application processing. Students must apply each academic year.

## Satisfactory Academic Process for Federal Financial Aid Recipients

In accordance with federal regulations, CAC must develop and apply a consistent and reasonable standard of academic progress. The satisfactory progress policy is established to carry out the statutory requirement that a student must be making satisfactory progress to be eligible for funding under the Federal Student Financial Assistance (SFA) programs.

## Standards of Satisfactory Academic Process

At the end of each semester, the academic records of all federal aid recipients are reviewed for cumulative GPA, credit hours completed per semester and total hours/semesters completed.

## Qualitative Measure

- Students must maintain at least a 2.0 cumulative grade point average (GPA).

## Quantitative Measure

- Maximum Time Frame

Attempted credit hours may not exceed 150 percent of the published program of study (major). All credit hours attempted are considered when determining financial aid eligibility, whether or not financial aid was received. Hours for repeated courses are always counted in the 150% rule. Regardless of where the hours were attempted, Central Arizona College’s Satisfactory Academic Progress policy will apply.

Students lose eligibility for future awards after the semester in which they exceed the maximum hours. To determine the maximum allowable hours for a specific program of study (major), refer to the degrees and certificates section of the College Catalog, note the total hours required for the program and multiply the figure by 1.5.

## Incremental Assessment

Earned credit hours must be at least 67 percent of attempted credit hours each academic year or semester, as applicable. A student who totally withdraws is unsatisfactory in terms of academic progress.

## Return of Title IV Funds

If a student withdraws completely, Central Arizona College is required to follow specific guidelines as directed by the U.S. Department of Education. The guidelines are used to calculate the amount of federal aid that will be returned to the various financial aid programs.

When a student withdraws, any loan a student received will enter the grace period (as provided by the terms of that loan) and Central Arizona College will notify the lender(s) of the current status through the National Student Clearinghouse.

It is important to understand that the published Institutional tuition/fee refund schedule should not be confused with the calculation for returning federal student aid funds to the federal government. Each one is a separate calculation and they do not directly complement each other.

Contact the Financial Aid Office for details on CAC’s refund schedule and how the return of federal student aid is calculated.

## Definition and/or Treatment of Terms

### Incomplete Courses

Incomplete courses will increase attempted credit hours but not earned credit hours. There is no impact on cumulative grade point average (GPA). An incomplete may affect the student’s Satisfactory Academic Progress status.



## Course Withdrawal

Courses with grades of W will increase attempted credit hours but not earned credit hours and may affect the student's Satisfactory Academic Progress status.

## Repeat Courses

The credit hours earned for a repeated course may only be counted once and will be considered accordingly in maximum time frame and incremental requirements. The grade for the repeated courses counted will have an effect on cumulative and semester GPA.

## Change of Program of Study- Degree or Certificate

A student may be considered not making satisfactory academic progress when a change in a program of study is made prior to completion of that program.

## Complete Withdrawal

A student is considered not making satisfactory academic progress when the student completely withdraws from school, whether official or unofficial.

## Appealing a Decision

If a determination is made that a student is not making satisfactory academic progress, a student may appeal that decision based on mitigating circumstances. Procedures and forms for the appeal process and the reinstatement of federal financial aid are available online at [www.centralaz.edu/finaid](http://www.centralaz.edu/finaid) or by contacting the Financial Aid Office.

## Payment of Financial Aid

A student's financial aid payment is based on the number of credits in which the student is enrolled that apply toward his or her declared degree or certificate program.

Financial aid awards may be adjusted based on the student's enrollment status as determined after the Drop/Add period, or in the case of late awards, at the time the award is approved.

Each student must be meeting all of the eligibility requirements at the time payment is issued.

Financial aid will not be disbursed until after the Drop/Add period. Only courses required for the declared degree or certificate will be included in enrollment status for payment of financial aid. If a course is not required for the declared degree or certificate, it will not be considered in the calculation of the financial aid award.

## Institutional Scholarship Programs

Central Arizona College offers a variety of scholarship programs to recognize students for their academic performance as well as for participation in athletics and other activities. A student may receive one or more of the following types of scholarships, not to exceed the cost of in-state tuition, registration and fees. To receive a scholarship, the student must meet the following conditions:

- Must complete the Free Application for Federal Student Aid (FAFSA)
- Must be pursuing a degree or certificate

New students are first priority. All scholarships must be coordinated with federal financial aid, and the total of all awards may not exceed the student's need as determined by the Financial Aid Office. All scholarships have minimum academic progress requirements. Students may not appeal these requirements.

The Financial Aid Office has information and applications for institutional scholarship programs as well as other non-institutional programs. Students interested should visit one of the Central Arizona College campuses.

### GED 1-SEMESTER SCHOLARSHIP

**Target:** Students who pass the GED examination taken through the Central Arizona College GED testing program.

**Enrollment Requirements:** Must enroll in a minimum of 1 credit hour with a maximum of 12 credit hours in the semester immediately following notification from CAC of scholarship eligibility. Must enroll in the CPD101 class.

**Renewal Requirements:** This scholarship is non-renewable.

**Value:** The amount is equivalent to in-state tuition up to 12 credit hours. Award amounts will vary.

### CAC INCENTIVE SCHOLARSHIP

**Target:** New and continuing students up to 22 years of age, primarily first generation college students (first generation defined as first member of family to attend college).

**Eligibility Requirements:** Must enroll in a minimum of 6 credit hours per semester. Have a 2.5 cumulative grade point average.

**Application Process:** A completed institutional scholarship application is required with a 300-word essay.

**Selection Process:** The Central Arizona College Financial Aid Office will select and present applicant(s) to the Financial Aid Scholarship work group. The work group will select and approve recipient(s).





**Renewal Requirements:** Must complete a minimum of 6 credit hours each semester, must earn and maintain a 2.5 cumulative grade point average, must be continuously enrolled and limited to four consecutive semesters.

**Value:** The amount covers a portion of in-state tuition and is based on financial need. The amount is prorated for enrollment less than full-time.

### NON-TRADITIONAL STUDENT SCHOLARSHIP

**Target:** Primarily re-entry students 23 years of age or older. Open to new and continuing students.

**Eligibility Requirements:** Must enroll in a minimum of 6 credit hours per semester. Have a 2.5 cumulative grade point average.

**Application Process:** A completed institutional scholarship application is required with a 300-word essay.

**Selection Process:** The Central Arizona College Financial Aid Office will select and present applicant(s) to the Financial Aid Scholarship workgroup. The workgroup will select and approve recipient(s).

**Renewal Requirements:** Must complete an application form each year, must complete a minimum of 6 credit hours each semester, must earn and maintain a 2.5 cumulative grade point average. Enrollment must be continuous and limited to four consecutive semesters.

**Value:** The amount covers a portion of in-state tuition and is based on financial need. Amount is prorated for enrollment less than full-time.

### CAC ACADEMIC SCHOLARSHIP

**Target:** Students who graduate in the top 10% of their high school graduating class at participating high schools.

**Eligibility Requirements:** Must enroll in a minimum of 12 credit hours in the semester immediately following high school graduation. Must enroll in the CPD101 class.

**Renewal Requirements:** Must complete a minimum of 9 credit hours each semester. Must earn and maintain a 3.0 cumulative grade point average. Enrollment must be continuous, and limited to four consecutive semesters.

**Value:** The amount is equivalent to in-state tuition up to 18 credit hours.

## Co-curricular Scholarship Programs

Central Arizona College offers scholarships for a number of co-curricular programs. These programs are awarded at the discretion of the coach(s)/coordinator(s) of the program.

### HONORS SCHOLARSHIP

**Target:** New and returning students who participate in the Honors Program.

**Eligibility Requirements:** Must enroll in a minimum of 12 credit hours per semester. Must meet program specific requirements.

**Renewal Requirements:** Must have received a grade of “B” or better in all previous honors courses. Must complete a minimum of 12 credit hours each semester. Must earn and maintain a 3.5 cumulative grade point average. Limited to four semesters. Must meet program specific requirements.

**Value:** \$750 per semester

### ATHLETIC SCHOLARSHIP

(Signal Peak Campus Only)

**Target:** Students playing in Central Arizona College intercollegiate athletics.

**Eligibility Requirements:** Must meet NJCAA requirements.

**Renewal Requirements:** Must meet NJCAA requirements and contingent upon coach’s recommendation.

**Value:** Amount varies by athletic program and student athlete.



### ACTIVITY SCHOLARSHIP

**Target:** Students must participate in established college activities.

**Eligibility Requirements:** Must enroll in a minimum of 6 credit hours each semester. Must meet program specific requirements. Must compete or perform in the name of the college.

**Renewal Requirements:** Must meet program specific requirements. Students must maintain a 2.5 cumulative grade point average. Must apply each year.

**Value:** Amount varies by activity.



**PERFORMING ARTS SCHOLARSHIP**

(Signal Peak Campus Only)

**Target:** Students participating in band, drama or choir at Central Arizona College.

**Eligibility Requirements:** Must enroll in a minimum of 6 credit hours each semester. Must meet program specific requirements. Must compete or perform in the name of the college. Audition requirement.

**Renewal Requirements:** Must meet program specific requirements. Students must maintain a 2.5 cumulative grade point average.

**Value:** Amount varies by activity. The award value is at the discretion of the vocal, instrumental music ensemble, and/or drama director.

**Central Arizona College Foundation Scholarships**

The Central Arizona College Foundation serves and supports the college as a two-year institution of higher education with the primary role of providing student scholarships. The Foundation receives financial gifts and real property from individuals and organizations to fund these scholarships.

The purpose of Central Arizona College Foundation Scholarships is to assist students enrolled at Central Arizona College in achieving their educational goals.

To receive a Central Arizona College Foundation Scholarship, the student must meet the following minimum qualifications:

- Complete the Free Application for Federal Student Aid (FAFSA);
- Pursue a degree or certificate;
- Coordinate with federal financial aid. The total of all awards may not exceed the student’s need as determined by the Financial Aid Office;
- Enroll in a minimum of 6 credits per semester;
- Earn and maintain a 2.5 cumulative grade point average;
- Meet all other specific criteria as identified by each foundation scholarship.



**CENTRAL ARIZONA COLLEGE FOUNDATION PROMISE FOR THE FUTURE SCHOLARSHIP**

The following endowed scholarships have been established within the Promise for the Future Scholarship Fund:

- A. M. & Pearl Clark, J. R. & Lola Waddle Scholarship**
- APS Foundation**
- ASML Trust Scholarship**
- CORE Construction**
- DURRANT ARCHITECTS**
- Zhe (Joe) Fang Memorial Scholarship**
- Gila River Indian Community**
- Isabel and Claude Gipson Scholarship**
- Sergeant Tate Lynch Scholarship:** *Preference to students who intend to pursue a career in public safety, emergency services or criminal justice.*
- Kemper & Ethel Marley Foundation Scholarship**
- Sodexo Scholarship**
- Stephen P. Terry Scholarship**
- TransCanada Promise for the Future**
- Fred & Eunice Wuertz Scholarship**

**Eligibility Requirements:** High school graduates of Pinal County that have signed and submitted a Promise for the Future contract to the Central Arizona College during their 8th grade year. Students must graduate high school with at least a 2.75 GPA and fulfill a community service requirement.

**Enrollment Requirements:** Must enroll in a minimum of 12 credit hours (including CPD 101) and must enroll in the fall semester immediately following May graduation or in the spring semester for December graduates.

**Renewal Requirements:** Must complete a minimum of 9 credit hours each semester and maintain a 2.5 cumulative grade point average. Enrollment must be continuous and limited to four consecutive semesters.

**JUDGE ROBERT R. BEAN MEMORIAL SCHOLARSHIP**

**Eligibility Requirements:** Students from Pinal County who declare intent to pursue studies in the criminal justice or legal field. Must be a Coolidge or Florence High School graduate.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.5 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application with a 300-word essay. A letter of recommendation from an individual attesting to personal and academic qualities.

**Scholarship Amount:** Varies



### **BOSWELL SCHOLARSHIP**

**Eligibility Requirements:** Must be a Coolidge High School graduate.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.50 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application with a 300-word essay.

**Scholarship Amount:** Varies

### **CASA GRANDE JR. CHAMBER OF COMMERCE SCHOLARSHIP**

**Eligibility Requirements:** Must be a graduate of Casa Grande, Maricopa, or Stanfield high schools and have been active in high school activities. Work study students are not eligible.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.5 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay and a letter from a high school representative verifying participation in high school activities.

**Scholarship Amount:** Varies

### **MICHAEL J. CEPELLO MEMORIAL SCHOLARSHIP**

**Eligibility Requirements:** Preference to a Pinal County resident; minimum cumulative GPA of 2.5; must be enrolled in a minimum of 6 credit hours per semester; Program of study in behavioral health sciences.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.5 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application with a 300-word essay.

**Scholarship Amount:** Varies

### **A THOMAS COLE ART SCHOLARSHIP**

**Eligibility Requirements:** Program of study in creative arts.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.5 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed central Arizona College Scholarship Application with a 300-word essay.

**Scholarship Amount:** Varies

### **COOLIDGE MOUNTED SHERIFF'S POSSE SCHOLARSHIP**

**Eligibility Requirements:**

- First priority – Direct descendants of Sheriff's Posse members for any certificate or degree program.
- High school graduates participating in the CAC Rodeo Program pursuing a two-year certificate or degree, or;
- Pinal County graduates pursuing a degree or certificate in agriculture.

**Renewal Requirement:** Must maintain a minimum cumulative GPA of 2.0 after one semester of attendance at Central Arizona College.

**Application Process:** A completed Central Arizona College Scholarship Application with a 300-word essay.

**Scholarship Amount:** Varies

### **John Deere TECH Scholarship**

**Eligibility:** 2<sup>nd</sup> year students who are pursuing a degree in the following areas: John Deer Tech AAS, Heavy Equipment Diesel Technology AAS or certificate.

**Renewal Requirements:** Must maintain a minimum cumulative 2.5 GPA in the third semester to qualify for a second scholarship.

**Application process:** A completed Central Arizona College Scholarship Application with a 300-word essay.

**Scholarship Amount:** Varies

### **ARTHUR J. AND MARY A. FAUL SCHOLARSHIP**

**Eligibility Requirements:** Program of study in agricultural sciences.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.5 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application with a 300-word essay.

**Scholarship Amount:** Varies

### **ZELDA (CHRIS) FERRYMAN SCHOLARSHIP**

**Eligibility Requirements:** Program of study in nursing.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.5 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay.

**Scholarship Amount:** Varies



## **GEORGE FRIDELL MEMORIAL SCHOLARSHIP**

**Eligibility Requirements:** Must be enrolled in 6 credit hours with a 2.5 GPA.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of at least 2.5 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay.

**Scholarship Amount:** Varies

## **Dale and Lee Gibson Scholarship**

**Eligibility Requirements:** Must be a Florence Union High School graduate pursuing a degree or certificate. Must maintain a minimum cumulative GPA of 2.50 after one semester of attendance at Central Arizona College and successfully completed a minimum of 6 credit hours per semester.

**Application process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay.

**Scholarship:** Varies

## **GUY GILBERT SCHOLARSHIP**

**Eligibility Requirements:** Casa Grande Union High School graduate. Must have participated in the agriculture program at CGUHS.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.50 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay.

**Scholarship Amount:** Varies

## **JOANN HARTER MEMORIAL SCHOLARSHIP FOR NURSING**

**Eligibility Requirements:** Must be a second year nursing student.

**Renewal Requirements:** Must maintain a cumulative GPA of 3.0 while at Central Arizona College.

**Application Process:** A completed Central Arizona College Scholarship Application with a 300-word essay.

**Scholarship Amount:** Varies

## **Winston Hoffman Drama Scholarship**

**Eligibility Requirements:** Must be performing in current productions and have a minimum 2.0 GPA.

**Application Process:** A completed Central Arizona College Scholarship Application with a 300-word essay.

## **DUANE IRVIN SCHOLARSHIP**

**Eligibility Requirements:** Program of study in technology.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.5 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application with a 300-word essay.

**Scholarship Amount:** Varies

## **Richard J. Jones and A. Myrtle Jones Memorial Scholarship**

**Eligibility:** Must be Florence or Coolidge high school graduates, preference to Coolidge high school graduates, with a minimum 2.5 GPA. Must demonstrate participation in school and community activities.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of at least 2.5 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay.

**Scholarship Amount:** Varies

## **N.E. "PETE" & JOSEPHINE KING SCHOLARSHIP**

**Eligibility Requirements:** Must be a health careers student.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.50 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay.

**Scholarship Amount:** Varies

## **DONOVAN KRAMER SCHOLARSHIP**

**Eligibility Requirements:** Must be a communications student.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.50 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed institutional scholarship application is required with a 300-word essay.

**Scholarship Amount:** Varies





### **TOM KUNZ/VAQUERO FOUNDATION SCHOLARSHIP**

**Eligibility Requirements:** Must be a member of a recognized Central Arizona College athletic team. Must be a graduate of a Pinal County high school.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.50 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** Head coaches will submit a recommendation to include student's academic and personal qualifications for this scholarship.

**Scholarship Amount:** Varies

### **LIN L. LAURSEN SCHOLARSHIP**

**Eligibility Requirements:** Must be a full time female student who is a member of CAC women's basketball team.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.5 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** Qualified students will be notified in writing by the Financial Aid Office of their eligibility and will be asked to complete the appropriate application materials.

**Scholarship Amount:** Varies

### **JAMES LEE MUSIC SCHOLARSHIP**

**Eligibility Requirements:** Must be enrolled in music courses.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.50 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay. Applications that include recommendations by former instructors will be given additional consideration.

**Scholarship Amount:** Varies

### **Lynn S. Long Memorial Scholarship**

**Eligibility:** Must be a nursing student enrolled in a minimum of 6 credits per semester. Must earn a 3.5 GPA on courses required for the nursing AAS degree.

**Renewal Requirements:** Must maintain a minimum 3.5 GPA on courses required for the nursing AAS degree and be enrolled in 6 credit hours per semester.

**Application Process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay.

**Scholarship Amount:** Varies

### **CLARA LOVETT UNIVERSITY FOUNDATION SCHOLARSHIP**

**Eligibility Requirements:**

- Must be a Pinal County high school graduate. (Excludes the Arizona State Prison Campus).
- Central Arizona College Graduate with a completion of 30 university parallel credits with a cumulative GPA of 3.0 at Central Arizona College and in university parallel courses taken at Central Arizona College.
- Enrollment in a minimum of 9 credits with a declared university major. University must be a regionally accredited institution offering courses at Central Arizona College Campus.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 3.0 after one semester of attendance at University. Submission of transcripts may be required.

**Application Process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay.

**Scholarship Amount:** Varies

### **TEPI MADDOCK SCHOLARSHIP**

**Eligibility Requirements:** Must be a female student enrolled physical education, nursing or pre-med; maintain a minimum cumulative GPA of 2.50.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.50 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed institutional scholarship application is required with a 300-word essay.

**Scholarship Amount:** Varies

### **Paul Pearce Memorial Scholarship**

**Eligibility Requirements:** Must be a resident of Arizona and a freshman who is pursuing a degree or certificate in agriculture, alternative energy or agricultural sciences. Must demonstrate leadership, community service; additional consideration given to applicants with 2 years of 4H or FFA.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.5 and successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay.

**Scholarship Amount:** Varies



**ROBERTA PHILLIPS SCHOLARSHIP**

**Eligibility Requirements:** Program of study in nursing.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 3.0 and successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay.

**Scholarship Amount:** Varies

**PINAL COUNTY UNIVERSITY FOUNDATION SCHOLARSHIP**

**Eligibility Requirements:**

- Must be a Pinal County high school graduate with a 3.0 cumulative high school GPA. Submission of transcripts may be required. (Excludes the Arizona State Prison Campus).
- Must enroll in 12 credits in a declared major at Central Arizona College.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 3.0 after one semester of attendance at Central Arizona College.

**Application Process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay.

**Scholarship Amount:** Varies

**C.A. POPE & NELLE H. POPE MEMORIAL SCHOLARSHIP**

**Eligibility Requirements:** Program of study in art.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.50 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona college Scholarship Application is required with a 300-word essay.

**Scholarship Amount:** Varies

**JOE REFSNES SCHOLARSHIP**

**Eligibility Requirements:** Student should exhibit financial need and promise of success as a student.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of at least 2.50 after one semester of attendance at Central Arizona College.

**Application Process:** Submit a completed Central Arizona College Scholarship Application with a 300-word essay.

**Scholarship Amount:** Varies

**DR. R.F. SCHOEN SCHOLARSHIP**

Awarded to outstanding “Freshman of the Year” at the Signal Peak Campus.

**Scholarship Amount:** Varies

**SODEXO SCHOLARSHIP**

**Eligibility Requirements:** Student(s) enrolled in either the Hospitality and Restaurant Management or Culinary Arts programs.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of at least 2.50 after one semester of attendance at Central Arizona College.

**Application Process:** A completed Central Arizona college Scholarship Application is required with a 300-word essay.

**Scholarship Amount:** Varies

**Darlene Unger Memorial Scholarship**

**Eligibility Requirements:** Students enrolled in business courses/programs.

**Application Process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay.

**Scholarship Amount:** Varies

**KATHLEEN VAN CLEFT INDIAN SCHOLARSHIP**

**Eligibility Requirements:** Must be a Native American student.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.50 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Application Process:** A completed Central Arizona College Scholarship Application is required with a 300-word essay.

**Scholarship Amount:** Varies

**ANN WILLIAMS SCHOLARSHIP**

**Eligibility Requirements:** Must participate in the Rodeo Program.

**Renewal Requirements:** Must maintain a minimum cumulative GPA of 2.50 after one semester of attendance at Central Arizona College. Must successfully complete a minimum of 6 credit hours each semester.

**Scholarship Amount:** Varies



## Linda Yarrington Memorial Scholarship

**Eligibility Requirements:** High school graduates of Pinal County that have signed and submitted a Promise for the Future contract to the Central Arizona College during their 8th grade year. Students must graduate high school with at least a 2.75 GPA and fulfil a community service requirement.

**Enrollment Requirements:** Must enroll in a minimum of 12 credit hours (including CPD 101) and must enroll in the fall semester immediately following May graduation or in the spring semester for December graduates.

**Renewal Requirements:** Must complete a minimum of 9 credit hours each semester and maintain a 2.5 cumulative grade point average. Enrollment must be continuous and limited to four consecutive semesters.

## Financial Aid Contact Information:

**Central Arizona College**  
Financial Aid Office  
8470 N. Overfield Road  
Coolidge, AZ 85228

**Aravaipa Campus**  
520-357-2816

**Maricopa Campus**  
520-494-6401

**San Tan Campus**  
480-677-7830

**Signal Peak Campus**  
Student Services Center  
520-494-5425  
Fax: 520-494-5091

**Superstition Mountain Campus**  
480-677-7708

**E-Mail**  
finaid@centralaz.edu

## More Information on Federal Financial Aid Programs:

**Federal Student Aid Information Center**  
1-800-4-FED-AID (1-800-433-3243)  
TDD Number 1-800-730-8913

### Information on the World Wide Web

For more information on federal financial aid programs:

- [www.centralaz.edu](http://www.centralaz.edu) - Central Arizona College
- [www.fafsa.gov](http://www.fafsa.gov) - FAFSA on the Web

- [www.ed.gov](http://www.ed.gov) - Department of Education
- [www.finaid.org](http://www.finaid.org) - The Financial Aid Information Page
- [www.students.gov](http://www.students.gov) - Student gateway to the U.S. Government
- [www.studentaid.ed.gov](http://www.studentaid.ed.gov) - Federal Student Aid for students
- [www.nsls.gov](http://www.nsls.gov) - National Student Loan - Database System

## Veterans Educational Benefits

Central Arizona College is approved for the enrollment of veterans, survivors and dependents. Veterans' services are provided by the Records and Registration Office.

Veterans must follow the admission policies and procedures as outlined for all students in this catalog. Veterans must pursue an approved degree program or a qualified certificate program in order to be eligible for benefits. Transcripts from other institutions and for previous training must be forwarded to the Records and Registration Office to be evaluated and applied to the students' programs of study.

Student who is honorably discharged from the armed forces and demonstrated evidence of intent to be a resident of Arizona qualifies for in-state residency for tuition purposes. It is the responsibility of the Veteran to ensure they are classified under the correct residency status.

The number of semester credit hours in which a veteran must enroll (and maintain enrollment) in order to receive benefits is as follows:

Full-time	12 or more credits
3/4 time	9-11 credits
1/2 time	6-8 credits
less than 1/2 time	1-5 credits

## STUDENT RECORDS

Student records are maintained in the Records Office.

## Family Educational Rights and Privacy Act

The Family Educational Rights and Privacy Act of 1974 (FERPA) protects the privacy of educational records and gives students the right to review their educational records. In compliance with the Act, Central Arizona College has established policies and procedures for the review and correction of inaccurate or misleading information. Copies of the policies and procedures are available in the Records Office. Questions regarding the Act may be addressed to the Registrar.

Central Arizona College does not release any personally identifiable information about any student to a third party without the student's written consent. Directory or "public" information may be released at the college's discretion.



Directory information includes name, address, dates of attendance, program of study, classification (freshman or sophomore), status (full- or part-time), and participation in officially recognized activities and sports, degrees, awards received, and previous institutions attended by the student.

Currently enrolled students may withhold disclosures of directory information by submitting a written request to the Registrar. Such requests must be renewed on a yearly basis.

Effective March 19, 1997, colleges are required to provide directory information to the Department of Defense. Students may request in writing to withhold the release of this information. Requests should be sent to the Office of the Registrar, 8470 North Overfield Road, Coolidge, AZ 85128.

## Students Right to Know

In compliance with federal regulations, Central Arizona College must report the graduation rate for all students, as well as graduation rates for those students who receive athletically-related financial aid by the sport they play. Copies of this information may be obtained in the Records Office or may be viewed on CAC's website at [www.centralaz.edu](http://www.centralaz.edu)

## Application for Graduation

Students applying for graduation must file an Application for Graduation with the Records and Registration office. Please see the official Academic Calendar for application deadlines.

To ensure that students satisfy their graduation requirements, it is recommended that students file their application at least two semesters prior to the start of their final semester.

There is no fee to graduate from CAC. If a student wishes to obtain an official diploma and/or certificate they will be charged a fee. Please see the Tuition and Fee schedule for appropriate diploma and certificate fees.

## Catalog Under Which a Student Graduates

Students maintaining continuous enrollment at any public Arizona community college or university may graduate according to the requirements of the catalog in effect at the time of initial enrollment or according to the requirements of any single catalog in effect during subsequent terms of continuous enrollment. Students may maintain continuous enrollment whether attending a single public community college or university in Arizona or transferring among public institutions in Arizona while pursuing their degrees.

- A semester in which a student earns course credit will be counted toward continuous enrollment. Non-credit courses, audited courses, failed courses, or courses from which the student withdraws do not count toward the determination of continuous enrollment for catalog purposes.
- Students who do not meet the minimum enrollment standard stipulated above during three consecutive

semesters (fall/spring), and the intervening summer term at any public Arizona community college or university, are no longer considered continuously enrolled. They must meet requirements of the public Arizona community college or university catalog in effect at the time they are readmitted or of any single catalog in effect during subsequent terms of continuous enrollment after readmission.

- Students are not obligated to enroll and earn course credit during summer terms but summer enrollment may be used to maintain continuous enrollment status.
- Students admitted or readmitted to a public Arizona community college or university during a summer term must follow the requirements of the catalog in effect the following fall semester or of any single catalog in effect during subsequent terms of continuous enrollment.
- Students transferring between Arizona public higher education institutions must meet the admission requirements, residency requirements, and all curricular and academic requirements of the degree-granting institution.

## University Department Time Limit for Coursework

In areas of study in which the subject matter changes rapidly, material in courses taken long before graduation may become obsolete or irrelevant. Coursework that is more than eight years old is applicable to completion of degree requirements at the discretion of the student's major department at the university to which they transfer.

Departments may accept such coursework, reject it, or request that the student revalidate its substance. The eight-year limit on coursework applies except when program accreditation agencies limit the life of coursework to less than eight years.

Departments also may require students to satisfy current major requirements rather than major requirements in earlier catalogs when completing earlier requirements is no longer possible or educationally sound.

## Credit by Examination

Students currently or previously enrolled at Central Arizona College may earn a maximum of 30 credit hours through credit by examination. Students cannot receive credit by examination for a course that is equivalent to, or a lower level than, a course in which they are currently enrolled or have previously completed.

Credit by examination is offered on the principle that students may have previously acquired college level learning in certain areas and that this knowledge may be demonstrated through an examination of course competencies. Instructors are not responsible for helping students develop this knowledge in order to prepare for an examination.





Should a student transfer to another institution, credits earned through credit by examination may be treated differently by that institution. Please refer to the AZ Transfer Examination Equivalency Guide (EEG) for credit by exam scores accepted by CAC and their CAC course equivalencies:

<https://aztransmac2.asu.edu/cgi-bin/WebObjects/ATASS.woa/wa/examquery>

#### **Central Arizona College examinations for credit:**

With approval, students have the opportunity to earn credit by successfully completing an examination at the beginning of the semester. This option is not available for all courses. Check with the course instructor and division chair as to the availability of credit by exam.

#### **Advanced Placement from High School:**

These examinations are administered in various high schools each May and are designed to test competence in specific subject areas at the lower division college level. High school seniors may request the opportunity to participate in advanced placement examinations, in one or more areas of proficiency, through their high school counselor's office. Credit may be earned for successfully completed exams upon receipt of an official score report.

#### **College Level Examination Program (CLEP):**

CLEP examinations are nationally developed and administered and provide an opportunity for students to demonstrate college level learning in a variety of subjects. Two types of examinations are available, general and subject examinations. Central Arizona College does offer these examinations and will award credit for successfully completed exams upon the receipt of an official score report.

**Subject/General CLEP Examinations:** These exams cover material typical of college level courses. A listing of available examinations, possible credits and passing scores is available in the Office of Academic Advising.

#### **Credit by Evaluation:**

With few exceptions, CAC does not evaluate or award credits for non-collegiate training or experience. Those exceptions, listed below, are treated as articulated credit and may be treated differently by another institution should the student transfer.

**Military Experience:** Credit will be awarded for military experience and training if it has been evaluated by the American Council on Education and published in either the *Guide to the Evaluation of Educational Experiences in the Armed Services* or an individual's transcript from either the Community College of the Air Force or on the Army/AARTS transcript.

**COTA:** Central students completing the Correctional Officers Training Academy may be awarded up to 21 credits toward their A.A.S. - Corrections degree requirements.

#### **Tech Prep**

Pinal County high school students may complete Tech Prep study in a variety of courses. If the high school student enrolls in Central Arizona College within two years of graduation, s/he may apply for Tech Prep articulated credit. If a student enrolls at CAC more than two years after high school graduation, a competency examination may be needed to receive the Tech Prep credit. Students completing coursework in an approved Tech Prep program will be awarded Central Arizona College **articulated** course credit for such coursework provided the following guidelines are fulfilled:

- Student enrolls at CAC within two years after high school graduation; and
- Student has the high school send an official high school transcript to CAC to the attention of Records and Admissions.
- Student presents a written request for the articulated course credit to CAC Records and Admissions by either a form/certificate from the high school or a form generated from the Pinal County Tech Prep website.

Should a student transfer to another institution, credits earned for Tech Prep study may be treated differently by that institution. For more information concerning Arizona/Pinal County Tech Prep, please go to: [www.pinaltechprep.org](http://www.pinaltechprep.org).

#### **Conferring a Second Degree**

Students who complete an Associate in Arts, Associate in Applied Science, Associate in Business, Associate in Science, or Associate in General Studies degree program at Central Arizona College may earn a second degree. Students who wish to obtain an additional degree must meet the following criteria:

- Students must have **completed** the requirements for an associate degree.
- Students must meet all the requirements of the second degree as outlined in the catalog in effect at the time of initial enrollment in the second degree program.
- Students must complete a minimum of 16 credits beyond those previously earned in the awarded degree.
- Credits applied to the second degree must be completed with grades of "C" or better.
- Student must apply through the normal graduation application process.
- The Associate of General Studies will not be awarded as a second degree.



## ACADEMIC STANDARDS

### Plagiarism

Central Arizona College recognizes the seriousness of plagiarism as an ethical issue. Blatant plagiarism results from dishonesty and/or infringement upon the rights of published authors. The first type of blatant plagiarism is turning in writing that is falsely represented as one's own, including (but not limited to) a roommate or spouse's writing, essays bought from the Internet, and passages copied from a research source such as a book, magazine, or website. Allowing another student to copy one's work is a second type of blatant plagiarism. Students also are expected to avoid subtle plagiarism, which includes (1) turning in writing that uses paraphrased information from a source but fails to credit the source and (2) allowing someone else to make significant revision or editing changes to a student's own writing. Penalties for plagiarism, according to Violations of Code of Conduct, can be severe, including failure of an assignment and failure of a course at discretion of instructor. The underlying message of the Central Arizona College plagiarism policy is that instructors are committed to encouraging writers to develop the confidence to express themselves in their own unique ways.

## ATTENDANCE

### Absence Policy

#### No Show During Drop/Add Period

Students must make contact with their instructor during the first week of the semester. If contact is not made between the student and the instructor, all instructors are required to withdraw those students from class. To ensure CAC is in compliance with federal regulations the Financial Aid Office must check to see if it is necessary to recalculate the student's eligibility for federal student aid based on a revised enrollment status and Cost of Attendance.

### Excused Absences

Absences from class due to authorized participation in College sponsored activities will be considered as excused absences. Absences due to student or family member illness, death of family member, or other extenuating circumstances will be considered for excused absences. There will be no institutionally sanctioned penalty associated with excused absences. Designation of excused absences will be made by the Academic Dean.

The faculty or staff sponsoring an activity requiring students' absence shall provide a written list of students to all faculty at least one (1) week prior to the absence. One list may be distributed to cover absences during an entire semester.

### Unexcused Absences

Absences other than excused will be considered unexcused absences. Instructors may recommend to the Division Chair the administrative withdrawal of a student from class for excessive unexcused absences, and no refunds will be authorized. Students may appeal administrative withdrawals to the Academic Dean.

### Make-Up Assignments and Exams

The student is responsible to make up any assignments or exams missed because of an excused absence. Arrangements for make-up assignments or exams must be made with the individual instructor prior to the absence. At the discretion of the instructor, a student may be denied the opportunity to make up assignments or exams missed because of an unexcused absence. Make-up assignments or exams for unexcused absences shall not be punitive in nature.

### Punctuality

Students are expected to be prompt in attending each of their classes. Instructors are authorized to take appropriate actions, including recommending administrative withdrawal of a student from class because of excessive student tardiness.

### Exception to Policy

An instructor wishing to employ a teaching strategy (such as contract learning) in which the attendance records required above are inappropriate, may propose to the Academic Dean a system which deviates from the above guidelines. If the Dean ascertains that the proposed system adequately monitors student activity and progress, or is in compliance with certain professional licensing and/or certification regulations, it may be implemented.

### Non-Credit Classes

Attendance requirements in non-credit classes may be established by the instructor. These requirements will not be more stringent than those adopted for credit granting classes.

### Attendance Requirements

Central Arizona College students are expected to attend all class meetings.

### Grading Information

Grades are designed to reflect content mastery and the student's performance in meeting the course objectives.

- A - Excellent Work (4 points)
- B - Good Work (3 points)
- C - Average Work (2 points)
- D - Below Average Work (1 point)
- F - Failing Work (0 points)
- I - Incomplete
- W - Withdrew
- AU - Audit
- CR - Credit (see explanation below)
- NC - No Credit (see explanation below)
- S - Satisfactory (see explanation below)
- U - Unsatisfactory (see explanation below)



### Incomplete (I) Grade

Students who, because of circumstances beyond their control, cannot complete a course in the time allotted, may be given an extension and temporary grade of Incomplete (I) by the instructor. When electing an Incomplete Grade, the student is forfeiting the option of a withdrawal from the class.

If a grade of Incomplete is given, the instructor shall state in writing on an Incomplete Grade Contract form, the activities necessary to complete the course. The contract will include the time period (not to exceed seven months) allowed for completion of the course, and the letter grade which the incomplete grade will automatically revert if the work is not completed. The contract will be signed by both the instructor and the student. Each will receive a copy. A copy of this contract must be submitted with the final grade roster for that course.

The *Incomplete Grade Contract* must be completed no later than seven months after the end of the term in which the incomplete grade was given. Students should not re-register for the course to complete the contract.

### Audit (AU) Grade

Students may register for audit at the time of registration. Auditing students register and pay tuition and fees. No changes from audit to credit (or from credit to audit) are permitted after the student has registered. Students do not receive credit in courses for which they enroll as audit. Audit (AU) grades do not count in the grade point average calculation.

### Credit/No Credit

Students receive a credit (CR) or no credit (NC) grade for self-interest courses numbered between 70-79. Credit (CR) signifies successful completion of the course, but the credit hours do not count toward completion of any degree or certificate listed in this catalog, nor does the grade count in the grade point average calculation. A grade of NC does not count in GPA calculation.

### Satisfactory/Unsatisfactory

Satisfactory (S) indicates the student has a “C” or better work in class. The grade is not computed in the GPA.

Unsatisfactory (U) indicates the student has earned a “D” grade or failed the class. The grade is not computed in the GPA.

If a course description in the College Catalog indicates a course may be taken for a satisfactory/unsatisfactory grade, the student may elect the satisfactory/unsatisfactory option. This must be done in writing in the Records and Registration Office no later than the deadline to add classes as published in the appropriate schedule of classes. The deadline to add classes also is the deadline to change from a satisfactory/unsatisfactory to regular A-F grading or audit status.

Students electing the satisfactory/unsatisfactory option should be aware that:

- Once awarded, the satisfactory or unsatisfactory grade may not be changed to a letter grade.

- The satisfactory grade is equivalent to a grade of “C” or better; however, neither the satisfactory nor the unsatisfactory grade is calculated in the GPA.
- The satisfactory grade may carry credit toward graduation or toward meeting professional requirements. A maximum of 12 credit hours of S grades may be applied toward a degree, and a maximum of 25 percent toward a certificate.
- The satisfactory grade shows on the transcripts as credit hours earned for the semester and will be used toward meeting the credit hours required of a full-time student and toward determining financial aid eligibility.
- The unsatisfactory grade shows on the transcript but not as credits earned for the semester; therefore, the unsatisfactory grade does not count toward meeting the hours required of a full-time student or toward determining financial aid eligibility.
- Courses taken for satisfactory/unsatisfactory credit for which a grade of satisfactory is earned will satisfy prerequisites and co-requisites; a grade of unsatisfactory does not fulfill prerequisites and co-requisites.
- It is the student’s responsibility to verify the transferability of satisfactory grades. Students are cautioned that satisfactory grades may not be accepted for transfer credit to other post-secondary institutions; some may translate the unsatisfactory grade as failing.

### Calculation of Grade Point Averages:

Grade point averages will be calculated for each student at the conclusion of each term. When a course is repeated, the highest grade will be included in the GPA. A “Report Course Form” must be completed in the Records and Registration Office if the course is being taken to improve a previous grade.

### Computing Your G.P.A. Worksheet

Use the following formula to compute your grade point average:

Grade points divided by the number of hours equals the grade point average. Grade points can be determined by multiplying the credit hours for a course by the grade as follows:

A = 4 points, B = 3 points, C = 2 points, D = 1 point and F = 0 points

*Note: W does not compute into GPA.*

The Formula:

1. Number of Hours for Each Class	Number of Points for Each Class	Total by Class
_____x	_____	= _____
_____x	_____	= _____
_____x	_____	= _____
_____x	_____	= _____
_____x	_____	= _____

2. Total Number of Hours	3. Total Points
-----------------------------	-----------------

$$4: \frac{\text{(Total Points)}}{\text{(Total Number of Hours)}} = \text{GPA}$$



## Grade Change/Appeal

Grade changes are not allowed except in the case of faculty error in reporting the grade. Such changes must be submitted within eight weeks of the end of the class.

Students may appeal grades by following the process described on the College web page titled Resources in Addressing Concerns > Student Grade or Course Instructor Concern ([www.centralaz.edu/concern](http://www.centralaz.edu/concern)).

## Academic Progress

Academic progress is a system of monitoring students to achieve an educational objective. Academic probation is a process to:

- Identify and alert students who are experiencing difficulty in making satisfactory progress in their coursework.
- Help students reassess their objectives and to consider methods necessary to achieve educational success.

## Academic Probation

Students who have accumulated 12 or more semester credit hours and have a cumulative GPA of less than 2.0 will be placed on academic probation. Academic probation students whose following *semester* grade point average is 2.0 or above, but *cumulative* grade point average remains below 2.0, will remain on academic probation. Students placed on academic probation status must comply with the recommendations outlined in the Academic Probation Agreement Plan designed in collaboration with a professional academic advisor.

Students placed on academic probation will be notified via postal mail of their standing. It is the responsibility of the student to ensure the institution has updated contact information on file.

## Academic Suspension

Students on academic probation status will be suspended from the college when the semester or cumulative GPA is below 2.0 in a subsequent semester. Students who are suspended a first time will be eligible for readmission after one semester has elapsed since the dismissal. Students who are suspended a second time will not be eligible for readmission until one year has elapsed since the suspension. Upon readmission after a suspension, students will be on academic probation until their cumulative GPA is 2.0 or higher.

Students who have been suspended may submit an Academic Suspension Appeal to the Designated Academic Suspension Official to request reinstatement. An appeal for reinstatement may be granted if the action is warranted due to extenuating circumstances beyond the control of the student. Students who have been granted reinstatement will be placed on academic probation status until their cumulative GPA is 2.0 or higher. Students are encouraged to meet with an academic advisor to obtain an Academic Suspension Appeal form, support and guidance to complete the process.

Students placed on academic suspension will be notified via postal mail of their standing. It is the responsibility of the student to ensure the institution has updated contact information on file.

## Academic Renewal Guidelines

A student returning to Central Arizona College after an absence of at least 3 years may petition the Registrar to have specific grades excluded from the computation of the cumulative grade point average according to the following guidelines:

- The student must complete 12 or more credits with a grade point average of 2.0 following re-enrollment after the three-year absence.
- Only grades of D, F are eligible for renewal.
- Academic renewal may be granted only once during a student's enrollment at Central.
- Grades remain on the student's transcript but are not computed in the cumulative GPA.

## Academic Honors Recognition

### Dean's and Honors List

Students will be placed on the Dean's list with a 3.5 GPA or above. Students will be placed on the Honors List with a GPA of 3.00-3.49. Both lists require:

- Completion of 12 or more credits or;
- Completing 12 credits and enrolled in at least 6 credit hours each term.

### Graduation with Honors

Students awarded an associate degree with a cumulative GPA of 3.5 or above will be awarded the distinction of "Graduating with Honors." An honor seal will be posted to the diploma.

### Phi Theta Kappa

Phi Theta Kappa, the international honor society for community college students, is open to students who have a grade point average of 3.50 or better and have completed 12 college-level credit hours at CAC. Through this organization, students have an opportunity to develop leadership skills and to perform service to the college, campus and community.

### Honors Program

The honors program is available for academically exceptional students. It encourages students to question, research, discover and debate ideas in various curricular areas. The insight gained through individual probing will be shared with professors and students to broaden the student's awareness in a variety of areas. The scholarly inquiry in this program will provide a strong base for a lifelong quest for knowledge and excellence.

### Goals of the Program

The following goals have been established for the Honors Program:

- To extend the curriculum offering academically talented students intellectual opportunities beyond those found in the normal curriculum;
- To provide recognition for exceptional academic achievement;





- To provide a program to assist honors students in successfully transferring to honors programs at other institutions;
- To provide the greatest efficacy in learning through small classes and individualization;
- To provide a structured setting in which academically talented students can socially interact with one another and faculty.

### Scholarships

The honors scholarship may be used to cover registration fees, tuition, books and supplies. The student must maintain a 3.5 cumulative GPA and will receive a similar scholarship the second year of their program.

### Admission to the Honors Program

Applicants should meet any one of the following criteria:

- 3.5 grade point average at high school graduation;
- Top 5 percent of high school graduating class;
- 30 on ACT;
- 2000 on SAT;
- 95 percent on GED;
- 3.5 grade point average at Central Arizona College with a minimum of 12 transferable credits.

In addition to the above criteria, prospective applicants must provide:

- Two current letters of recommendation from educators;
- A 250-word statement of the applicant's goals and his/her expectations of the Honors Program.

### Retention in the Honors Program

- Students must maintain a 3.5 GPA for regular status.
- Students may be placed on probation for one semester if grade point average is between 3.25 and 3.5 and may be readmitted to regular status when the GPA returns to 3.5 or above.
- Students must have received a grade of "B" or better in all previous honors courses.

### Graduation from the Honors Program

- 3.5 grade point average with a B or better in all honors courses and in each course taken for honors credit;
- 6 hours of completed colloquia;
- 9 hours of courses taken for honors credit (from 3 different divisions);
- 3 hours honors seminar.

### Bookstore

The Maricopa, San Tan Valley, Signal Peak and Superstition Mountain campuses provide full-service bookstores to accommodate students with textbooks, supplies and clothing. Evening hours are posted during the first two weeks of class and book buy back week, which is always scheduled during the week of finals.

### Bookstore Refund Policy

A full refund will be given in your original form of payment if textbooks are returned during the first week of classes with original receipt. With proof of schedule change and original receipt, a full refund will be given in your original form of payment during the first 30 days of classes. No refunds on unwrapped loose leaf books, shrink wrapped books, access codes or activated eBooks. Textbooks must be in original condition. No refunds or exchanges without original receipt.



## SERVICES

Central Arizona College provides equal opportunity in employment and educational programs and activities. Discrimination is prohibited on the basis of race, color, religion, sex, age, disability, national origin, military status or genetic test information.

### Career & Student Employment Services

Career & Student Employment (CSES) is located in the Gloria R. Sheldon University Center ("T" Building, Rm. 204) on the Signal Peak Campus. The CSES provides comprehensive guidance to students as they pursue future college and career aspirations. The CSES is committed to providing resources, information and services for students to transition to the workplace and to further their academic studies.

### Career Exploration

This is an opportunity for students to explore various fields of study and possible career options. Career exploration can be done via the online assessment tool or using the numerous printed resource materials available.

### Internships

Internships are supervised, practical training that gives students the opportunity to gain valuable "on-the-job" experience while pursuing an education in a related field. Central Arizona College offers internship courses for academic credit. Should you require more information or assistance contact Experiential Learning at 520-494-5987.

### Student Employment

Student employment provides equitable hiring practices for all students seeking employment whether on- or off-campus, full-



time, part-time, temporary or seasonal. This is an opportunity to gain practical work experience and knowledge in a specific career-related field. All available job opportunities can be viewed via the web-based job posting board, available 24 hours a day, seven days a week.

To view available jobs, students must first register. Registration for the web-based job board is simple, just go to *student resources* and scroll down to *Career and Student Employment Services*. Choose *student employees* then select *student employment process*. Once in the page, click on “*full-time/part-time job posting*” and complete the registration. In order to view the positions, you must provide a valid e-mail address that you check on a regular basis. Just follow the instructions to complete your registration. Should you require more information or assistance, send an e-mail to [studentjobs@centralaz.edu](mailto:studentjobs@centralaz.edu) or call 520-494-5424 or 1-800-237-9814, ext. 5424.

Additionally, students can attend workshops to assist with the creation of cover letters, resumes and interview skills.

### Employment Eligibility Requirements

There are three employment options available for students. Each employment option has different eligibility requirements. All students are required to complete the Free Application for Federal Student Aid (FAFSA) prior to seeking employment for an on-campus position.

### College Federal Work Study Program

The Federal Work-Study Program is a federally funded program designed for students who have demonstrated financial need using the Free Application for Federal Assistance Aid (FAFSA). Students who are employed under this program must meet the additional eligibility requirements:

- Must be enrolled in an eligible program of study.
- Must maintain Satisfactory Academic Progress. More information is available under the Financial Aid section.
- Students must be enrolled in at least six (6) credits to qualify.

### College Funded Student Employee

All students can apply for this type of employment option. Students are employed part-time by the department or division within the college and do not have to show financial need. The student must be enrolled in at least six (6) credits to qualify.

### Off-Campus Employment:

There are no enrollment requirements for positions that are located off-campus. This option is available for students seeking employment options that are not available on campus. Off-campus employers post available positions on the web-based job board and students may apply for positions at their discretion. Off-campus job wages may be higher than on-campus positions.

## Customer Service and Technical Support

The Customer Service and Technical Support (CSTS/Help Desk) provides a central location for customer and technical support. As the first point of contact for technical support, CSTS offers a wide variety of assistance, which includes resetting passwords, assistance with the use of the Online Student Services, and troubleshooting Blackboard, CAC e-mail, and Internet Explorer. For students using Blackboard, CSTS can provide a copy of the Handbook for Online Learners and information about the Student Hands-On Orientation to Online Learning (SCHOOL). Also, whether you need to find out how to register for classes or where to go for tutoring, CSTS can point you to the right college department.

There are several methods to access assistance:

Phone: 520-494-5111 or 1-800-237-9814, ext. 5111

Email: [centralhelpdesk@centralaz.edu](mailto:centralhelpdesk@centralaz.edu). Central Arizona

College Website: Help and FAQs provide a list of frequently asked questions. See front page of the CAC website.

### Service Desks:

- Signal Peak Campus in the M Building (Student Services). Open from 8 a.m. to 6 p.m. Monday through Thursday.
- Superstition Mountain Campus in the Teaching and Learning Center (TLC). Open from 8 a.m. to 6 p.m. Monday through Thursday.
- Aravaipa Campus in the A Building. Open from 8 a.m. to 6 p.m. Monday through Thursday.
- San Tan Campus in the B building. Open from 8 a.m. to 6 p.m. Monday through Thursday
- Maricopa Campus in the A building. Open from 8 a.m. to 6 p.m. Monday through Thursday.

## Food Services

The Signal Peak, Superstition Mountain, Maricopa, San Tan Valley and Aravaipa campuses offer on-campus food service. At the Signal Peak Campus, meals are served seven days per week for residence hall students. The dining hall and Top of the Stairs Cafe at Signal Peak offer food service for students, staff and guests. For menus, hours and locations visit, [www.centralazdining.com](http://www.centralazdining.com) or call (520) 494-5452.

## Meal Plan Options

### Living On Campus

Students planning to live on campus must purchase a 19 meal per week meal plan. The fee for this meal plan is included as part of the room and board fees assessed through Residence Life. Prices are listed on the Central Arizona College home page: Home>Admissions>Paying for College.

## Catering

Catering service may be arranged by contacting the Catering Manager at 520-494-5034 or by visiting [www.caccatering.catertrax.com](http://www.caccatering.catertrax.com).



## General Educational Development (GED) Classes

Central Arizona College offers GED (high school equivalency) courses. The classes include instruction in the four areas tested on the GED® 2014: Reasoning through Language Arts, Mathematical Reasoning, Science and Social Studies.

GED classes are individualized as much as possible and include computer-based instruction. The time it takes a student to prepare to take the test varies with the individual student and depends on such factors as regular student attendance and the skill level in the areas of reading, math and writing upon entry.

GED classes are held at various locations throughout the county.

### GED Test

GED (the high school equivalency examination) tests are given at the college by an independent examiner appointed by the State Department of Education and certified by Pearson Vue Testing.

The cost of the GED test is \$140. Retests are \$35 per subject. Scheduling and payment of fees is done through the website [GED.com](http://GED.com).

### Requirements to take GED Test

If under the age of 18 but at least 16 years old, an examinee must:

- Have officially withdrawn from high school (a letter from the last attended school is required as verification of this status.);
- Have their parent's/guardian's notarized written permission to take the test if the examinee is not married;
- Present two forms of I.D., including one picture I.D.

If 18-years-old or older, an examinee must:

- Not be a high school or GED graduate;
- Not be currently enrolled in high school;
- Present two forms of I.D., including one picture I.D.



## Intercollegiate Athletics

Women's sports at the Signal Peak Campus include basketball, softball, track & field, cross country, volleyball and rodeo.

Men's sports at the Signal Peak Campus include basketball, baseball, track & field, cross country, and rodeo.

Central Arizona College is a member of the National Junior College Athletic Association (NJCAA) and the Arizona Community College Athletic Conference (ACCAC). Central Arizona College has one of the most successful athletic programs in the ACCAC and NJCAA. It has posted 36 national championships and numerous second- and third-place finishes over the past four decades.

Individuals desiring information concerning Central Arizona College's intercollegiate athletic programs under the Equity in Athletics Disclosure Act of 1994, Section 360B of Publication L.103-382, may obtain this information from one of the following offices: Chief Student Affairs Office or the Athletic Department.

## Athletic Records

National Championship teams and year:

- Baseball 1976, 2002
- Women's Basketball 1989, 1998, 2005, 2009
- Men's Cross Country 1988, 2002, 2003, 2005, 2012, 2013
- Women's Cross Country 2005, 2009
- Women's Rodeo 1978, 1979
- Softball 1984, 1985, 1988, 1989, 1990, 1991, 1992, 1995, 1997, 1999, 2003, 2005
- Men's Track & Field 1996, 2005, 2006, 2007
- Women's Track & Field 1998, 1999, 2006, 2007, 2008
- Volleyball 1983

The George Young Activity Center is used for all home basketball games. Outdoor athletic facilities include: an eight-lane all-weather track & field, baseball and softball fields, rodeo arena, tennis courts, and a 50-meter swimming pool. For more information, contact the athletic department at 520-494-5300 or 800-237-9814, ext. 5300.

## Learning Support Department

Central Arizona College provides free tutoring for students in most academic areas of study through the Learning Support Department. The tutors work with students individually and/or in small groups to address the various learning needs of students. In addition, tutors use several modalities including, but not limited to, face to face, online, interactive television, email, and phone to assist students in their academic endeavors. The Learning Support Department via the Learning Centers has computerized tutorials for many CAC courses as well as computer-assisted instructional programs for coursework or independent study. For further information, contact the Learning Center at the Aravaipa, Maricopa, San Tan, Superstition Mountain, or Signal Peak campuses.



## Library

The library has facilities located at the Maricopa, San Tan, Signal Peak, Superstition Mountain and Aravaipa campuses. Librarians are available for both online and in-person assistance with student research needs. The library also offers research workshops throughout the semester. The library facilities have computer workstations, Wi-Fi, and study areas. Online journal and eBook resources are available to students 24 hours a day. The library's print book collection contains over 65,000 volumes district-wide, includes government resources, and can be searched through the library's online catalog or by asking library staff for assistance.

## Disability Resource Services

Disability Resource Services is dedicated to supporting and empowering students with disabilities by providing self-advocacy opportunities and independence.

### Services may include, but are not limited to:

- Assistive Technology
- Note-taking Services
- Testing Accommodations
- Sign Language interpreting
- Referral to Campus and Community Resources
- Advocacy with Faculty and Staff

### Obtaining Services

In order to receive accommodations, students must provide written documentation of their disability to the Disability Resource Services office. Once the documentation has been submitted the student may make an appointment with Disability Resource Services staff. To reach the Disability Resource Services Office please call 520-494-5409, or 800-237-9814 ext. 5409, or visit the Signal Peak Campus office in M115.

### Concern or Complaint

If you have a concern or complaint about a disability related issue, please contact the Disability Resource Services Coordinator at 520-494-5409. If you need additional assistance please contact the Dean of Students office at 520-494-5431.

## TRIO Student Success Program

The TRIO Student Support Services program, located on the Signal Peak Campus, is designed to assist first generation, low-income students and students with disabilities by providing support and services throughout their academic career and transition to a university. Services include personalized academic advising, peer/faculty mentoring, monitored academic tutoring, cultural events, scholarship opportunities, and much more. The goal of the program is to increase the retention, graduation and transfer rates of TRIO participants. For more information visit the TRIO webpage at [www.centralaz.edu/trio](http://www.centralaz.edu/trio) or call (520) 494-5007. TRIO is on Facebook and Twitter at CAC TRIO.

## TRIO Summer Bridge

The Summer Bridge program is an exciting and valuable week-long college orientation program designed to give you an edge in succeeding at CAC. The program takes place on the Signal Peak Campus and is for recent high school graduates or GED recipients. Students live in the residence halls, go through a number of mini classes, participate in discussion groups, join in many activities and explore college life. It is a very full week where you will meet a number of students and interact with many of the faculty and staff at CAC.

For more information please visit the TRIO Summer Bridge website at [www.centralaz.edu/summerbridge](http://www.centralaz.edu/summerbridge) or call 520-494-5007.

## WIA Youth Program

The Workforce Investment Act (WIA) Youth Program enrolls youth who are 21 years and younger, income eligible and face barriers to education or employment. Some of the services offered include: help obtaining a HS diploma or GED, paid work experience, support services that help meet education or employment goals, work readiness training and financial assistance with tuition and books. The WIA Youth Program provides mentoring in order to help youth overcome barriers that they face. The objective of the program is to provide education and training directly related to employment that leads to a degree or certificate. The WIA youth program serves students who reside in Pinal or Gila County. WIA Youth Program is federally funded by the Department of Labor through the Gila Pinal Workforce Investment Board. Applications and further information is available on our webpage at [www.centralaz.edu/wia](http://www.centralaz.edu/wia) or by calling 520-494-6053.

## Residence Life

The Signal Peak Campus offers an on-campus living and a learning environment with space for approximately 350 students. The Residence Life Staff provide programs that promote personal growth and development, cultural, diversity, and community responsibility. These programs work towards enhancing the student's overall college experience.

For more information about Residence Life, and to obtain a copy of the housing application, please visit the Residence Life website at: Home>Student Resources>Residence Life or contact the office directly at 520-494-5470 or via e-mail [rlstaff@centralaz.edu](mailto:rlstaff@centralaz.edu). If you wish to live in on-campus housing, you must officially apply to be considered.





## STUDENT ENGAGEMENT AND ACTIVITIES

Student Engagement and Activities provide students a variety of involvement opportunities. Co-curricular programs include leadership, clubs and organizations, and student activities.

### Student Leadership Organization

Student Leadership at CAC is an important student organization that responds to student needs and issues. The Student Leadership Organization (SLO) develops events and activities to increase student involvement on campus and within the local communities.

Students may participate in SLO as a coordinator or volunteer.

There are many benefits to serving as a student leader:

- Scholarships
- Prescott Leadership Camp
- Leadership Training & National Conferences
- Community Involvement
- Host the Annual Student Awards Ceremony
- National recognition for leadership excellence

### Student Activities

Student Leadership and Clubs/Organizations provide on-campus activities. Many activities include social, cultural, service, awareness and academic programs. Student Activities programs are FREE and open to all students, faculty, and staff. Students receive a weekly list of campus programs via The Vaquero Vibe.

## Student Clubs and Organizations

Student Clubs and Organizations (SCO) are organized student groups with a common interest and a shared goal. Clubs and Organizations provide students opportunities for social interaction, recreation, leadership training and enhancement of career-academic interests. Each group has a faculty or staff advisor to guide and support the student group. There are a variety of opportunities to be involved in leadership, social, service, religious, educational, ethnic, and cultural clubs and organizations. Not all clubs are available at each campus. For more information, check our webpage at [www.centralaz.edu/activities](http://www.centralaz.edu/activities).

### Campus Leadership Opportunities

- Art Club
- Central Arizona Student Nurses Association (CASNA)
- Campus Crusades of Christ
- Improv Club
- Health Occupations Student of America
- Phi Theta Kappa International Honor Society
- Business Clubs (Collegiate DECA and PBL)
- The Science Technology Engineering and Math (STEM)
- Superstition Mountain PRIDE: LGBTQ & Straight Alliance
- TRIO Peer Mentors
- Resident Student Leaders
- Student Leaders





# Degrees and Certificates



BIO 109 Class at Boyce Thompson Arboretum – October 2013



## DEGREE AND CERTIFICATE INFORMATION

Central Arizona College (CAC) offers students a variety of one- and two-year programs to meet their diverse interests and goals, including nearly 150 degrees and certificates in a variety of disciplines. Many credentials may be completed over an extended period to accommodate the needs of nontraditional students. Four (4) associate degrees transfer directly to all Arizona public universities, specifically: Associate of Arts (A.A.), Associate of Business (A. Bus.), Associate of Science (A.S.) and Associate of Arts in Elementary Education (A.A.E.E.). In addition, many Associate of Applied Science (A.A.S.) degrees now transfer to the three Arizona public universities, Arizona State University (ASU), Northern Arizona University (NAU) and the University of Arizona (UA), and other higher education institutions.

CAC associate degrees require 60-64 semester credits and share five basic “blocks” in addition to CAC degree core requirements, specifically: General Education, Special Awareness Requirements, Core Courses, Subject Options, Electives and Other CAC Requirements. Students completing these degrees with a minimum cumulative grade point average (CGPA) of 2.0 on a 4.0 grade scale typically matriculate to an Arizona public university with junior status and only need an additional 56-60 university credits to complete a bachelor’s degree consisting of 120 credits.

Select Programs offer a 75 + 45 credit baccalaureate degree program; up to 75 credits may be completed at CAC and directly transferred to the university program. Other special program agreements with partnering higher education institutions build upon the CAC associate’s degree. The Arizona A.A.S. to B.A.S. option supports students earning an A.A.S. Degree plus 15 select General Education credits which transfer and apply toward bachelor’s degree requirements at select universities. In addition, some transfer pathways accept 90 or more CAC credits towards a baccalaureate degree program; Northern Arizona University (NAU) currently offers a variety of 90 + 30 programs. Contact an academic advisor to determine the options available in your chosen field.

Completion of an associate degree does not necessarily guarantee admission to a particular university’s program of study. For assured admission to the Arizona public universities, AGEC completers are required to earn a minimum GPA of 2.5 in all AGEC courses and a degree cumulative grade point average (CGPA) of 2.0. For assured admission to the universities, Associate degree completers are required to earn a minimum CGPA of 2.0. Students are strongly encouraged to consult with both a CAC academic advisor and the target university’s admissions advisor.

Students who are undecided about their academic program should meet with an academic advisor for assistance in

exploring career and life goals. Selecting a program that fits talents and interests and planning a timeline to achieve academic goals based on course offerings leads to successful degree/certificate completion.

### Arizona Transfer Information

Students planning to earn a four-year baccalaureate degree should go to the Arizona Transfer website for detailed information on the Arizona Transfer Model and options.

Use the following Arizona Transfer Resources:

**Arizona Transfer (AZTransfer):**

<http://steeringcommittee.aztransfer.com/>

**Course Equivalency Guide (CEG):**

<http://aztransmac2.asu.edu/cgi-bin/WebObjects/CEG>, and the **Reverse CEG** (university to college transfer) located at the lower left of the CEG website. Both provide specific course transfer information based on academic year.

**Transfer Index of Tools & Policies:**

<http://steeringcommittee.aztransfer.com/resources/>

**AGEC-Web** (courses transferable to the three Arizona public universities: <http://aztransfer.com/generaleducation/>)

**Degrees & Pathways:** <http://aztransmac2.asu.edu/cgi-bin/WebObjects/ATASS.woa/wa/DegreePathwayAZ>

**Major Guides:** <https://aztransmac2.asu.edu/cgi-bin/WebObjects/ATASS.woa/wa/MajorGuideAZ>

**Shared Unique Number (SUN) Course Matrix:**

<http://www.aztransfer.com/sun/>

**Transfer Pathways:** <http://aztransfer.com/transferpathways/>

Arizona State **Math Competencies** are identified at:

<http://steeringcommittee.aztransfer.com/resources/mathcompetencies.html>

To determine **Credit by Examination** equivalencies for Advanced Placement (AP), College Level Examination Program (CLEP), International Baccalaureate Diploma Program (IB) and DANTES/DSST exams, see the **Exam Equivalency Guide (EEG):** <http://aztransmac2.asu.edu/cgi-bin/WebObjects/ATASS.woa/wa/EEG>

The Arizona public and tribal universities and community colleges collaboratively determine transfer articulation policies and procedures to help students easily transfer community college credits to the universities. These “transfer articulation agreements” apply to all Arizona public and tribal community colleges and universities.





In addition, CAC Articulation Agreements with select four-year colleges/universities provide a wide array of opportunities to students graduating with an associate's degree. Students are strongly encouraged to discuss Transfer/Articulation Agreement Options with their academic advisor during their first year. Some options require students to sign the agreement and follow a prescribed program course sequencing guide. Contact a CAC academic advisor for assistance and to review other special transfer agreement options and scholarship opportunities.

### Arizona Shared Unique Numbering (SUN) System

Arizona community college students planning to transfer to ASU, NAU or UofA may use the SUN System to identify transferrable courses, however students still need to confirm the course transferability at each of the three Arizona public universities; see the Course Equivalency Guide (CEG): <http://aztransmac2.asu.edu/cgi-bin/WebObjects/CEG>. Because each student has a unique academic plan, students are strongly encouraged to seek academic advising prior to enrollment.

The Shared Unique Number (SUN) course numbering system identifies more than 80 CAC courses that transfer among Arizona's public community colleges and three state public universities.

SUN courses are identified by a three-letter prefix, four-digit course number and a SUN icon . SUN courses are labeled in university and community college catalogs, schedules and websites, making it easy for students to find transferable courses. In the CAC Catalog, students and others will also find the AGEC  icon next to many SUN courses.

SUN courses are a subset of the multitude of college courses that transfer among Arizona's colleges and universities. CAC accepts all SUN courses and applies them toward meeting CAC program requirements, provided the student earned a grade of "C" or better in each course.

For more information about the Arizona SUN System go to: <http://www.aztransfer.com/sun/>

### Arizona General Education Curriculum (AGEC)

Each of the transfer associate degrees (A.A., A.Bus. and A.S) include at least 35 semester credits of general education studies known as the Arizona General Education Curriculum (AGEC). The AGEC fulfills lower-division general education requirements for students planning to transfer to an Arizona public university or community college. The AGEC transfers as a block of 35 credits which meet the target institution's general education requirements provided students earn a minimum degree cumulative grade point average (CGPA) of 2.0 on a 4.0 scale. For assured admission to the universities, AGEC completers are required to earn a 2.5 in all AGEC courses.

The AGEC provides clear and secure transfer pathways for community college students parallel to the pathways followed by students who began their studies at the university. These transfer pathways help students maximize their experience at the community college, incorporate community college credits and degrees efficiently into university graduation requirements, and complete baccalaureate majors with the minimum number of required credits. AGEC courses are transferable to all three Arizona public universities provided students earn a grade of "C" or better.

Students, depending on their career goals, select the AGEC-Arts, AGEC-Business, or AGEC-Sciences Certificate. Each AGEC has specific minimum mathematics and English coursework. The AGEC-S requires significant coursework in the sciences. For all three AGECS, students are encouraged to choose coursework from more than one discipline for both Arts and Humanities and Social and Behavioral Science categories.

In general, most bachelor's degrees can accommodate an AGEC; however, some majors are structured in such a way that students should or must complete select general education requirements at the university. See the Major Guides:

<https://aztransmac2.asu.edu/cgi-bin/WebObjects/ATASS.woa/wa/MajorGuideAZ>

Students completing the AGEC also must fulfill university lower division program requirements and prerequisites for their major. Majors in specific professional fields have significant prerequisites that students must complete before admission to upper division coursework. CAC recommends students complete prerequisites at CAC prior to transfer.

Students who are undecided about their transfer path should consult an academic advisor to explore educational options while completing one of the AGEC Certificates.

The Arizona public universities accept AGEC courses for transfer credit in any of the following categories: equivalent course (specific course and credit value are identified in the CEG), general elective credit (EC), or departmental elective credit (DEC). Access the **Course Equivalency Guide (CEG)** at <http://aztransmac2.asu.edu/cgi-bin/WebObjects/CEG>





## Non-AGEC Institutions

Coursework transferred from regionally accredited non-AGEC granting institutions may be applied to AGECE as follows (i.e. Arizona public universities or out-of-state institutions):

1. Transfer coursework deemed by CAC to be equivalent to a course on CAC’s AGECE list may be used to satisfy AGECE in the same manner as the CAC course.
2. Transfer coursework that is equivalent to a CAC non-AGECE course may not be used to satisfy the AGECE.
3. CAC accepts AGECE coursework earned from Arizona tribal and community colleges, provided the student earned a grade of “C” or better.
4. Transfer coursework without a direct CAC course equivalency shall be evaluated by CAC using CAC institutional curricular standards for identifying AGECE courses.

## Upper Division Course Transfer

Upper division courses from regionally accredited higher education institutions transfer as a CAC lower division course or as an elective, provided the student earned a grade of “C” or better.

Students completing a CAC degree may find some of their CAC courses may transfer as 300-level courses to select CAC Transfer/Articulation Agreement institutions. Consult a CAC advisor and the program/degree specific Transfer Pathway document on that institution’s website to confirm transferability and applicability of CAC coursework, i.e. the CAC Student Portal. Transfer Pathways are updated annually and Transfer/Articulation Agreements state specific student eligibility requirements, scholarship opportunities and the programs available.

## Transfer Agreement Options

The [aztransfer.com](http://aztransfer.com) website offers transfer tips and valuable transfer tools for students, advisors, faculty and others. See links on the previous pages of this catalog section. Students are strongly encouraged to consult a CAC academic advisor.

### AAS to BAS Transfer Model: The Arizona University System Model

Students who complete an AAS degree at one of Arizona’s community colleges have two special program options for transferring to a BAS degree program at one of the Arizona public universities.

### The 60-60 Credit Hour Model\*

In this model, students transfer an A.A.S. degree as a 60 credit hour block toward fulfilling the requirements for the 120 credit B.A.S. degree. Students then complete 60 credit hours of upper division and specific lower division courses at the university granting the B.A.S. degree.

### The 75-45 Credit Hour Model \*\*

In this model, students take an additional 15 credit hours at CAC of specified General Studies courses beyond the credit hours required for the A.A.S. degree, for a total of 75 transferable credit hours. Students then complete an additional 45 credit hours of specified courses at the university granting the B.A.S. degree.

Students must complete the additional 15 hours of lower division credits by taking general studies courses that meet Arizona General Education Curriculum (AGECE) criteria. Five courses are selected from six (6) areas of study depending upon the nature of the A.A.S. degree. The six areas are:

1. Mathematics/Computer Science
2. Natural Sciences
3. Humanities Fine Arts
4. Social and Behavioral Sciences
5. Literacy
6. Cultural/Global/Historical Awareness

Students must complete a mathematics course equivalent to, or higher than, College Mathematics (MAT141). If the math requirement is met by the program requirements of a specific AAS degree, students may take the additional three hours in any one of the five remaining areas. The following table illustrates the relationship between the AAS category and the possible distribution of the 15 credit hours.

Students are strongly encouraged to meet with an advisor to plan their course of study and to determine how their A.A.S. degree aligns with a specific university program.

\* NAU’s model is based on a 64 credit A.A.S. degree.

\*\*There are A.A.S. to B.A.S. models with more than 75 credits which can be transferred. Consult a CAC academic advisor or an NAU advisor.

See Transfer Agreement options for AAS to BAS degree.

### AAS to BAS (75 + 45 Credit Hour Model)

AAS Category	Math Computer Science	Natural Sciences	Humanities / Fine Arts	S/B Sciences	Literacy	Awareness	Total
HUM / FA	3	3	0	3	3	3	15
SB Sciences	3	3	3	0	3	3	15
Science / Health	3	0	3	3	3	3	15
Technology	3	3	3	3	3	0	15

Approved by APASC, April 29, 2011



## Articulation and Transfer Options for Degree Completers

### Albright College

1201 S Alma School Road, Mesa, AZ 85210  
Suite 5400  
480-659-3608  
[mesa.albright.edu](http://mesa.albright.edu)

### Arizona Christian University

2625 E. Cactus Road, Phoenix, AZ 85032  
800-247-2697  
[arizonachristian.edu](http://arizonachristian.edu)

### Benedictine University

Gillett Hall, 225 E. Main Street, Mesa, AZ 85201  
866-295-3104  
[www.ben.edu/mesa](http://www.ben.edu/mesa)

### Brigham Young University

Brigham Young University, Provo, Utah 84602  
801-422-4636  
<http://www.home.byu.edu/home/>

### Chamberlain College of Nursing

2149 W. Dunlap Avenue, Phoenix, AZ 85021  
602-331-2720  
[www.chamberlain.edu](http://www.chamberlain.edu)

### College of St. Scholastica

15950 N. Civic Center Plaza, Surprise, AZ 85374  
866-478-9277  
[css.edu/Locations/Arizona.html](http://css.edu/Locations/Arizona.html)

### Fondazione Marco Polo SRL – Italy

<http://www.marcopoloinstitute.org/>

### Frontier Nursing University

195 School Street, Hyden, Kentucky 41749  
606-672-2312  
[www.frontier.edu](http://www.frontier.edu)

### Grand Canyon University

3300 W. Camelback Road, Phoenix, AZ 85017  
602-639-7500  
[www.gcu.edu](http://www.gcu.edu)

### Kaplan University

4646 E. Van Buren Street, Phoenix, AZ 85008  
866-527-5268  
[kaplanuniversity.edu](http://kaplanuniversity.edu)

### Ottawa University

10020 N. 25<sup>th</sup> Avenue, Phoenix, AZ 85021  
855-392-0002  
[www.ottawa.edu](http://www.ottawa.edu)

### Palmer College of Chiropractic

1000 Brady Street, Davenport, IA 52803  
800-722-2586  
[www.palmer.edu](http://www.palmer.edu)

### Potomac College

2141 E. Highland Avenue, Phoenix, AZ 85016  
888-635-1121  
[www.potomac.edu](http://www.potomac.edu)

### Prescott College

220 Grove Avenue, Prescott, AZ 86301  
877-350-2100  
[www.prescott.edu](http://www.prescott.edu)

### University of Maryland University College

3501 University Blvd. East, Adelphi, MD 20783  
800-888-8682  
[www.umuc.edu](http://www.umuc.edu)

### University of Phoenix

1625 W. Fountainhead Parkway, Tempe, AZ 85282  
888-766-0766  
[www.phoenix.edu](http://www.phoenix.edu)

### Upper Iowa University

1361 S. Alma School Road, Mesa, AZ 85210  
888-329-7290  
<http://uiu.edu/locations/educationcenters/uscenters/mesa.html>

### Western International University

1601 W. Fountainhead Parkway, Tempe, AZ 85282  
602-943-2311  
[www.west.edu](http://www.west.edu)



## Arizona State University Transfer Admission Guarantee Programs (TAGs), AAS to BAS, RN to BSN

If you have decided on an ASU bachelor's degree program, the Central Arizona College-ASU **Transfer Admission Guarantee (TAG)** has been designed for you. Through this program, you follow a prescribed sequence of coursework that meets the lower-division course requirements for an ASU major. When you complete your TAG, you will have met the requirements for your associate's degree and be on track towards earning your bachelor's degree. TAGs include the appropriate AGEC (Arizona General Education Curriculum) and an associate's degree.

### ASU TAG Benefits:

1. Guaranteed admission to the ASU degree program of your TAG.
2. Cost-effective pathway ensuring that all of your courses transfer and apply to your ASU degree.
3. Eligibility for participation in the **ASU Tuition Commitment** program.
4. Access to ASU transfer advising by phone and occasionally in-person.

### ASU TAG Eligibility Requirements:

1. CAC student to sign TAG agreement prior to CAC graduation; Arizona resident to receive TAG ASU Tuition Commitment rate.
2. AGEC completed with 2.5 cumulative GPA.
3. Overall CAC 2.0-2.5 GPA, dependent upon ASU major.

### ASU TAG Terms:

1. Work with a CAC and ASU advisor to monitor progress on the TAG prescribed sequence of courses.
2. Complete the TAG with a specified GPA and any special requirements.
3. All credit applied to the TAG must be completed with a grade of "C" or better.
4. Complete the TAG in a period not to exceed three (3) years to receive **Guaranteed Admission** into the specified ASU degree program. A maximum of 5 years of coursework, including CAC and ASU coursework, is permitted. After that period, the TAG cohort tuition rate no longer applies at ASU.
5. **Pathway certification** verifying completion of the TAG requirements.
6. Coursework more than 8 years old is subject to approval by the ASU academic department.
7. Use the CEG to determine direct course equivalencies to ASU for the semester and year the CAC course was taken. Excess credit hours for equivalent courses do not apply to the TAG.

8. TAG requirements satisfied by **Credit by Exam** (AP, IB, CLEP, DSST) must be consistent with ASU's established equivalencies. See the EEG and submit exam results to ASU for credit to be granted.
9. TAG completed with a 2.0 to 3.0 ASU cumulative transfer GPA, dependent upon major.
10. CAC students participating in the TAG program become eligible for the **Tuition Commitment Program** at ASU which locks students into a specific tuition cohort while at ASU for a reduced tuition rate. The tuition rate is based on the student's semester of acceptance in a TAG program and compliance with the TAG requirements. For more information, see:  
<http://students.asu.edu/tuition/commitment> .

TAGs have been created for ASU's highest demand degrees. See ASU/CAC Transfer Agreement website for the current pathways available at: <http://transfer.asu.edu/central-az> .

### To Enroll in an ASU TAG:

Contact your CAC advisor who will explain the TAG terms and requirements, and sign you up for a TAG. The TAG will be part of your academic plan in the student information system. Plan to meet with an advisor at least once a year to check your progress and make sure you are on track. Note, if you change your major while at CAC, you will also need to reset your TAG start date and sign a new TAG form which will affect your tuition cohort and restart your three-year completion period.

### AAS to BAS:

As of spring 2012, CAC offers 45 Associates in Applied Science (AAS) degree options that transfer to at least one of ASU's Bachelor of Applied Science (BAS) degrees designed specifically for students who have earned a CAC Associate of Applied Science. See the list at:  
<http://transfer.asu.edu/central-az> .

### RN to BSN Pathway Program:

The CAC-ASU RN-BSN Pathway Program is designed for students who are currently pursuing an Associate of Applied Science (AAS) degree in nursing at CAC and who plan to earn a Bachelor of Science in Nursing (BSN) at ASU. Students who intend to transfer to ASU commit to specific terms for program completion.

### RN to BSN Benefits:

1. Students may apply up to 75 specified credits hours from CAC towards the ASU BSN (a minimum of 45 credit hours beyond pathway requirements is required to complete the ASU RN-BSN).
2. Guaranteed admission into ASU's RN-BSN program upon completion of pathway requirements.
3. Eligibility for participation in the **ASU Tuition Commitment** program.



4. Access to ASU RN-BSN advisors and other pre-enrollment services.

### To Enroll in RN-BSN Pathway Program:

Contact CAC Nursing Advisor. Students should seek academic advisement each semester to ensure that they are staying on track and completing the appropriate coursework.

### General Transfer to ASU:

ASU offers bachelor's degrees in more than 250 academic programs. Contact a CAC or ASU advisor for details or use the **ASU Degree Search website** to learn more about programs, career opportunities and admission requirements:

<https://webapp4.asu.edu/programs/t5/undergrad?init=false&nopassive=true>.



## Northern Arizona University

### Northern Arizona University (NAU) Flagstaff and Extended Campuses

*CAC2NAU, AAS to BAS, 90+30 Programs, Personalized Learning, Graduate Programs*

Open doors to new opportunities by earning an undergraduate or graduate degree through [the Extended Campuses of Northern Arizona University](#) (NAU) or by attending the main campus in Flagstaff. NAU's programs are designed to help you advance in high-demand job fields such as criminal justice, healthcare, business, environmental and sustainable systems, and education. To learn more, visit [www.nau.edu](http://www.nau.edu).

NAU-Extended Campuses serves busy professionals and working adults throughout Arizona with online, in-person, and hybrid classes, as well as a growing number of affordable transfer programs with community college partners like Central Arizona College. This way, you can take classes locally in your community or enjoy an engaging online learning experience supported by NAU's award-winning technical infrastructure. NAU also offers a number of degree programs at a flexible pace to fit your busy schedule.

NAU-Extended Campuses has been a leader in distance learning for more than 30 years and offers the lowest university tuition in the state. Degree programs accepting between 64 and 90 transfer credits continue to grow in popularity along with the number of students embracing the Extended Campuses alternative. Currently, some 35 percent of NAU students earn their degrees online or in their local communities. Learn more at [nau.edu/extended](http://nau.edu/extended)

### NAU Office on CAC

NAU-Extended Campuses' Pinal County office is located on the Central Arizona Campus Signal Peak inside CAC Advising

(M-115). NAU staff is available Monday through Thursday, 8 a.m. to 6 p.m., to answer questions. Call 520-421-1394 for more information.

### 2NAU Partnership

CAC and NAU are providing greater access and affordability for students to earn a bachelor's degree with the award-winning\* 2NAU joint-admission program. As a participant in the CAC2NAU program, you are admitted to NAU while attending CAC. You earn your associate degree first, then seamlessly transition to NAU and complete your bachelor's degree—locally, online, or in Flagstaff.

\*Recipient of *Arizona's Pathways to Postsecondary Education Award*

### 2NAU Eligibility

Any student admitted to CAC is eligible to participate in the 2NAU program.

(Note: Students who have started their last semester at CAC or who have already completed their community college coursework should apply directly to NAU following the *General Transfer* process below.)

### 2NAU Benefits & Features

- Expert guidance to help maximize credits earned at the community college.
- Waived NAU admission application fee.
- Access to NAU early enrollment.
- Access to library services at both institutions.
- NAU email account and ID card (JacksCard fee waived).
- Free admission to NAU athletic events in Flagstaff.
- Merit-based \$2,000 scholarship for those who qualify.

### 2NAU Degree Options

- NAU offers many degree programs online and in-person throughout the state. To see a complete list of our statewide programs, visit [www.nau.edu/extended](http://www.nau.edu/extended).
- For a list of majors available on the Flagstaff campus, visit [www.nau.edu/admissions](http://www.nau.edu/admissions)

### Getting Started with 2NAU

To get started, visit [www.nau.edu/why2nau](http://www.nau.edu/why2nau). You may also contact your local CAC2NAU coordinator at [cac2nau@nau.edu](mailto:cac2nau@nau.edu) or by calling 520-421-1394.

### 2NAU Requirements

Once admitted, CAC2NAU students are expected to

1. Maintain enrollment in 6 or more transferable CAC credits each semester,
2. Complete coursework with a grade of "C" or better, and
3. Meet with their NAU Transition Coordinator *at least one* semester before graduation, and
4. Complete a CAC associate degree.





### 2NAU Scholarships & Financial Aid

NAU offers transfer students scholarships and other financial support. 2NAU students may be eligible for the \$1,000 2NAU Joint Admission Transfer Scholarship (potential to earn it in two consecutive semesters for \$2,000 in total) and other opportunities; see: [nau.edu/FinAid/Scholarships](http://nau.edu/FinAid/Scholarships)

### General Transfer to NAU

After completing a CAC associate degree, students may transfer 64 or more credit hours into select NAU degree programs offered locally, online, or in Flagstaff.

Contact a CAC or NAU advisor for details, or use visit [www.nau.edu/extended](http://www.nau.edu/extended) to learn more about traditional transfer programs, career opportunities and admission requirements.

### AAS to BAS Degrees

AAS degrees allow CAC students to transfer up to 75 credit hours and complete the remaining 45 credit hours toward a BAS through NAU.

### 90/30 Programs

NAU's 90/30 academic programs allow students to transfer up to 90 credit hours of community college and/or university credit from regionally accredited institutions and complete the remaining 30 upper division credits with NAU.

NAU now has eight 90/30 degree options:

- Career and Technical Education
- Emergency Management
- Humanities
- Intelligence Studies
- Law Enforcement Management\*
- Nursing (RN-BSN)
- Public Administration\*
- Technology Management

\*(Ask about the CAC-NAU Weekend College at the Corporate Center.)

### Personalized Learning (Self-Paced Online Option)

Through NAU's competency-based Personalized Learning programs, you can pursue an accredited bachelor's degree at our own pace for a flat rate of \$2,500 for six months of unlimited learning. Coursework is entirely online and customized to match your learning preferences and goals. You can also use what you know to test out of lessons and advance quickly in areas where you have experience. Financial aid available. Learn more at [www.nau.edu/personalized](http://www.nau.edu/personalized).

### Bachelor's & Beyond- NAU's Graduate Programs

Once you have earned a bachelor's degree, continue your education through NAU's graduate programs and fulfill your potential in fields as diverse as business administration, biotechnology, healthcare, environmental and sustainable systems, and education. Graduate degree programs include a number of flexible pace options to work with your schedule.

Visit [www.nau.edu/extended](http://www.nau.edu/extended) for information on graduate (including doctoral) programs offers.

## University of Arizona



The University of Arizona provides Transfer Pathways for a variety of Bachelor's degree program options to provide seamless transfer opportunities for CAC students/employees/family members to complete their degree in Pinal County or at the UA campus in Tucson. After completing a CAC Associate's degree, students transfer into pathway degree programs. See the transfer pathway agreements for details on the pathway programs:

<http://admissions.arizona.edu/transfer/central-arizona-college-pathways-agreements>

### Benefits to CAC Students/Employees and Family Members:

- Cost-effective pathway
- Transfer course applicability
- Access to UA transfer advisors
- Affordable, accessible degree programs offered in Pinal County
- Degree pathways from Associate of Science, Arts, and Applied Science degrees
- UA Pinal Coordinator on-site at the CAC Signal Peak Campus to assist you with the transfer process  
<http://uapinal.arizona.edu/>

### Eligibility Requirements:

- Completion of AGECE
  - C or better in each transferrable course
  - Specific majors will have minimum GPA requirements for admission; see transfer pathway agreements for more information:  
<http://admissions.arizona.edu/transfer/central-arizona-college-pathways-agreements>
- UA Pinal Coordinator on-site at the CAC Signal Peak Campus to assist you with the transfer process <http://uapinal.arizona.edu/>

### Terms of Agreement:

- a. Cumulative GPA and minimum grade for transfer courses: C (2.0) or better
- b. Tuition:  
<http://www.bursar.arizona.edu/students/fees>. Students completing branch campus programs through UA Pinal are eligible for the UA South tuition rate.
- c. Fees:  
<http://www.bursar.arizona.edu/students/fees>
- d. Deadlines:  
<http://admissions.arizona.edu/transfer/dates-deadlines>
- e. Resident Transfer Application Fee: \$50
- f. Credit by Exam Options: Credit is awarded for certain AP, IB, and CLEP examinations:  
<http://catalog.arizona.edu/2013-14/policies/profexam.htm>



- g. Military Credit: <http://catalog.arizona.edu/2013-14/policies/military.htm>
- h. Credit life limitations, if any: Applicability of transfer credit is determined with an academic advisor
- i. Scholarships available: <https://financialaid.arizona.edu/>

**Enrollment information:**

- a. Transfer to UA main campus in Tucson: <http://admissions.arizona.edu/transfer/steps-to-apply>
- b. Transfer to UA Pinal: <http://uas.arizona.edu/admissions>

**Programs/Special Programs/Cohorts:**

A variety of transfer pathways are available for Bachelor's degree programs at the UA and through the branch campus, UA South: <http://admissions.arizona.edu/transfer/central-arizona-college-pathways-agreements>

Students completing AAS degrees at CAC have the option of transferring to a Bachelor of Applied Science (BAS) program through UA Pinal, including majors in Administration of Justice, Early Childhood Education, Human Services, Informatics, Network Administration, and Organizational Leadership. The BAS is designed for students with work experience and/or an AAS to meet industry demands, utilize real-world situations and allow students to use practical knowledge and to advance in their career.

Prospective transfer students are encouraged to visit: <http://transfer.arizona.edu/prospective-transfer-students>

AZTransfer Course Equivalency Guide: <http://aztransmac2.asu.edu/cgi-bin/WebObjects/CEG>

**Advising Information/Contact:**

- a. UA Pinal Coordinator available for assistance at the CAC Signal Peak Campus Advising Center: 520.449.3449 <http://uapinal.arizona.edu/>
- b. UA Advising Resource Center <http://www.advising.arizona.edu/>

## ASSOCIATE OF ARTS (A.A.) DEGREE (60-64 Credits)

**District-Wide**

The Associate of Arts (A.A.) Degree is appropriate for students who plan to transfer to the university to earn a baccalaureate degree. Major areas of study include: Administration of Justice, Advertising, Agri-Business, Agriculture, American Studies, Anthropology, Art, Art History, Broadcasting, Communication, Creative Writing, Dramatic Theory, Early Childhood Education, Economics, English, Exercise Science, Fine Arts, Geography, History, Hotel/Restaurant Management, Interdisciplinary Arts/Performance, Interdisciplinary Studies, Journalism, Languages, Liberal Arts, Mathematics, Media Arts, Music, Philosophy, Physical Education, Political Science, Psychology, Public Programs, Public Relations, Recreation and Tourism, Religious Studies, Secondary Education, Social and Behavioral Sciences, Social Work, Sociology and Theatre.

For a list of Common Courses associated with specific programs of study, go to the Common Course Matrix Archives and select the current year or the year the course was completed: <http://steeringcommittee.aztransfer.com/resources/ccm.html>

AGEC courses are transferable to all three Arizona public universities provided students earn a grade of "C" or better. Contact an academic advisor for assistance.





**AGEC-A Certificate (35-36 Credits)**

The Associate of Arts Degree requires the AGEC-Arts (AGEC-A) general education block of 35-36 credits. The AGEC-A satisfies requirements in many liberal arts programs and other programs that articulate with the A.A. Degree. The AGEC-A requires a minimum of College Mathematics MAT141 plus 32 credits from specific AGEC categories. Refer to the AGEC Course List in this catalog or the AGEC-Web: <http://aztransfer.com/generaleducation/>

**General Education (35-36)**

*For the five categories below, select the recommended course(s) or an AGEC course from the equivalent category.*

**Written Communications (6 Credits)**

- ENG 101 English Composition III (3)  
- ENG 102 English Composition IV (3)  

**Oral Communications (3 Credits)**

*Select an AGEC Course.*

*For the following two categories, select a total of 15 credits.*

**Arts and Humanities (6-9 Credits)**

*Select a minimum of one Art (3) and one Humanities (3) AGEC course.*



### Social and Behavioral Sciences (6-9 Credits)

Select AGEC courses from two different disciplines.

### Physical and Biological Sciences (8 Credits)

Select AGEC courses with a laboratory component.

### Mathematics (3-4 Credits)

MAT 141 College Mathematics, Standard (4) or higher

### Subject Options (0-6)

Based on your major, review the specific A.A. Degree requirements in the CAC catalog, consult an academic advisor, and review Transfer Guides at: <http://aztransfer.com/college/>

### Special Awareness Requirements (0-9)

Select AGEC courses to fulfill these requirements.

1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender)
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences or Transfer Electives, may also be used to satisfy the three (3) Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.


Students may select courses which fulfill multiple categories. For example, a course may fulfill the AGEC Arts, Intensive Writing and a core requirement.

Select approved elective courses which transfer as “elective or better” to all three Arizona public universities to complete the required A.A. Degree credit requirement. Consult the CEG.

### Requirements for A.A. Degree (3)

Reading Competency: RDG 094 College Reading 

#### Computer Competency (3):

CIS 120 Survey of Computer Information Systems (3) 

AGB 124 Microcomputers in Agriculture (3)

OR

Transferable Computer Competency course  
(Consult the Course Equivalency Guide to determine transferability to the three state public universities.)

### Other A.A. Degree Requirements

Some A.A. Degree majors require up to 16 credits of a Second Language to demonstrate proficiency. Many four-year degree programs require either a second semester or fourth semester level of a second language. CAC strongly encourages students to complete this requirement at CAC prior to transfer.

Check your university catalog, Transfer Guides at <http://aztransfer.com/college/> or meet with an academic advisor. Students may demonstrate proficiency by completion of coursework and/or a proficiency test.

Students who are undecided about their major are encouraged to complete a fourth semester of a second language. CAC offers Spanish, French, Sign Language and other Foreign Languages and Literatures. Contact an academic advisor for assistance.

Students must earn a grade of “C” or better in each A.A. Degree required course.

Students must earn a minimum of 20 credits from CAC which includes the AGEC-A requirements.

The Associate of Arts Degree requires 60-64 semester credits.





**ASSOCIATE OF BUSINESS  
(A.BUS.) DEGREE  
(60-64 Credits)**

**Aravaipa, Maricopa, Signal Peak, Superstition Mountain and San Tan Campuses**

The Associate of Business (A. Bus.) Degree suits students who plan to transfer to the university to earn a baccalaureate degree in Business-related areas, such as Accounting, Business Administration, Computer Information Systems, Economics, Finance, Human Relations, Marketing and Public Administration.

For a list of Common Courses associated with specific programs of study, go to the Common Course Matrix Archives and select the current year or the year the course was completed:

<http://steeringcommittee.aztransfer.com/resources/ccm.html>

AGEC courses are transferable to all three Arizona public universities provided students earn a grade of "C" or better. Contact an academic advisor for assistance.

**AGEC-B Certificate (35-36 Credits)**

The Associate of Business Degree requires the AGEC-Business general education block of 35-36 credits. The AGEC-B satisfies requirements in many business programs and other programs that articulate with the A. Bus. Degree. The AGEC-B requires a minimum of Brief Calculus MAT211 plus 32 credits from specific AGEC categories. Select AGEC courses only. Refer to the AGEC Course List in this catalog or the AGEC-Web: <http://aztransfer.com/generaleducation/>

**General Education (35-36)**

For the five categories directly below, choose from the recommended courses or select AGEC courses from the equivalent category.

**Written Communications (6 Credits)**

ENG 101 English Composition III (3)

ENG 102 English Composition IV (3)

**Oral Communications (3 Credits)**

Select an AGEC course.

For the following two categories, select a total of 15 credits.

**Arts and Humanities (6-9 Credits)**

Select a minimum of one Art (3) and one Humanities (3) AGEC course.

**Social and Behavioral Sciences (6-9 Credits)**

Select AGEC courses from two different disciplines.

**Physical and Biological Sciences (8 Credits)**

Select AGEC courses with a laboratory component.

**Mathematics (3-4 Credits)**

MAT 211 Brief Calculus (4) or higher

**Computer Competency (3 Credits)**

CIS 120 Survey of Computer Information Systems (3)

**Subject Options (0-3)**

Based on your major, review the specific Associate of Business Degree requirements in the CAC Catalog, consult an academic advisor and review the Transfer Guides:

<http://aztransfer.com/college/>

**Special Awareness Requirements (0-9)**

Select AGEC courses to fulfill these requirements.

1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender)
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences or Transfer Electives, may also be used to satisfy the three (3) Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

**Core Requirements (22-26 Credits)**

ACC 201 Financial Accounting (3)

ACC 202 Managerial Accounting (3)

BUS 201 Legal Environment of Business (3)

BUS 208 Business Statistics (3)

ECN 201 Principles of Macroeconomics (3) also fulfills Social/Behavioral Science requirement

ECN 202 Principles of Microeconomics (3) also fulfills Social/Behavioral Science requirement

MAT 215 Math for Business Analysis (4)



**Electives (0-4)**

Select approved elective courses which transfer as "elective or better" to all three Arizona public universities. Consult the CEG. Students must complete a total of 60-64 credits to earn the Associate of Business Degree.






### Recommended Business Electives:

- ACC 121 Income Tax Fundamentals (3)  
 BUS 100 Introduction to Business (3)  
 BUS 260 Applied Business Seminar (3)  
 CIS 123 Introduction to Programming (3)  
 MAT 151 College Algebra, Standard (4)  

### Requirements for A. Bus. Degree (3)

Reading Competency: RDG 094 College Reading 

### Computer Competency (3):

- CIS 120 Survey of Computer Information Systems (3)   
 (Fulfilled by AGEC-B requirement)

### Other A. Bus. Degree Requirements

Some A. Bus. Degree majors require up to 16 credits of a Second Language to demonstrate proficiency. Many four-year degree programs require either a second semester or fourth semester level of a second language. CAC strongly encourages students to complete this requirement at CAC prior to transfer.

Check your university catalog, Transfer Guides at <http://aztransfer.com/college/> or meet with an academic advisor. Students may demonstrate proficiency by completion of coursework and/or a proficiency test.

Students undecided about their major are encouraged to complete a fourth semester of a second language. CAC offers Spanish, French, Sign Language and other Foreign Languages and Literatures. Contact an academic advisor for assistance.

Students must earn a grade of "C" or better in each A. Bus. Degree required course.

Students must earn a minimum of 20 credits from CAC which includes the AGEC-B requirements.

The Associate of Business Degree requires 60-64 credits.



## ASSOCIATE OF SCIENCE DEGREE (A.S.)

(60-64 Credits)

### Signal Peak & Superstition Mountain Campuses

The Associate of Science (A.S.) Degree suits students who plan to transfer to the university to earn a baccalaureate degree in Physical and Biological Science areas such as Agricultural Science, Allied Health, Animal Science, Astronomy, Athletic Training, Biology, Botany, Chemistry, Computer Science, Engineering, Microbiology, Physics, Plant and Soil Science, and Veterinary Science.

For a list of Common Courses associated with specific programs of study, go to the Common Course Matrix Archives and select the year you completed the course(s): <http://steeringcommittee.aztransfer.com/resources/ccm.html>

AGEC courses are transferable to all three Arizona public universities provided students earn a grade of "C" or better. Contact an academic advisor for assistance.

### AGEC-S Certificate (35-37 Credits)

The Associate of Science Degree requires the AGEC-Sciences general education block of 35-37 credits. The AGEC-S satisfies programs with rigorous mathematics and science requirements. The AGEC-S requires a minimum of MAT221 Analytical Geometry and Calculus I (4) or higher Math course, transferable to ASU, NAU and UofA, plus 32 credits from specific AGEC categories. Refer to the AGEC Course List in this catalog or the AGEC-Web:

<http://aztransfer.com/generaleducation/>

### General Education (35-37)

#### Written Communications (6 Credits)

- ENG 101 English Composition III (3)    
 ENG 102 English Composition IV (3)  

For the two categories directly below, choose courses from the equivalent category on the AGEC course list in the CAC catalog.

#### Arts and Humanities (6 Credits)

Select one Art (3) and one Humanities (3) AGEC course.

#### Social and Behavioral Sciences (6 Credits)

Select AGEC courses from two different disciplines.

#### Physical and Biological Sciences (8 Credits)

- BIO 181 General Biology I (4)   AND  
 BIO 182 General Biology II (4)  

OR



- CHM 151 General Chemistry I (4) AND  
 CHM 152 General Chemistry II (4)   
**OR**  
 PHY 121 University Physics I: Mechanics (4) AND  
 PHY 122 University Physics II: Electricity and  
 Magnetism (4)

### Mathematics (3-4 Credits)

- MAT 221 Analytical Geometry and Calculus I (4)   
 or higher

### Subject Options (6-8)

Based on your major, consult the Transfer Guides:  
<http://aztransfer.com/college/>  
 Students may select mathematics or science courses. Select  
 Mathematics courses above the first course in the calculus  
 sequence and/or Science courses from: Agriculture,  
 Astronomy, Biology, Botany, Chemistry, Engineering,  
 Environmental Science, Geology, Nutrition, Physical  
 Geography, Physics or Zoology.

### Special Awareness Requirements (0-9)

1. At least three semester credits of coursework in Intensive Writing and Critical Thinking
2. At least three semester credits of coursework in Ethnic/Race/Gender Awareness
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness

Note: Courses used in other areas, such as Communications, Arts and Humanities, Social and Behavioral Sciences or Transfer Electives may also be used to satisfy one of the three (3) Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

### Electives

Select approved elective courses which transfer as "elective or better" to all three Arizona public universities. Consult the CEG. Students must complete a total of 60-64 credits to earn the Associate of Science Degree.

### Requirements for A. S. Degree (3)

Reading Competency: RDG094 College Reading

#### Computer Competency (3):

- AGB 124 Microcomputers in Agriculture (3)  
**OR**  
 CIS 120 Survey of Computer Information Systems (3)   
**OR**

Transferable Computer Competency course  
 (Consult the Course Equivalency Guide to determine transferability to the three state public universities.)

### Other A. S. Degree Requirements

Some A.S. Degree majors require up to 16 credits of a Second Language to demonstrate proficiency. Many four-year degree programs require either a second semester or fourth semester level of a second language. CAC strongly encourages students to complete this requirement at CAC prior to transfer.

Check your university catalog, Transfer Guides at <http://aztransfer.com/college/> or meet with an academic advisor. Students may demonstrate proficiency by completion of coursework and/or a proficiency test.

Students who are undecided about their major are encouraged to complete a fourth semester of a second language. CAC offers Spanish, French, Sign Language and other Foreign Languages and Literatures. Contact an academic advisor for assistance.

Students must earn a grade of "C" or better in each A.S. Degree required course.  
 Students must earn a minimum of 20 credits from CAC which includes the AGECS requirements.

Associate of Science Degree requires 60-64 credits.





## ARIZONA GENERAL EDUCATION CURRICULUM (AGEC) 2013-2014

Completion of the AGECE or AGECE Certificate fulfills lower division General Education Requirements and will be fully applicable to the baccalaureate degree upon transfer to an Arizona public university. Three tracks are available: AGECE-Arts, AGECE-Business and AGECE-Science. All require completion of 35-37 transferable credits.

Consult an academic advisor to select courses to meet the AGECE requirements that may also fulfill program requirements in your chosen university major.

### Multiple-Use Course Guideline:

Students may use a course to fulfill an AGECE Category, such as the Social and Behavioral Sciences along with an AGECE Special Awareness Requirement Area, such as Intensive Writing. In addition, students may use the same course to fulfill certificate/degree core and/or elective requirements as well as CAC Requirements, i.e. Computer Competency course.

Students must earn the minimum credits required for each credential. For example, an A.A. Degree with an AGECE-A requires a minimum of 60-64 credits, including a minimum of 20 credits earned from CAC.

## AGECE (35-37 Credits)


### General Education

When fulfilling the AGECE requirements, follow the instructions carefully. For example, students selecting the AGECE-A must earn a minimum of one course in the Art Category and one course in the Humanities Category, i.e. ART 207 or ART208. Thus, the same Art course may not fulfill both the AGECE Arts and AGECE Humanities Categories (6-9 credit requirements).

### Written Communications (6 Credits)

- ENG101 English Composition III (3)   
 ENG102 English Composition IV (3) 



### Oral Communications (3 Credits)

- COM100 Fundamentals of Human Communication (3)   
 COM101 Interpersonal Communication (3)  
 COM202 Introduction to Group Communication (3)  
 COM206 Public Speaking (3)  
 COM263 Intercultural Communication (3)




*Students are encouraged to choose coursework from more than one discipline for both Arts and Humanities and Social and Behavioral Science categories.*

## Arts and Humanities (6-9 Credits)

### Arts (Minimum of 3 credits)

- ART100 Art Appreciation (3)  
 ART101 Two-Dimensional Design (3)  
 ART102 Three-Dimensional Design (3)  
 ART103 Beginning Jewelry and Metalwork (3)  
 ART105 Ceramics I (3)  
 ART207 Art History I (3)   
 ART208 Art History II (3)   
 EIT100 History of Rock n' Roll (3)  
 HMC250 Humanities in the Western World I (3)  
 HMC251 Humanities in the Western World II (3)  
 HMC252 Humanities in the Western World III (3)  
 LIT202 American Literature II (3)  
 MHL100 Music Appreciation (3)  
 MHL207 Survey of Jazz/Popular Music (3)  
 THE100 Theater Appreciation (3)  
 THE115 Introduction to Cinema (3)  
 THE116 Contemporary Cinema (3)

### Humanities (Minimum of 3 credits)

- AJS123 Ethics and the Administration of Justice (3)  
 ART207 Art History I (3)   
 ART208 Art History II (3)   
 EIT100 History of Rock n' Roll (3)  
 ENG205 Introduction to the Study of Language (3)  
 HIS101 U.S. History I (3)  
 HIS102 U.S. History II (3)  
 HIS103 History of Western Civilization I (3)  
 HIS104 History of Western Civilization II (3)  
 HIS108 Eastern Civilization—Beginnings to 1850 (3)  
 HIS201 Women in U.S. History (3)  
 HIS208 Eastern Civilization—1850 to Modern Times (3)  
 HMC250 Humanities in the Western World I (3)  
 HMC251 Humanities in the Western World II (3)  
 HMC252 Humanities in the Western World III (3)  
 HNR204 Honors Colloquium I (3)  
 HNR205 Honors Colloquium II (3)  
 HNR255 Leadership Development (3)  
 LIT101 Introduction to Literature (3)  
 LIT201 American Literature I (3)  
 LIT202 American Literature II (3)  
 LIT203 English Literature I (3)  
 LIT204 English Literature II (3)  
 LIT206 World Literatures (3)  
 LIT233 American Ethnic Literature (3)  
 LIT254A Literature and Film (3)  
 LIT256 Science Fiction Literature and Film (3)  
 LIT291 Children's Literature for Educators (3)  
 PHI101 Introduction to Philosophy (3)   
 PHI105 Introduction to Ethics (3)   
 PHI112 World Religions (3)



## Social and Behavioral Sciences (6-9 Credits)

Select courses from at least two disciplines.

- AGS122 Natural Resources and Conservation (3)
- AJS101 Introduction to Administration of Justice (3)
- AJS123 Ethics and the Administration of Justice (3)
- AJS225 Criminology (3)
- AJS270 Community Relations (3)
- ARH200 Principles of Archaeology (3)
- ASB101 Physical Anthropology and Archaeology: Bones, Stones, and Human Evolution (3)
- ASB102 Cultural Anthropology (3)
- ASB201 Indians of the Southwest (3)
- BUS123 Business Relations (3)
- BUS190 Principles of Management and Leadership (3)
- COM101 Interpersonal Communication (3)
- COM263 Intercultural Communication (3)
- ECE276 Child Development (3)
- ECN200 Contemporary Economic Issues (3)
- ECN201 Principles of Macroeconomics (3)
- ECN202 Principles of Microeconomics (3)
- EDU221 Introduction to Education (3)
- EDU222 Introduction to Special Education (3)
- EDU230 Cultural Values in Education (3)
- GEO101 Introduction to Cultural and Historical Geography (3)
- HIS101 U.S. History I (3)
- HIS102 U.S. History II (3)
- HIS105 Arizona History (3)
- HIS106 Mexican-American History (3)
- HIS107 African-American History I (3)
- MSC101 Media and Society (3)
- PEH101 Personal Health (3)
- PHI105 Introduction to Ethics (3)
- POS101 American Politics (3)
- POS104 Contemporary Issues in World Politics (3)
- POS220 U.S. and Arizona Constitutions (3)
- PSY101 Introduction to Psychology (3)
- PSY200 Social Psychology (3)
- PSY203 Developmental Psychology (3)
- PSY205 Personality and Social Adjustment (3)
- PSY277 Human Sexuality (3) *Cross Listed with SOC277*
- REC101 Recreation, Leisure, and the Quality of Life (3)
- SOC100 Introduction to Sociology (3)
- SOC102 Contemporary Issues in Society (3)
- SOC200 Racial and Ethnic Minorities (3)
- SOC203 Marriage and Family (3)
- SOC212 Gender in Society (3)
- SOC250 Family Violence (3)
- SOC277 Human Sexuality (3) *Cross Listed with PSY27*

## Physical and Biological Sciences (8 Credits)

Associate of Science Degrees have unique Physical or Life Science requirements. Students pursuing an Associate of Science Degree should consult their academic advisor and follow the Arizona Transfer Guide for their major. Refer to the AGEC-S requirements in this catalog.

- AGS101 World of Plants (4)
- AGS104 Agricultural Environmental Science (4)
- AGS106 Entomology (4)
- AGS221 Soil Science (4)
- AGS240 Plant Biology (4)
- AST101 Survey of Astronomy (4)
- BIO100 Biology Concepts (4)
- BIO109 Natural History of the Southwest (4)
- BIO156 Human Biology for Allied Health (4)
- BIO160 Introduction to Human Anatomy/Physiology (4)
- BIO181 General Biology I (4)
- BIO182 General Biology II (4)
- BIO201 Human Anatomy – Physiology I (4)
- BIO202 Human Anatomy – Physiology II (4)
- BIO205 Microbiology (4)
- CHM130 Fundamental Chemistry (4)
- CHM151 General Chemistry I (4)
- CHM152 General Chemistry II (4)
- CHM235 General Organic Chemistry I (4)
- CHM236 General Organic Chemistry II (4)
- ENV101 Environmental Science (4)
- GLG101 Physical Geology (4)
- GLG102 Historical Geology (4)
- GLG110 Environmental Geology (4)
- NTR141 Nutrition and Wellness (4)
- PHY100 Physical Universe (4)
- PHY111 College Physics I (4)
- PHY112 College Physics II (4)
- PHY121 University Physics I: Mechanics (4)
- PHY122 University Physics II: Electricity and Magnetism (4)





## Mathematics (3-4 Credits)

Associate of Business and Associate of Science Degrees have unique Mathematics requirements dependent on the major. Contact an academic advisor and follow the Transfer Guide for your major to determine the required Mathematics sequence. Refer to the AGEC-B and the AGEC-S requirements.

MAT141	College Mathematics, Standard (4)
MAT151	College Algebra, Standard (4) 📌
MAT162	Applied Statistics (3)
MAT182	Trigonometry with Algebra Review (4)
MAT187	Pre-Calculus (5) 📌
MAT201	Math for Elementary Teachers I (3)
MAT202	Math for Elementary Teachers II (3)
MAT211	Brief Calculus, Standard (4)
MAT212	Brief Calculus, Accelerated (3)
MAT215	Math for Business Analysis (4)
MAT221	Analytical Geometry and Calculus I (4) 📌
MAT231	Analytical Geometry and Calculus II (4) 📌
MAT241	Analytical Geometry and Calculus III (4) 📌
MAT262	Ordinary Differential Equations (3) 📌
MAT275	Modern Differential Equations (4) 📌

## Subject Options (Varies 0-8)

See specific AGEC requirements.

## Special Awareness Requirements (0-9 Credits)

Courses used in general education areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences, or Transfer Electives may also be used to satisfy the three (3) Special Requirements categories. A course may not be used to satisfy more than one Special Requirements category.

### Intensive Writing/Critical Inquiry

AGS122	Natural Resources and Conservation (3)
AJS225	Criminology (3)
ENG203	Advanced Composition (3)
HIS208	Eastern Civilization – 1850 to Modern Times (3)
HNR204	Honors Colloquium I (3) <b>AND</b>
HNR205	Honors Colloquium II (3)
	(Note: Must complete HNR204 and HNR205)
LIT201	American Literature I (3)
LIT202	American Literature II (3)
LIT203	English Literature I (3)
LIT204	English Literature II (3)
LIT233	American Ethnic Literature (3)
LIT254A	Literature and Film (3)
LIT256	Science Fiction Literature and Film (3)
LIT291	Children's Literature for Educators (3)
PHI105	Introduction to Ethics (3) 📌
PSY203	Developmental Psychology (3)
SOC200	Racial and Ethnic Minorities (3) 📌

## Cultural Awareness (Ethnic/Race/Gender)

ART207	Art History I (3) 📌
ART208	Art History II (3) 📌
ASB102	Cultural Anthropology (3)
ASB201	Indians of the Southwest (3)
COM263	Intercultural Communication (3)
EDU230	Cultural Values in Education (3)
ENG205	Introduction to the Study of Language (3)
GEO101	Introduction to Cultural /Historical Geography (3)
HIS105	Arizona History (3)
HIS106	Mexican-American History (3)
HIS107	African-American History I (3)
HIS108	Eastern Civilization–Beginning to 1850 (3)
HIS201	Women in U.S. History (3)
HMC250	Humanities in the Western World I (3)
HMC251	Humanities in the Western World II (3)
HMC252	Humanities in the Western World III (3)
LIT101	Introduction to Literature (3)
LIT201	American Literature I (3)
LIT202	American Literature II (3)
LIT206	World Literatures (3)
LIT233	American Ethnic Literature (3)
LIT291	Children's Literature for Educators (3)
MHL207	Survey of Jazz/Popular Music (3)
PSY277	Human Sexuality (3) <i>Cross Listed with SOC277</i>
SLG202	American Sign Language IV (4)
SOC200	Racial and Ethnic Minorities (3) 📌
SOC212	Gender in Society (3)
SOC277	Human Sexuality (3) <i>Cross Listed with PSY277</i>

## Global/International and Historical Awareness (3 Credits)

### Global/International Awareness

AGS122	Natural Resources and Conservation (3)
ART207	Art History I (3) 📌
ART208	Art History II (3) 📌
ASB102	Cultural Anthropology (3)
FRE201	Intermediate French I (4) 📌
FRE202	Intermediate French II (4) 📌
HIS103	History of Western Civilization I (3)
HIS104	History of Western Civilization II (3)
HIS107	African-American History I (3)
HIS108	Eastern Civilization–Beginning to 1850 (3)
HIS208	Eastern Civilization–1850 to Modern Times (3)
LIT206	World Literatures (3)
PHI112	World Religions (3)
POS104	Contemporary Issues in World Politics (3) 📌
SPA201	Intermediate Spanish I(4) 📌
SPA202	Intermediate Spanish II (4) 📌
THE100	Theater Appreciation (3)



### Historical Awareness

- ART207 Art History I (3) 
- ART208 Art History II (3) 
- ASB201 Indians of the Southwest (3)
- GEO101 Introduction to Cultural/ Historical Geography (3)
- HIS101 U.S. History I (3)
- HIS102 U.S. History II (3)
- HIS103 History of Western Civilization I (3)
- HIS104 History of Western Civilization II (3)
- HIS105 Arizona History (3)
- HIS106 Mexican-American History (3)
- HIS201 Women in U.S. History (3)
- HMC250 Humanities in the Western World I (3)
- HMC251 Humanities in the Western World II (3)
- HMC252 Humanities in the Western World III (3)
- MHL100 Music Appreciation (3)
- MHL207 Survey of Jazz/Popular Music (3)

See AGEC-Web for current information:

<http://aztransfer.com/generaleducation/>


**AGEC Course Designations 2014-2015 A** † See the Code Legend at the end of this grid.

See AGEC-Web for current information: <a href="http://aztransfer.com/generaleducation/">http://aztransfer.com/generaleducation/</a>			Core Areas					Awareness Areas			
Course #	Cr	Course Title	CM	MA	AH	SB	PBS	IW	CU	GI	HI
AGS 101	4	World of Plants					BS				
AGS 104	4	Agricultural Environmental Science					BS				
AGS 106	4	Entomology					BS				
AGS 122	3	Natural Resources and Conservation				SB		IW		GI	
AGS 221	4	Soil Science					BS				
AGS 240	4	Plant Biology					BS				
AJS 101	3	Introduction to Administration of Justice				SB					
AJS 123	3	Ethics and the Administration of Justice			HU	SB					
AJS 225	3	Criminology				SB		IW			
AJS 270	3	Community Relations				SB					
ARH 200	3	Principles of Archaeology				SB					
ART 100	3	Art Appreciation			AR						
ART 101	3	Two-Dimensional Design			AR						
ART 102	3	Three-Dimensional Design			AR						
ART 103	3	Beginning Jewelry and Metalwork			AR						
ART 105	3	Ceramics I			AR						
ART 207	3	Art History I			AH				CU	GI	HI
ART 208	3	Art History II			AH				CU	GI	HI
ASB 101	3	Physical Anthropology				SB					
ASB 102	3	Cultural Anthropology				SB			CU	GI	
ASB 201	3	Indians of the Southwest				SB			CU		HI
AST 101	4	Survey of Astronomy					PS				
BIO 100	4	Biology Concepts					BS				
BIO 109	4	Natural History of the Southwest					BS				
BIO 156	4	Human Biology for Allied Health					BS				
BIO 160	4	Introduction to Human Anatomy- Physiology					BS				
BIO 181	4	General Biology I					BS				
BIO 182	4	General Biology II					BS				
BIO 201	4	Human Anatomy-Physiology I					BS				
BIO 202	4	Human Anatomy-Physiology II					BS				
BIO 205	4	Microbiology					BS				
BUS 123	3	Business Relations				SB					
BUS 190	3	Principles of Management and Leadership				SB					
CHM 130	4	Fundamental Chemistry					PS				
CHM 151	4	General Chemistry I					PS				
CHM 152	4	General Chemistry II					PS				

= SUN Course



# DEGREES AND CERTIFICATES

## AGEC Course Designations 2014-2015 B † See the Code Legend at the end of this grid.

See AGEC-Web for current information: <a href="http://aztransfer.com/generaleducation/">http://aztransfer.com/generaleducation/</a>			Core Areas					Awareness Areas			
Course #	Ⓢ	Course Title	CM	MA	AH	SB	PBS	IW	CU	GI	HI
CHM 235	4	General Organic Chemistry I					PS				
CHM 236	4	General Organic Chemistry II					PS				
COM 100	3	Fundamentals of Human Communication	OR								
COM 101	3	Interpersonal Communication	OR			SB					
COM 202	3	Introduction to Group Communication	OR								
COM 206	3	Public Speaking	OR								
COM 263	3	Intercultural Communication	OR			SB			CU		
ECE 276	3	Child Development				SB					
ECN 200	3	Contemporary Economic Issues				SB					
ECN 201	3	Principles of Macroeconomics				SB					
ECN 202	3	Principles of Microeconomics				SB					
EDU 221	3	Introduction to Education				SB					
EDU 222	3	Introduction to Special Education				SB					
EDU 230	3	Cultural Values in Education				SB			CU		
EIT 100	3	History of Rock n' Roll			AH						
ENG 101	3	English Composition III	WR								
ENG 102	3	English Composition IV	WR								
ENG 203	3	Advanced Composition						IW			
ENG 205	3	Intro to the Study of Language			HU				CU		
ENV 101	4	Environmental Science					PS				
FRE 201	4	Intermediate French I								GI	
FRE 202	4	Intermediate French II								GI	
GEO 101	3	Intro to Cultural and Historical Geography				SB			CU		HI
GLG 101	4	Physical Geology					PS				
GLG 102	4	Historical Geology					PS				
GLG 110	4	Environmental Geology					PS				
HIS 101	3	U.S. History I			HU	SB					HI
HIS 102	3	U.S. History II			HU	SB					HI
HIS 103	3	History of Western Civilization I			HU					GI	HI
HIS 104	3	History of Western Civilization II			HU					GI	HI
HIS 105	3	Arizona History				SB			CU		HI
HIS 106	3	Mexican-American History				SB			CU		HI
HIS 107	3	African-American History				SB			CU	GI	
HIS 108	3	Eastern Civilization-Beginnings to 1850			HU				CU	GI	
HIS 201	3	Women in United States History			HU				CU		HI
HIS 208	3	Eastern Civilization-1850 to Modern Times (3)			HU			IW		GI	

= SUN Course





**AGEC Course Designations 2014-2015 C** † See the Code Legend at end of this grid.

See AGEWeb for current information: <a href="http://aztransfer.com/generaleducation/">http://aztransfer.com/generaleducation/</a>			Core Areas					Awareness Areas			
Course #	Cr	Course Title	CM	MA	AH	SB	PBS	IW	CU	GI	HI
HMC 250	3	Humanities in the Western World I			AH				CU		HI
HMC 251	3	Humanities in the Western World II			AH				CU		HI
HMC 252	3	Humanities in the Western World III			AH				CU		HI
HNR 204	3	Honors Colloquium I			HU						
HNR 205	3	Honors Colloquium II			HU						
HNR 204+ HNR 205	6	Honors Colloquium I and II						IW			
HNR 255	3	Leadership Development			HU						
LIT 101	3	Introduction to Literature			HU				CU		
LIT 201	3	American Literature I			HU			IW	CU		
LIT 202	3	American Literature II			AH			IW	CU		
LIT 203	3	English Literature I			HU			IW			
LIT 204	3	English Literature II			HU			IW			
LIT 206	3	World Literatures			HU				CU	GI	
LIT 233	3	American Ethnic Literature			HU			IW	CU		
LIT 254A	3	Literature and Film			HU			IW			
LIT 256	3	Science Fiction Literature and Film			HU			IW			
LIT 291	3	Children’s Literature for Educators			HU			IW	CU		
MAT 141	4	College Mathematics, Standard		MA							
MAT 151	4	College Algebra, Standard		MA							
MAT 162	3	Applied Statistics		MA							
MAT 182	4	Trigonometry with Algebra Review		MA							
MAT 187	5	Pre-Calculus		MA							
MAT 201	3	Math for Elementary Teachers I		MA							
MAT 202	3	Math for Elementary Teachers II		MA							
MAT 211	4	Brief Calculus, Standard		MA							
MAT 212	3	Brief Calculus, Accelerated		MA							
MAT 215	4	Math for Business Analysis		MA							
MAT 221	4	Analytical Geometry and Calculus I		MA							
MAT 231	4	Analytical Geometry and Calculus II		MA							
MAT 241	4	Analytical Geometry and Calculus III		MA							
MAT 262	3	Ordinary Differential Equations		MA							
MAT 275	4	Modern Differential Equations		MA							
MHL 100	3	Music Appreciation			AR						HI
MHL 207	3	Survey of Jazz/Popular Music			AR				CU		HI
MSC 101	3	Media and Society				SB					

= SUN Course



# DEGREES AND CERTIFICATES

## AGEC Course Designations Grid 2014-2015 D † See Code Legend at the end of this grid.

See AGEC-Web for current information: <a href="http://aztransfer.com/generaleducation/">http://aztransfer.com/generaleducation/</a>			Core Areas					Awareness Areas			
Course #	ꠔ	Course Title	CM	MA	AH	SB	PBS	IW	CU	GI	HI
NTR 141	3	Nutrition and Wellness					BS				
PEH 101	3	Personal Health				SB					
PHI 101	3	Introduction to Philosophy			HU						
PHI 105	3	Introduction to Ethics			HU	SB		IW			
PHI 112	3	World Religions			HU					GI	
PHY 100	4	Physical Universe					PS				
PHY 111	4	College Physics I					PS				
PHY 112	4	College Physics II					PS				
PHY 121	4	University Physics I: Mechanics					PS				
PHY 122	4	University Physics II: Electricity & Magnetism					PS				
POS 101	3	American Politics				SB					
POS 104	3	Contemporary Issues in World Politics				SB				GI	
POS 220	3	U.S. and Arizona Constitutions				SB					
PSY 101	3	Introduction to Psychology				SB					
PSY 200	3	Social Psychology				SB					
PSY 203	3	Developmental Psychology				SB		IW			
PSY 277	3	Human Sexuality (Cross Listed with SOC277)				SB			CU		
REC 101	3	Recreation, Leisure, and the Quality of Life				SB					
SLG 202	4	American Sign Language IV							CU		
SOC 100	3	Introduction to Sociology				SB					
SOC 102	3	Contemporary Issues in Society				SB					
SOC 200	3	Racial and Ethnic Minorities				SB		IW	CU		
SOC 203	3	Marriage and the Family				SB					
SOC 212	3	Gender in Society				SB			CU		
SOC 250	3	Family Violence				SB					
SOC 277	3	Human Sexuality (Cross Listed with PSY277)				SB			CU		
SPA 201	4	Intermediate Spanish I								GI	
SPA 202	4	Intermediate Spanish II								GI	
THE 100	3	Theatre Appreciation			AR					GI	
THE 115	3	Introduction to Cinema			AR						
THE 116	3	Contemporary Cinema			AR						

† AH=Arts/Humanities; AR=Arts; BS=Biological Sciences; CL=Cross Listed; CM=Communications; CU=Cultural Awareness (Ethnic/Race/Gender); GI=Global/International; HI=Historical; HU=Humanities; IW=Intensive Writing; MA=Mathematics; OR=Oral Communications; PBS=Physical/Biological Sciences; PS=Physical Sciences; SB=Social/Behavioral Sciences; ꠔ=SUN Course; WR=Written Communications.

\*HNR 204 + HNR 205 earned with grade of "C" or better fulfills IW requirement.



## Other Degree Information for Central Arizona College

CAC offers two other types of associate degrees: Associate of Applied Science (A.A.S.) and the Associate of General Studies (A.G.S.). These degrees prepare students to directly enter the workforce, to pursue a Bachelor of Applied Science Degree, or to select another degree path to a four-year college/university. Students who select a four-year bachelor's degree goal should earn an AGEC Certificate. The AGEC-Art, AGEC-Business and AGEC-Science Certificates align with many programs of study. Select your target four-year college/university, then consult an academic advisor. See the Transfer Guides: <http://aztransfer.com/college/>

## ASSOCIATE OF APPLIED SCIENCE DEGREE (A.A.S.) (64 Credits)



### Signal Peak Campus

The Associate of Applied Science (A.A.S.) Degree is appropriate for students who plan to directly enter the workforce of their chosen degree. Some state universities permit students with an A.A.S. degree to transfer most or all of their credits to a university. Students may also choose to pursue a Bachelor of Applied Science (B.A.S.) Degree. Consult your CAC academic advisor and the Transfer Guides: <http://aztransfer.com/college/>

For a list of Arizona Common Courses associated with specific programs of study, go to the Common Course Matrix Archives and select the current year or the year the course was completed; See: <http://steeringcommittee.aztransfer.com/resources/ccm.html>

## General Education (19-23 Credits)

### Written Communications (3 Credits)

ENG 101 English Composition III (3)    
OR

ENG 121 Applied Technical Writing (3)

### Oral Communications (3 Credits)

Select a COM course, or an AGEC course if you plan to transfer to a bachelor's degree program.

For the following two categories: 1) Arts and Humanities and 2) Social and Behavioral Sciences, the required courses must represent two different departmental areas from each category. For example, students may not take a History course to fulfill their Arts and Humanities requirement if they are using another History course to complete their Social and Behavioral Sciences requirement.

### Arts and Humanities (3 Credits)

Select courses numbered 100 or above in the following areas: Art, Humanities, Literature, Music, Philosophy and Theatre. Students may also choose any course from the Arts or Humanities AGEC lists, especially those areas which suit major or minor areas of study.

### Social and Behavioral Sciences (3 Credits)

Select courses numbered 100 or above in the following areas: Anthropology, Economics, Geography, History, Political Science, Psychology and Sociology. Students may also choose any course from the Social and Behavioral Science AGEC list, especially those areas which suit major or minor areas of study.

### Physical and Biological Sciences (4 Credits)

Select courses numbered 100 or above from biological or physical science disciplines, or any course from the Biological and Physical Lab Science AGEC list, especially those areas which suit major or minor areas of study.

### Mathematics (3-4 Credits)

Select a college-level Mathematics course  
BUS 101 Business Mathematics (3)

OR

MAT 101 Essential Mathematics (4) or higher

## Core Requirements and Electives (41 or More Credits)

The number of credits required depends on the chosen major. See the specific A.A.S. Degree programs.

### Requirements for A.A.S. Degree (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading 

### Computer Competency (3):

AGB124 Microcomputers in Agriculture (3)

OR

CIS110 Fundamentals of Computer Literacy (3) or higher

OR

Transferable Computer Competency course (Consult the CEG.)

Students intending to transfer to a B.A.S. Degree or other bachelor's degree are advised to select transferable courses.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

The A.A.S. Degree requires a minimum of 64 credits.



**ASSOCIATE OF GENERAL STUDIES  
DEGREE (A.G.S.)  
(64 Credits)**

**Signal Peak Campus  
Superstition Mountain Campus**

The Associate of General Studies (A.G.S.) Degree is appropriate for students who desire flexibility to select courses to build a degree and who do not plan to transfer. However, choosing the A.G.S. degree and fulfilling the Arizona General Education Curriculum (AGEC) requirements provides the opportunity for students to attend an Arizona public university and to transfer the 35 credit AGEC block.

All students should consult an academic advisor and the Transfer Guides for Arizona State University, Northern Arizona University, and the University of Arizona in the major field for the bachelor degree. For more information, go to: <http://aztransfer.com/college/>

For a list of Common Courses associated with specific programs of study, go to the Common Course Matrix Archives and select the current year or the year you completed the course(s): <http://steeringcommittee.aztransfer.com/resources/ccm.html>

Upon completion of the A.G.S. Degree with an AGEC, students must complete both the A.G.S. Degree completion form and the AGEC Certificate Completion form.

**General Education (29-30 Credits)**

**Written Communications (3 Credits)**

ENG 101 English Composition III (3)  

*Note: The AGEC Certificate requires 6 credits: ENG 101 English Composition III (3) and ENG 102 English Composition IV (3).*

**Oral Communications (3 Credits)**

Select a COM course applicable to your designated degree.

**Arts and Humanities (6 Credits)**

Select courses numbered 100 or above in the following areas: Art, Humanities, Literature, Music, Philosophy and Theatre. Students may also choose any course from the Arts or Humanities AGEC lists, especially those areas which suit major or minor areas of study. One Art (3) and one Humanities (3) course is required.

**Social and Behavioral Sciences (6 Credits)**

Select courses numbered 100 or above in the following areas:

*Anthropology, Economics, Geography, History, Political Science, Psychology and Sociology. Students may also choose any course from the Social and Behavioral Science AGEC list, especially those areas which suit major or minor areas of study. Select courses from two different disciplines.*

**Physical and Biological Sciences (8 Credits)**

Select courses numbered 100 or above from biological or physical science, or any course from the Physical and Biological Sciences AGEC list, especially those areas which suit major or minor areas of study.

**Mathematics (3-4 Credits)**

BUS 101 Business Mathematics (3)

**OR**

MAT 101 Essential Mathematics (4) or higher

**Electives (30-31) Credits**

Select college-level courses numbered 100 or above to meet 64 credit minimum requirement. Students electing to earn the AGEC-A to prepare for transfer to a four-year institution are strongly encouraged to complete additional coursework in the following areas: English and Mathematics.

**Requirements for A.G.S. Degree (4)**

PAC or DAN Course (1)

Reading Competency: RDG 094 College Reading 

**Computer Competency (3):**

AGB 124 Microcomputers in Agriculture (3)

**OR**

CIS 110 Fundamentals of Computer Literacy (3) or higher

**OR**

Transferable Computer Competency course (Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

The A.G.S. Degree requires 64 credits.







## COMMON STUDENT LEARNING OUTCOMES (CSLOs) for Central Arizona College

### CAC College Policy 402 Revised 09/18/2012

The College shall strive to improve student success and academic achievement by providing quality education which encompasses continuous improvement in teaching and learning. The primary focus will be on the learning process that adds value to the learners.

Common Student Learning Outcomes indicate the comprehensive skills, abilities, attitudes and knowledge necessary for being a productive and educated citizen in the 21<sup>st</sup> century. CAC graduates attain these outcomes through cumulative quality learning experiences. The four Common Student Learning Outcomes are:

1. **Cultural and Civic Engagement** – Participate in diverse environments while demonstrating global citizenship and social consciousness
2. **Integrative Knowledge** – Identify, comprehend, apply and synthesize facts, concepts, theories and practices across broad and specialized knowledge areas
3. **Personal and Professional Skills** – Demonstrate skills which enhance personal and professional development
4. **Reasoning Skills** – Inquire and analyze to solve problems, draw logical conclusions, or create innovative ideas

The Governing Board expects the faculty, in conjunction with the instructional administration, to establish Learning Outcomes for assessing student achievement.

1. Learning Outcomes are statements describing essential, measurable learning that students achieve and can reliably demonstrate at the end of a course or program.
2. The Common Student Learning Outcome statements are the basis for student performance criteria used to evaluate the level of student achievement.

## CERTIFICATES

Certificate programs prepare students for entry-level employment opportunities and some build toward a state of Arizona General Education Curriculum (AGEC) Certificate or a CAC A.A.S. or A.G.S. Degree. Full-time students can complete most certificate programs in one or two semesters.

In addition to offering advanced training or building foundations for future credentials, many certificates build toward an A.A.S. Degree which transfers to the state universities and other higher education institutions.

In Arizona, the public universities support the AAS to BAS Pathway where students may earn 75 credits at CAC and complete a 120 credit baccalaureate degree by earning the last 45 credits at the university/four-year college.

Certificates require the following:

- Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.
- Students must complete one-third of the certificate credits from CAC.

To view the Certificates and Degrees available at CAC, consult the Program of Study list in this catalog.



**Arizona General Education Curriculum for the Arts (AGEC-A Certificate) (35-36 Semester Credits)**

**District-Wide**

The Arizona General Education Curriculum focused on the Arts (AGEC-A) is a 35 semester credit block that fulfills the lower division general education requirements of liberal arts majors (e.g., social science, fine arts, humanities). The AGEC-A requires a minimum of MAT141 or higher plus 32 credits. The AGEC block transfers to any Arizona public or tribal community college and to the three Arizona public universities. Students who intend to transfer into liberal arts majors should select the AGEC-A.

**General Education (35-36)**

**Subject Area Requirements**

An approved AGEC-A, together with the number of courses and number of semester credits, must contain the following Subject Areas. Select only AGEC courses.

**Written Communications (6 credits)**

ENG 101 English Composition III (3) ENG 1101  
ENG 102 English Composition IV (3) ENG 1102

**Oral Communications (3 credits)**

Select an AGEC course.

For the following two categories, select a total of 15 credits.

**Arts and Humanities (6-9 credits)**

Select a minimum of one Art (3) and one Humanities (3) AGEC course.

**Social and Behavioral Sciences (6-9)**

Select AGEC courses from at least two different disciplines.

**Physical and Biological Sciences (8)**

Select AGEC courses with a laboratory component.

**Mathematics (3-4)**

MAT 141 College Mathematics, Standard (4) or higher

**Subject Options (0-6)**

Based on your major, review the specific A.A. Degree requirements in the CAC catalog, consult an academic advisor, and see the Transfer Guides at <http://aztransfer.com/college/>

**Special Awareness Requirements (0-9 Credits)**

Select AGEC courses to fulfill these requirements.

1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender)
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences or Transfer Electives may also be used to satisfy the three Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

Note: Some Transfer Articulation Agreements require a specific number of credits in the Arts and Humanities or the Social and Behavioral Sciences categories. Refer to the officially published TAG, TAP, CAC2NAU or other articulation pathway document for details and consult an advisor.

Students must earn a grade of "C" or better in each course. Students must earn at least one-third of the AGEC-A Certificate credits from CAC.





## Arizona General Education Curriculum for Business (AGEC-B Certificate) (35-36 Semester Credits)

**Aravaipa, Maricopa, San Tan, Signal Peak and Superstition Mountain Campuses**

### General Education (35-36)

The Arizona General Education Curriculum focused on Business (AGEC-B) is a 35 semester credit block that fulfills the lower division general education requirements of many business programs and other programs that articulate with the Associate of Business Degree. The block transfers to any Arizona public or tribal community college, to the three Arizona public universities, and other higher education institutions. The AGEC-B requires a minimum of Brief Calculus plus 32 credits from specific AGEC categories.

### Subject Area Requirements

An approved AGEC-B, together with the number of courses and number of semester credits, must contain the following Subject Areas. Select AGEC courses only.

#### Written Communications (6)

ENG 101 English Composition III (3) ENG 1101  
ENG 102 English Composition IV (3) ENG 1102

#### Oral Communications (3)

*Select an AGEC course.*

For the following two categories, select a total of 15 credits.

#### Arts and Humanities (6-9)

*Select a minimum of one Art (3) and one Humanities (3) AGEC course.*

#### Social and Behavioral Sciences (6-9)

*Select AGEC courses from at least two different disciplines.*

#### Physical and Biological Sciences (8)

*Select AGEC courses with a laboratory component.*

#### Mathematics (3-4)

MAT 211 Brief Calculus (4) or higher

### Computer Information Systems (3)

CIS 120 Survey of Computer Information Systems (3)

CIS 1120

### Subject Options (0-3)

Based on your major, review the specific Associate of Business Degree requirements in the CAC Catalog, consult an academic advisor and see the Transfer Guides at <http://aztransfer.com/college/>

### Special Awareness Requirements (0-9)

*Select AGEC courses to fulfill these requirements.*

1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender)
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences or Transfer Electives may also be used to satisfy the three Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

Note: Some Transfer Articulation Agreements require a specific number of credits in the Arts and Humanities or the Social and Behavioral Sciences categories. Refer to the officially published TAG, TAP, CAC2NAU or other articulation pathway document for details and consult an advisor.

Students must earn a grade of "C" or better in each course. Students must earn at least one-third of the AGEC-B Certificate credits from CAC.





**Arizona General Education Curriculum for Science (AGEC-S Certificate) (35-37 Semester Credits)**

**Aravaipa, San Tan, Signal Peak and Superstition Mountain Campuses**

**General Education**

The Arizona General Education Curriculum focused on the Sciences (AGEC-S) is a 35-37 semester credit block that fulfills the lower division general education requirements of many science programs and other programs that articulate with the Associate of Science Degree. The block transfers to any Arizona public or tribal community college, to the three Arizona public universities, and other higher education institutions. The AGEC-S requires a minimum of Analytical Geometry and Calculus I plus 32 credits from specific AGEC categories, including rigorous science requirements.

**Subject Area Requirements**

An approved AGEC-S, together with the number of courses and number of semester credits, must contain the following Subject Areas. Select AGEC courses only.

**Written Communications (6)**

- ENG 101 English Composition III (3) ENG 1101
- ENG 102 English Composition IV (3) ENG 1102

**Arts and Humanities (6)**

Select one Art (3) and one Humanities (3) AGEC course.

**Social and Behavioral Sciences (6)**

Select AGEC courses from at least two different disciplines.

**Physical and Biological Sciences (8)**

- BIO 181 General Biology I (4) BIO 1181 AND
- BIO 182 General Biology II (4) BIO 1182
- OR**
- CHM 151 General Chemistry I (4) CHM 1151 AND
- CHM 152 General Chemistry II (4) CHM 1152
- OR**
- PHY 121 University Physics I: Mechanics (4) PHY 1121 AND
- PHY 122 University Physics II: Electricity and Magnetism (4) PHY 1131

**Mathematics (3-4)**

- MAT 221 Analytical Geometry and Calculus I (4) or higher MAT 2220

**Subject Options (6-8 credits)**

Based on your major, consult the Transfer Guide at <http://aztransfer.com/college> and select mathematics courses above the first course in the calculus sequence and/or Science courses from: Agriculture, Astronomy, Biology, Botany, Chemistry, Environmental Science, Geology, Physical Geography, Nutrition, Physics or Zoology.

**Special Awareness Requirements (0-9)**

Select AGEC courses to fulfill these requirements.

- At least three semester credits of coursework in Intensive Writing and Critical Inquiry
- At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender)
- At least three semester credits of coursework in Global/International Awareness or Historical Awareness

Note: Courses used in other areas, such as Communications, Arts and Humanities, Social and Behavioral Sciences or Transfer Electives may also be used to satisfy the three Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

Note: Some Transfer Articulation Agreements require a specific number of credits in the Arts and Humanities or the Social and Behavioral Sciences categories. Refer to the officially published TAG, TAP, CAC2NAU or other articulation pathway document for details and consult an advisor.

Students must earn a grade of "C" or better in each course. Students must earn at least one-third of the AGEC-S Certificate credits from CAC.







## PROGRAMS OF STUDY

### Accounting

Accounting A.A.S. (61)  
Accounting Certificate (62)

### Administration of Justice

Administration of Justice Studies A.A. (62)  
Administration of Justice A.A.S. (63)  
Administration of Justice Certificate (64)

### AGEC

AGEC-Arts Certificate (56)  
AGEC-Business Certificate (57)  
AGEC-Science Certificate (58)

### Agriculture

Agriculture A.A.(65)  
Agriculture A.S. (66)  
Agriculture Business Certificate (67)  
Agriculture General A.A.S. (68)  
Agriculture General Certificate (69)

### Animal Science

Equine Management and Training A.A.S. (69)  
Equine Management and Training Certificate (70)

### Biology

Biotechnology A.S. (71)

### Business

Business A.A.S. (72)  
Business Certificate (73)  
Management Certificate (74)  
Hotel and Restaurant Management A.A.S. (74)  
Hotel and Restaurant Management  
Certificate (76)  
Recreation Management Certificate (128)  
See **Sports and Fitness**

### Chemistry

Chemistry A.S. (76)

### Communications

Communication Skills for the Professional  
Certificate (77)  
Communication Studies Certificate (78)

### Computer

Application Development and Web Design  
Certificate (78)  
Computer Aided Design Certificate - See **Technology**

Computer Applications for Business Users  
Certificate (79)  
Computer Programming A.A.S. (79)  
Computer Programming Certificate (80)  
Geographic Information Systems A.A.S. (80)  
GIS Drafting and Mapping Certificate (81)  
Microcomputer Business Applications A.A.S. (82)  
Microcomputer Business Applications Specialist  
Certificate (82)  
Network Administration Certificate (83)  
Network Systems Administration A.A.S. (83)

### Creative Arts

Artist and Venue Management A.A.S. (84)  
Artist and Venue Management Certificate (85)  
Live Audio and Lighting A.A.S. (85)  
Live Audio and Lighting Certificate (86)  
Popular Music Performance A.A.S. (87)  
Popular Music Performance Certificate (87)  
Recording Engineering A.A.S. (88)  
Recording Engineering Certificate (89)  
Fine Arts A.A. (89)  
Graphic Design A.A.S. (90)

### Culinary Arts

Baking and Pastry Certificate (91)  
Culinary Arts A.A.S. (92)  
Culinary Arts I Certificate (93)  
Culinary Arts II Certificate (94)

### Diesel/Heavy Equipment

Diesel and Heavy Equipment Technology A.A.S. (94)  
Diesel and Heavy Equipment Technology Certificate (95)  
Heavy Equipment Operator A.A.S.(96)  
Heavy Equipment Operator Certificate (97)

### Education

Early Childhood Education – Family Childcare  
A.A.S. (98)  
Early Childhood Education – Family Childcare  
Certificate (98)  
Early Childhood Education – Infant/Toddler A.A.S. (99)  
Early Childhood Education – Infant/Toddler  
Certificate (99)  
Early Childhood Education – Management A.A.S. (100)  
Early Childhood Education – Management  
Certificate (101)  
Early Childhood Education – Preschool A.A.S.(101)  
Early Childhood Education – Preschool Certificate (102)  
Elementary Education A.A.E.E. (103)

### Emergency Medical Services

Basic EMT Certificate (105)  
Critical Care for Paramedics Certificate (105)  
Paramedicine A.A.S. (106)



## **Fire Services**

Driver Operator Certificate (107)  
Fire Officer 1 Certificate (108)  
Firefighter Operations Certificate (108)  
Fire Science Technology A.A.S. (109)  
Wildland Firefighter I Certificate (110)

## **Geographic Information Systems**

See Computer

## **Geology and Planetary Science**

Geology and Planetary Science A.S. (110)

## **Health Careers Center**

Clinical Laboratory Assistant Certificate (111)  
Coding and Reimbursement Certificate (112)  
Community Public Health A.S. (112)  
Health Information Technology A.A.S.(113)  
Massage Therapy A.A.S. (114)  
Massage Therapy Certificate (115)  
Medical Assistant A.A.S. (116)  
Medical Assistant Certificate (117)  
Pharmacy Technician Certificate (118)

## **Manufacturing**

Field Programmable Gate Array (FPGA) Certificate (118)  
LabVIEW Programming Certificate (119)  
Manufacturing Electronics Certificate (119)  
Manufacturing Engineering A.A.S.(119)  
Nanofabrication Technology A.A.S. (120)

## **Nutrition and Dietetics**

Community Nutrition Worker Certificate (121)  
Diabetes Care and Education Certificate (122)  
Dietary Manager Training Program Certificate (122)  
Dietetic Technician A.A.S. (123)  
Nutrition and Health Promotion Certificate (124)

## **Renewable Energy Technology**

Biofuels Technician Certificate (124)  
Renewable Energy Technology A.A.S. (125)  
Solar Photo Voltaic Technician Certificate (126)

## **Sports and Fitness**

Athletic Studies A.A. (126)  
Group Fitness Instructor Certificate (127)  
Human Performance Certificate (128)  
Recreation Management Certificate (128)  
Sports Information Certificate (129)  
Sports Management A.A.S. (129)

## **Technology**

Computer Aided Design Certificate (130)  
Welding Technology A.A.S. (130)  
Welding Certificate (131)

## **PROGRAMS WITH SPECIAL REQUIREMENTS**

The following degrees and certificates are also offered at Central Arizona College; however, they have special requirements which must be fulfilled before enrollment. Please see the individual listing for specific information.

## **Corrections**

Advanced Corrections Certificate (133)  
Corrections A.A.S. (133)

## **Diesel/Heavy Equipment**

Heavy Equipment Mechanic's Apprenticeship Program Certificate (134)  
John Deere Construction and Forestry Equipment Technology A.A.S. (135)  
Operator's Apprenticeship Program (AGC) Certificate (135)

## **Health Careers**

Nursing A.A.S. (136)  
Radiologic Technology A.A.S. (137)



## ACCOUNTING

### ACCOUNTING A.A.S.

**Aravaipa, Maricopa, Signal Peak and Superstition Mountain Campuses**

#### Total Credits: 65

The Accounting Degree prepares students for entry-level accounting positions. This degree is not designed for students planning to transfer to a university. Students interested in pursuing a Baccalaureate Degree may consider the Associate of Business Degree.

#### Recommended Proficiencies

A solid background in reading, math, and analytical skills is recommended.

#### General Education Requirements (19-23)

##### Written Communications (3)

ENG101 English Composition III (3) (Recommended)  
ENG121 Applied Technical Writing (3)

##### Oral Communications (3)

Select a COM course, or an AGEC course if you plan to transfer to earn a bachelor's degree.

##### Arts and Humanities (3)

Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGEC course.

##### Social and Behavioral Sciences (3)

ECN200 Contemporary Economic Issues (3)   
ECN201 Principles of Macroeconomics (3)   
ECN202 Principles of Microeconomics (3) **OR**  
Select a Social and Behavioral Science AGEC course.

##### Physical and Biological Sciences (4)

Select a Biological and Physical Science course numbered 100 or above, or an AGEC Biological and Physical Lab Science course.

##### Mathematics (3-4)

Select a college-level Mathematics course  
BUS101 Business Mathematics (3) (Recommended) **OR**  
MAT101 Essential Mathematics (4) or higher

#### Core Requirements (39)

ACC121 Income Tax Fundamentals (3)  
ACC201 Financial Accounting (3)\*   
ACC202 Managerial Accounting (3)   
ACC222 Payroll Accounting (3)  
ACC226 Accounting with QuickBooks Pro (3)  
ACC227 Accounting with Peachtree Complete (3)  
BUS100 Introduction to Business (3)  
BUS123 Business Relations (3)  
BUS201 Legal Environment of Business (3)  
BUS207 Business Communications (3)  
CBA133A Spreadsheet Applications – Excel (3)  
CBA133B Advanced Spreadsheet Applications Excel (3)  
CIS120 Survey of Computer Information Systems (3)  
 CIS 1120

\*Students may be advised to complete ACC100 prior to completing ACC201.

#### Electives (6)

Select electives from the following areas to total a minimum of 64 credits to complete the degree.

ACC Accounting  
AGB Agriculture Business  
BUS Business  
CBA Computer Business Applications  
CIS Computer Information Systems  
ECN Economics  
HNR Honors  
HRM Hospitality Management  
REA Real Estate

#### Other Requirements (4)

PAC or DAN Course (1)  
Reading Competency: RDG094 College Reading

#### Computer Competency (3):

CIS120 Survey of Computer Information Systems (3)   
(Fulfilled in Core Requirements)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must complete at least 20 credits from CAC.

This A.A.S. Degree requires 65 semester credits.



## ACCOUNTING CERTIFICATE

*District-Wide*




### Total Credits: 18

The Accounting Certificate prepares individuals for entry-level positions in accounting or bookkeeping.

### Recommended Proficiencies

Students should be able to identify and solve basic business problems in operations, finance and accounting, handle business data and human relations.

### Core Requirements (18)

- ACC121 Income Tax Fundamentals (3)
- ACC201 Financial Accounting (3)\* 
- ACC202 Managerial Accounting (3) 
- ACC226 Accounting with QuickBooks Pro (3)
- CIS120 Survey of Computer Information Systems (3) 
- ACC222 Payroll Accounting (3)

OR

- ACC227 Accounting with Peachtree Complete ® (3)

*\*Students may be advised to complete ACC100 prior to completing ACC201.*

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.



## ADMINISTRATION OF JUSTICE

### ADMINISTRATION OF JUSTICE STUDIES A.A.





*District-Wide*

### Total Credits: 60-64

The Administration of Justice Studies A.A. Degree academically prepares students to transfer to an accredited university to pursue a career in local and federal law enforcement, the court system, corrections or probation.

### General Education Requirements AGEC-A (35-36)

#### Written Communications (6)

- ENG101 English Composition III (3)  
- ENG102 English Composition IV (3)  

#### Oral Communications (3)

Select an AGECE course.






*For the following two categories, for each category select courses from different disciplines to total 15 credits:*

#### Arts and Humanities (6-9)

Select an AGECE Art course.

- AJS123 Ethics and the Administration of Justice (3)  
*(Also fulfills Core Requirement)*

#### Social and Behavioral Sciences (6-9)


- SOC100 Introduction to Sociology (3)  
- PSY101 Introduction to Psychology (3)  
- AJS101 Introduction to Administration of Justice (3)   
*(Also fulfills Core Requirement)*

*Or select an AGECE course.*

#### Physical and Biological Sciences (8)

Select AGECE courses with a laboratory component.

#### Mathematics (3-4)

- MAT141 College Mathematics, Standard (4)  or higher





### Subject Options (0-6)

Based on your major, review the specific A.A. Degree requirements in the CAC catalog, consult an academic advisor and see the Transfer Guides at [http:// aztransfer.com/college/](http://aztransfer.com/college/)

### Special Awareness Requirements (0-9)

Select AGEC courses to fulfill these requirements:

1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry (*Fulfilled by AJS225*).
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender).
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness.

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences, or Transfer Electives may also be used to satisfy requirements in the three Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

### Core Requirements (18)

- AJS101 Introduction to Administration of Justice (3)   
*(Also fulfills Social and Behavioral Sciences requirement)*
- AJS123 Ethics and the Administration of Justice (3)   
*(Also fulfills Humanities requirement)*
- AJS209 Substantive Criminal Law (3)
- AJS225 Criminology (3) *IW*
- AJS230 The Police Function (3)
- AJS260 Procedural Criminal Law (3)

### Electives (6-9)

Select AJS prefix course electives to meet the 60-64 credit Degree requirement.

### Other Requirements (3)

Reading Competency: RDG094 College Reading

### Computer Competency (3):

- AGB124 Microcomputer in Agriculture
- CIS120 Survey of Computer Information Systems

### Other A.A. Degree Requirements

Some A.A. Degrees require up to 16 credits of a Second Language to demonstrate proficiency. Many four-year degrees require either a second semester or fourth semester level of a second language and strongly encourage students to complete this requirement at the community college prior to transfer.

Check your university catalog, Transfer Guides at [http:// aztransfer.com/college/](http://aztransfer.com/college/) or meet with an academic advisor. Students may demonstrate proficiency by completion of coursework and/or a proficiency test.

Students undecided about their major are encouraged to complete a fourth semester of a second language. CAC offers Spanish, French, Sign Language and other Foreign Languages and Literatures. Contact an academic advisor for assistance.

Students must earn a grade of “C” or better in each A.A. degree required course.

Students must earn a minimum of 20 credits from CAC which includes the AGEC-A requirements.

The Administration of Justice Studies A.A. Degree requires 60-64 semester credits.

## ADMINISTRATION OF JUSTICE A.A.S.

**Aravaipa, Maricopa, San Tan, Signal Peak & Superstition Mountain Campuses and Casa Grande and Corporate Centers**

### Total Credits: 65

The Administration of Justice Studies A.A.S. Degree prepares students for professional careers in law enforcement, corrections, parole, probation, the judiciary and juvenile social work.

### General Education Requirements (25)

#### Written Communications (6)

- ENG101 English Composition III (3)
- ENG102 English Composition IV (3)

#### Oral Communications (3)

Select a COM course, or an AGEC course if you plan to transfer to earn a bachelor's degree.

#### Arts and Humanities (3)

- AJS123 Ethics and the Administration of Justice (3)   
*(Recommended)*
- Or select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an Arts or Humanities AGEC course.



**Social Behavioral Sciences (6)**

SOC100 Introduction to Sociology (3) (Recommended)

OR

PSY101 Introduction to Psychology (3) (Recommended)

OR

Select Anthropology, Economics, Geography, History, Political Science, Psychology or Sociology courses numbered 100 or above, or AGECE courses.

**Physical and Biological Sciences (4)**

Select a Biological or Physical Science course numbered 100 or above, or a Biological and Physical Lab Science AGECE course.

**Mathematics (3)**

MAT101 Essential Mathematics (4) or higher

OR

BUS101 Business Mathematics (3)

**Core Requirements (18)**

AJS101 Introduction to Administration of Justice (3)

AJS123 Ethics and the Administration of Justice (3)

AJS209 Substantive Criminal Law (3)

AJS225 Criminology (3)

AJS230 The Police Function (3)

AJS260 Procedural Criminal Law (3)

**AJS Electives (12)**

Select 12 credits from courses with the AJS prefix.

**General Electives (6)**

Credit may be granted for prior Police training upon departmental approval, including credit for AJS Core and Elective Requirements. See the CEG for University transferability status.

**Other Requirements (4)**

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading

**Computer Competency (3):**

AGB124 Microcomputers in Agriculture (3)

CIS110 Fundamentals of Computer Literacy (3) or higher

OR

Transferable Computer Competency course (Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 65 semester credits.

**ADMINISTRATION OF JUSTICE CERTIFICATE**

*Signal Peak Campus*

**Total Credits: 33.5**

Central Arizona College offers a full range of courses for regular and reserve officer certification, as well as in-service seminars to law enforcement agencies. The curriculum, offered through the Academy, has been approved by the Arizona Peace Officer Standards and Training Board (AZ POST) and the State Board of Directors for Community Colleges of Arizona. Recruits and reserve officers who complete the basic training program may be eligible to obtain state certification as peace officers. Individuals not sent to the Academy by law enforcement agencies may be eligible to attend at their own expense if they meet the requirements currently established by AZ POST for appointment and certification as a peace officer and successfully complete the required CARLOTA testing and screening process.

The Certificate curriculum also prepares students to pursue the AJS Associate Degree. The AJS Certificate coursework may be applied to fulfill AJS Associate Degree requirements. Consult a CAC advisor.

**Prerequisite**

Meet AZ POST Standards for eligibility.

**Core Requirements (33.5)**

AJS101 Introduction to Administration of Justice (3)

AJS122 Traffic Control (3)

AJS124 Defensive Tactics (3)

AJS130 Firearms (3)

AJS140 Communications in Law Enforcement (3.5)

AJS209 Substantive Criminal Law (3)

AJS230 The Police Function (3)

AJS270 Community Relations (3)

AJS275 Criminal Investigations (3)

EMS123 First Responder (3)

PAC104 Police Officer Physical Training (3)

**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.



## AGRICULTURE

### AGRICULTURE A.A.

#### *Signal Peak Campus*

#### Total Credits: 60-64



Students pursuing this Agriculture A.A. Degree may transfer to a university to pursue a Bachelor of Arts Degree in Agriculture.

#### General Education Requirements

##### AGEC-A (35-36)

##### Written Communications (6)

ENG101 English Composition III (3)  

ENG102 English Composition IV (3)  

##### Oral Communications (3)

Select an AGECE course.

For the following two categories, for each category select courses from different disciplines to total 15 credits.

##### Arts and Humanities (6-9)

Select one Art (3) and one Humanities (3) course.


##### Social and Behavioral Sciences (6-9)

AGS122 Natural Resources and Conservation (3)  
Select another AGECE course from a different discipline.

##### Physical and Biological Sciences (8)

Select AGECE courses with a laboratory component.

##### Mathematics (3-4)

MAT141 College Mathematics, Standard (4)  or higher

##### Subject Options (0-6)

Based on your major, review the specific A.A. Degree requirements in the CAC catalog, consult an academic advisor, and see the Transfer Guides at [http:// aztransfer.com/college/](http://aztransfer.com/college/)

##### Special Awareness Requirements (0-9)


Select AGECE courses to fulfill these requirements.

- At least three semester credits of coursework in Intensive Writing and Critical Inquiry  
Historical Awareness
- At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender)
- At least three semester credits of coursework in Global/International Awareness or Historical Awareness

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences, or Transfer Electives may also be used to satisfy requirements in the three Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

#### Core Requirements (10)

AGB124 Microcomputers in Agriculture (3)

AGS240 Plant Biology (4) 

ANS101 Animal Industry (3)

#### Electives (12-16)

Select elective credits from college-level, transferable courses numbered 100 or higher to meet the 60-64 credit Degree requirement. All electives must transfer to all three Arizona public universities. Consult the CEG to determine course equivalency at the universities.

#### Other Requirements (3)

Reading Competency: RDG094 College Reading 

#### Computer Competency (3):

AGB124 Microcomputers in Agriculture (3)  
(Fulfilled in Core Requirements)

#### Other A.A. Degree Requirements

Some A.A. Degrees require up to 16 credits of a Second Language to demonstrate proficiency. Many four-year degrees require either a second semester or fourth semester level of a second language and strongly encourage students to complete this requirement at the community college prior to transfer.

Check your university catalog, Transfer Guides at [http:// aztransfer.com/college/](http://aztransfer.com/college/)

or meet with an academic advisor. Students may demonstrate proficiency by completion of coursework and/or a proficiency test.

Students undecided about their major are encouraged to complete a fourth semester of a second language. CAC offers Spanish, French, Sign Language and other Foreign Languages and Literatures. Contact an academic advisor for assistance.

Students must earn a grade of "C" or better in each A.A. degree required course.

Students must earn a minimum of 20 credits from CAC which includes the AGECE-A requirements.

This A.A. Degree requires 60-64 semester credits.



## AGRICULTURE A.S.

*Signal Peak Campus*

### Total Credits: 60-64

Students earning the Agriculture A.S. Degree may transfer to a university to pursue a Bachelor of Science Degree in Agriculture.

### General Education Requirements AGEC-S (35-37)

#### Written Communications (6)

ENG101 English Composition III (3)

ENG102 English Composition IV (3)

*For the following two categories, select courses from different disciplines.*

#### Arts and Humanities (6)

*Select one Art (3) and one Humanities (3) AGEC course.*

#### Social and Behavioral Sciences (6)

AGS122 Natural Resources and Conservation (3)

AND

Select another AGEC course from a different discipline.

#### Physical and Biological Sciences (8)

*Select AGEC courses with a laboratory component.*

#### Life Science Majors:

CHM151 General Chemistry I (4) AND

CHM152 General Chemistry II (4)

OR

BIO181 General Biology I (4) AND

BIO182 General Biology II (4)

#### Physical Science Majors:

CHM151 General Chemistry I (4) AND

CHM152 General Chemistry II (4)

OR

PHY121 University Physics I: Mechanics (4) AND

PHY122 University Physics II: Electricity and

Magnetism (4)

#### Mathematics (3-4)

MAT221 Analytical Geometry and Calculus I (4)   
or higher

#### Subject Options (6-8)

Based on your major, consult the Transfer Guide at [http:// aztransfer.com/college/](http://aztransfer.com/college/)

and select mathematics courses above the first course in the calculus sequence and/or Science courses from: Agriculture, Botany, Chemistry, Environmental Science, Nutrition or Zoology.

### Special Awareness Requirements (0-9)

*Select AGEC courses to fulfill these requirements.*

1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender)
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness.

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences, or Transfer Electives may also be used to satisfy requirements in the three Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

### Core Requirements (10)

AGB124 Microcomputers in Agriculture (3)

*(Fulfills computer competency requirement)*

AGS240 Plant Biology (4)

ANS101 Animal Industry (3)

### Agriculture Electives (12-16)

*Select elective credits to meet the 60-64 credit Degree requirement. All electives must transfer to all three Arizona public universities. Consult the Course Equivalency Guide (CEG) to confirm course equivalency.*

AGB121 Resource and Environmental Economics (3)

AGB123 Agriculture Accounting (3)

AGB130 Agricultural Leadership (1)

AGB213 Introduction to Agricultural Commodity and Food Marketing (3)

AGB225 Agriculture Business Analysis (3)

AGB234 Agricultural Leadership Development (3)

AGS101 World of Plants (4)

AGS104 Agricultural Environmental Science (4)

AGS106 Entomology (4)

AGS122 Natural Resources and Conservation (3)

AGS221 Soil Science (4)

AGS235 Principles of Horticulture (3)

AGS296 Agriculture Internship (3)

ANS111 Horseshoeing I (3)

ANS172 Introduction to Western Horsemanship (3)

ANS200 Introduction to Equine Science (3)

ANS211 Advanced Horseshoeing (3)

ANS213 Animal Genetics (3)

ANS215 Anatomy and Physiology of Domestic Animals (4)

ANS216 Equine Anatomy and Physiology (3)





ANS220	Artificial Insemination (3)
ANS226	Feeds and Feeding (3)
BIO100	Biology Concepts (4)
BUS100	Introduction to Business (3)
CHM130	Fundamental Chemistry (4)
DIE132	Diesel Engines (12)
HEO100	Introduction to Heavy Equipment Operations (5)
MAT121	Intermediate Algebra, Standard (4)
WLD110	Survey of Welding Processes (3)

**OR**

Select fully transferable courses from Agriculture, Technology, Business, Math or Science with Agriculture Department approval.

### Other Requirements (3)

Reading Competency: RDG094 College Reading

#### Computer Competency (3):

AGB124 Microcomputers in Agriculture (3)  
(Fulfilled in Core Requirements)

**OR**

CIS120 Survey of Computer Information Systems (3)

Students must earn a grade of “C” or better in each A.S. degree required course.

Students must earn a minimum of 20 credits from CAC which includes the AGECS requirements.

This A.S. Degree requires 60-64 semester credits.



## AGRICULTURE BUSINESS CERTIFICATE

**Signal Peak Campus**

**Total Credits: 27**

This Certificate provides students with specialized agricultural workplace skills for entry-level agribusiness positions.

### Core Requirements (21)

AGB121	Resource and Environmental Economics (3)
AGB124	Microcomputers in Agriculture (3)
AGB213	Introduction to Agricultural Commodity and Food Marketing (3)
AGB225	Agriculture Business Analysis (3)
BUS100	Introduction to Business (3)

ACC100 Fundamentals of Accounting (3)

**OR**

AGB123 Agriculture Accounting (3)

BUS101 Business Mathematics (3)

**OR**

MAT101 Essential Mathematics (4) or higher

### Select one of the following courses (3):

ENG101	English Composition III (3)
ENG121	Applied Technical Writing (3)

### Select one of the following courses (3):

COM100	Fundamentals of Human Communication (3)
COM206	Public Speaking (3)

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.



## AGRICULTURE GENERAL A.A.S.

**Signal Peak Campus**

### Total Credits: 65

The A.A.S. Agriculture General Degree prepares students for entry level careers in agribusiness, agricultural systems management, and agricultural sustainability. This A.A.S. Degree transfers to the Arizona Bachelor of Applied Science (BAS) Degree. Students interested in pursuing a baccalaureate degree should review Transfer Agreement Options and meet with a CAC agriculture advisor.

### General Education Requirements (19-23)

#### Written Communications (3)

ENG101 English Composition III (3)    
ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

Select a COM course or an AGECE course if you plan to transfer to earn a bachelor's degree.

#### Arts and Humanities (3)

Select an Art, Humanities, Literature, Music, Philosophy or Theatre courses numbered 100 or above, or an AGECE course.

#### Social and Behavioral Sciences (3)

Select an Anthropology, Economics, Geography, History, Political Science, Psychology or Sociology course numbered 100 or above, or an AGECE course.

#### Physical and Biological Sciences (4)

Select a biological or physical science course numbered 100 or above, or a Biological and Physical Lab Science AGECE course.


#### Mathematics (3-4)

Select a college-level Mathematics course  
BUS101 Business Mathematics (3)

OR








MAT101 Essential Mathematics (4) or higher

#### Core Requirements (10)

AGB124 Microcomputers in Agriculture (3)  
AGS240 Plant Biology (4)   
ANS101 Animal Industry (3)

### Agriculture Electives (35)

Select from the following courses:

AGB121 Resource and Environmental Economics (3)  
AGB123 Agriculture Accounting (3)  
AGB130 Agricultural Leadership (1)  
AGB213 Introduction to Agricultural Commodity and Food Marketing (3)  
AGB225 Agriculture Business Analysis (3)  
AGB234 Agricultural Leadership Development (3)  
AGS101 World of Plants (4)   
AGS104 Agricultural Environmental Science (4)   
AGS106 Entomology (4)   
AGS122 Natural Resources and Conservation (3)   
AGS221 Soil Science (4)   
AGS235 Principles of Horticulture (3)  
ANS111 Horseshoeing I (3)  
ANS172 Introduction to Western Horsemanship (3)  
ANS200 Introduction to Equine Science (3)  
ANS211 Advanced Horseshoeing (3)  
ANS213 Animal Genetics (3)  
ANS215 Anatomy and Physiology of Domestic Animals (4)  
ANS216 Equine Anatomy and Physiology (3)  
ANS220 Artificial Insemination (3)  
ANS226 Feeds and Feeding (3)  
BIO100 Biology Concepts (4)   
BUS100 Introduction to Business (3)  
CHM130 Fundamental Chemistry (4)   
DIE132 Diesel Engines (12)  
HEO100 Introduction to Heavy Equipment Operations (5)  
MAT121 Intermediate Algebra, Standard (4)  
WLD110 Survey of Welding Processes (3)

OR

Select courses from Agriculture, Technology, Business, Math, or Science with Agriculture Department approval.

#### Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading 

#### Computer Competency (3):

AGB124 Microcomputer in Agriculture (3)  
(Fulfilled in Core Requirements)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 65 semester credits.



## AGRICULTURE GENERAL CERTIFICATE

**Signal Peak Campus**

**Total Credits: 32**

This Certificate introduces students to agricultural science and technology by focusing on general academic experiences in agriculture. This Certificate prepares students for entry-level careers in agri-science and agribusiness.

### Core Requirements (10)

- AGB124 Microcomputers in Agriculture (3)
- AGS240 Plant Biology (4)
- ANS101 Animal Industry (3)

### Written Communications (3)

Select one of the following:

- ENG101 English Composition III (3)
- ENG121 Applied Technical Writing (3)

### Agriculture Electives (19)

Select from the following courses:

- AGB121 Resource and Environmental Economics (3)
- AGB123 Agriculture Accounting (3)
- AGB213 Introduction to Agricultural Commodity and Food Marketing (3)
- AGB225 Agriculture Business Analysis (3)
- AGS101 World of Plants (4)
- AGS104 Agricultural Environmental Science (4)
- AGS106 Entomology (4)
- AGS110 Agricultural Mechanics I (3)
- AGS122 Natural Resources and Conservation (3)
- AGS140 Agricultural Mechanics II (3)
- AGS221 Soil Science (4)
- AGS235 Principles of Horticulture (3)
- ANS102 Horsemanship I (3)
- ANS111 Horseshoeing I (3)
- ANS121 Equine Facilities Management I (1)
- ANS122 Equine Facilities Management II (1)
- ANS131 Training the Roping Horse I (3)
- ANS172 Introduction to Western Horsemanship (3)
- ANS195 Careers in Veterinary Science (1)
- ANS200 Introduction to Equine Science (3)
- ANS211 Advanced Horseshoeing (3)
- ANS213 Animal Genetics (3)
- ANS215 Anatomy and Physiology of Domestic Animals (4)
- ANS220 Artificial Insemination (3)
- ANS223 Training for Timed Events (3)
- ANS226 Feeds and Feeding (3)
- BIO100 Biology Concepts (4)

OR

Select courses from Agriculture, Technology, Business, Math or Science with Agriculture Department approval.

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

## ANIMAL SCIENCE

### EQUINE MANAGEMENT AND TRAINING A.A.S.

**Signal Peak Campus**

**Total Credits: 64**

Equine Management and Training contains two options for the Associate of Applied Science Degree. Students complete a Horse Trainer or an Equine Business Management program of study. The degree prepares students for employment in a variety of areas in the horse industry. Classroom activities and practical laboratory experiences are provided in both options.

### General Education Requirements (19)

#### Written Communications (3)

- ENG101 English Composition III (3)
- ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

Select a COM course, or an AGECE course if you plan to transfer to a bachelor's degree program.

#### Arts and Humanities (3)

Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGECE course.

#### Social and Behavioral Sciences (3)

Select an Anthropology, Economics, Geography, History, Political Science, Psychology or Sociology course numbered 100 or above, or an AGECE course.

#### Physical and Biological Sciences (4)

- AGS221 Soil Science (4)

OR

- NTR141 Nutrition and Wellness (4)



**Mathematics (3-4)**

Select a college-level Mathematics course  
BUS101 Business Mathematics (3) **OR**  
MAT101 Essential Mathematics (4) or higher

**Core Requirements (26)**

ANS102 Horsemanship I (3)  
ANS110 Horse Event Production (3)  
ANS121 Equine Facility Management I (1)  
ANS122 Equine Facility Management II (1)  
ANS131 Training the Roping Horse I (3)  
ANS200 Introduction to Equine Science (3)  
ANS202 Horsemanship II (3)  
ANS216 Equine Anatomy and Physiology (3)  
ANS223 Training for Timed Events (3)  
ANS231 Training the Roping Horse II (3)

**Electives (15)**

Select 15 credits from the following:

ANS101 Animal Industry (3)  
ANS111 Horseshoeing I (3)  
ANS211 Advanced Horseshoeing (3)  
ANS213 Animal Genetics (3)  
ANS226 Feeds and Feeding (3)  
BUS100 Introduction to Business (3)  
BUS101 Business Mathematics (3)  
*(Also may fulfill Mathematics Requirement)*  
HEO100 Introduction to Heavy Equipment Operations (5)  
HEO128 Diesel Equipment Service and Repair (4)  
WLD Any Welding course (3)

**Other Requirements (4)**

PAC or DAN Course (1)  
Reading Competency: RDG094 College Reading *R*

**Computer Competency (3):**

AGB124 Microcomputers in Agriculture (3)  
CIS110 Fundamentals of Computer Literacy (3) or higher

**OR**

Transferable Computer Competency course  
(Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 64 semester credits.



**EQUINE MANAGEMENT AND TRAINING CERTIFICATE**

*Signal Peak Campus*

**Total Credits: 32**

The Equine Management and Training Certificate provides basic skills and information for equine handling. Courses for the certificate apply toward completion of the Equine Management and Training A.A.S Degree.

**Core Requirements (26)**

ANS102 Horsemanship I (3)  
ANS110 Horse Event Production (3)  
ANS121 Equine Facility Management I (1)  
ANS122 Equine Facility Management II (1)  
ANS131 Training the Roping Horse I (3)  
ANS200 Introduction to Equine Science (3)  
ANS202 Horsemanship II (3)  
ANS216 Equine Anatomy and Physiology (3)  
ANS223 Training for Timed Events (3)  
ANS231 Training the Roping Horse II (3)

**Electives (6)**

ANS101 Animal Industry (3)  
ANS111 Horseshoeing I (3)  
ANS211 Advanced Horseshoeing (3)  
ANS213 Animal Genetics (3)  
ANS226 Feeds and Feeding (3)

**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.





## BIOLOGY

### BIOTECHNOLOGY A.S.

*Signal Peak Campus*

**Total Credits: 60-64**

The Biotechnology Associate of Science Degree is designed for those interested in career/transfer path degrees in biology, biotechnology, molecular biology, microbiology, genetic engineering and pre-medical or other pre-professional programs. The Degree also provides applied technical training for those interested in laboratory employment in the biotechnology industry, medical or an academic research institution.

#### Prerequisites:

RDG094 College Reading  
MAT092 Introductory Algebra

#### General Education Requirements AGEC-S (35-37)

##### Written Communications (6)

ENG101 English Composition III (3)   
ENG102 English Composition IV (3)

*For the following two categories, for each category select courses from different disciplines.*

##### Arts and Humanities (6)

*Select one Art (3) and one Humanities (3) AGEC course.*

##### Social and Behavioral Sciences (6)

*Select AGEC courses from two different disciplines.*

##### Physical and Biological Sciences (8)

###### Life Science Majors:

CHM151 General Chemistry I (4) AND  
CHM152 General Chemistry II (4)

##### Mathematics (3-4)

MAT221 Analytical Geometry and Calculus I (4)   
or higher

#### Subject Options AGEC-S (6-8)

Based on your major, consult the Transfer Guide at [http:// aztransfer.com/college/](http://aztransfer.com/college/) and select mathematics courses above the first course in the calculus sequence and/or Science courses from Biology (BIO181, 205 or 206) Chemistry (CHM151 or higher) or Physics.

#### Special Awareness Requirements (0-9)

*Select AGEC courses to fulfill these requirements.*

1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender)
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness

Note: Courses used in other areas, such as Communications, Arts and Humanities, Social and Behavioral Sciences, or Transfer Electives, may also be used to satisfy one of the three Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

#### Core Requirements (19)

BIO181 General Biology I (4)   
*(Also counts toward AGEC-S)*  
BIO205 Microbiology (4)   
*(Also counts toward AGEC-S)*  
BIO206 Biotechnology Instrumentation I (4)  
*(Also counts toward AGEC-S)*  
BIO207 Biotechnology Instrumentation II (4)  
BIO240 General Genetics (3)

#### Electives (9-13)

Select approved elective courses which transfer as "Elective or better" to all three Arizona public universities to complete the required A.S. Degree credit requirement.

Students may choose:

BIO109 Natural History of the Southwest (4)  
BIO182 General Biology II (4)   
BIO299 Introduction to Co-Op: Biotechnology Internship (1)  
CHM235 General Organic Chemistry I (4)   
CHM236 General Organic Chemistry II (4)   
PHY111 College Physics I (4)   
PHY112 College Physics II (4)   
PHY121 University Physics I (4)   
PHY122 University Physics II (4)

Note: Students may use a course to fulfill an AGEC Core Area, such as the Social and Behavioral Sciences, and one



Special Awareness Area (Intensive Writing, Cultural, Global/International, or Historical Awareness). In addition, students may use the same course(s) to fulfill degree core and/or elective requirements. A minimum of 60 credits is required for this degree. Consult a CAC Advisor.

### Other Requirements (3)

Reading Competency: RDG094 College Reading

#### Computer Competency (3):

AGB124 Microcomputers in Agriculture (3)

**OR**

CIS120 Survey of Computer Information Systems (3)

**OR**

Transferable Computer Competency course (Consult the Course Equivalency Guide to determine transferability to the three state public universities.)

Students must earn a grade of “C” or better in each A.S. degree required course.

Students must earn a minimum of 20 credits from CAC which includes the AGECS requirements.

Biotechnology Associate of Science Degree requires 60-64 credits.



## BUSINESS

### BUSINESS A.A.S.

**Aravaipa, Maricopa, Signal Peak & Superstition Mountain Campuses**

#### Total Credits: 64

The Business A.A.S. Degree prepares students for entry-level positions in business and provides skills necessary for helping them begin their own business.

#### General Education Requirements (19-23)

##### Written Communications (3)

ENG101 English Composition III (3) (Recommended)

**OR**

ENG121 Applied Technical Writing (3)

##### Oral Communications (3)

COM100 Fundamentals of Human Communication (3)

COM206 Public Speaking (3)

*Or select a COM or AGECS course.*

##### Arts and Humanities (3)

*Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGECS course.*

##### Social and Behavioral Sciences (3)

BUS190 Principles of Management and Leadership (3)

ECN200 Contemporary Economic Issues (3)

ECN201 Principles of Macroeconomics (3)

ECN202 Principles of Microeconomics (3)

*Or select an Anthropology, Economics, Geography, History, Political Science, Psychology or Sociology course numbered 100 or above, or an AGECS course.*

##### Physical and Biological Sciences (4)

*Select a Biological or Physical Science course numbered 100 or above, or an Biological and Physical Lab Science AGECS course.*

##### Mathematics (3-4)

*Select a college-level Mathematics course*

BUS101 Business Mathematics (3) (Recommended)

**OR**

MAT101 Essential Mathematics (4) or higher

##### Core Requirements (30)

ACC121 Income Tax Fundamentals (3)

ACC201 Financial Accounting (3)\*

ACC202 Managerial Accounting (3)



BUS100	Introduction to Business (3)
BUS123	Business Relations (3)
BUS201	Legal Environment of Business (3)
BUS207	Business Communications (3)
BUS260	Applied Business Seminar (3)
CBA133A	Spreadsheet Applications in Excel (3)
CIS120	Survey of Computer Information Systems (3)

\* Students may be advised to complete ACC100 prior to Enrolling in ACC201 .

### Electives (14)

Select 14 credits from the following list to total at least 64 credit hours for this degree.

ACC	Accounting
AGB	Agriculture Business
BUS	Business
CBA	Computer Business Applications
CIS	Computer Information Systems
ECN	Economics
HRM	Hospitality Management
REA	Real Estate

### Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading

Computer Competency (3):

CIS120 Survey of Computer Information Systems (3)   
(Fulfilled in Core Requirements)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 64 semester credits.



## BUSINESS CERTIFICATE

### District-Wide

### Total Credits: 18

The Business Certificate prepares individuals for entry-level positions in businesses, provides skills to help them organize their own business, and leads to the Business A.A.S.

### Core Requirements (15)

ACC100 Fundamentals of Accounting (3)

OR

ACC201 Financial Accounting (3)

BUS100 Introduction to Business (3)

BUS101 Business Mathematics (3)

CIS120 Survey of Computer Information Systems (3)

Select one of the following courses (3):

ECN200 Contemporary Economic Issues (3)

ECN201 Principles of Macroeconomics (3)

ECN202 Principles of Microeconomics (3)

### Electives (3)

Complete 3 credits from the following prefixes to total 18 credits:

ACC	Accounting
BUS	Business
CBA	Computer Business Applications
CIS	Computer Information Systems
ECN	Economics
HRM	Hospitality Management
REA	Real Estate

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.



## MANAGEMENT CERTIFICATE

*District-Wide*

### Total Credits: 30

This Management Certificate focuses on communication, finances and legal issues including basic marketing and management principles that develop leadership and supervision skills. This certificate qualifies for sponsorship of the Retail Management Certificate Program with the Western Association of Food Chains ([www.WAFC.com](http://www.WAFC.com)) or WAFC national partnership (see Business Division, Management Certificate for company listings and program details).

### Recommended Proficiencies

RDG094 College Reading

### Core Requirements (30)

*Recommended Course Order:*

#### Select one Human Relations course (3):

BUS123 Business Relations (3)

**OR**

COM100 Fundamentals of Human Communications (3)

**AND**

CIS120 Survey of Computer Information Systems (3)

#### Select one Business Foundation course (3):

BUS100 Introduction to Business (3)

**OR**

BUS122 Small Business Management (3)

#### General Business Management courses (15):

BUS180 Introduction to Marketing (3)

BUS190 Principles of Management and Leadership (3)

BUS207 Business Communication (3)

HRM252 Managing Hospitality Human Resources (3)

BUS101 Business Mathematics (3)

#### Select one Accounting course (3):

ACC100 Fundamentals of Accounting (3)

**OR**

ACC201 Financial Accounting (3)

**AND**

BUS220 Retail Management (3) (Capstone Course)

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

## HOTEL AND RESTAURANT MANAGEMENT A.A.S.

*Signal Peak Campus*

### Total Credits: 66

The Hotel and Restaurant Management A.A.S. Degree includes hospitality industry certified courses, university-level business courses and the Arizona General Education Curriculum (AGEC-A). The AGEC-A requirements in this A.A.S. Degree fulfill university transfer with remaining courses to be evaluated on a course-by-course basis.

NAU School of Hotel and Restaurant Management accepts the AGEC-A and all HRM core courses, not to exceed 64 credits. (HRM103 + CUL105 or NTR105 or CUL205 are highly recommended for NAU transfer students). See the CEG for details and the Transfer Pathway Options at: [http://www.centralaz.edu/Home/Student\\_Resources/University\\_Transfer/CAC\\_Nationwide\\_Transfer\\_Partnerships.htm](http://www.centralaz.edu/Home/Student_Resources/University_Transfer/CAC_Nationwide_Transfer_Partnerships.htm).

### General Education Requirements AGEC-A (35-36)

#### Written Communications (6)

ENG101 English Composition III (3)

ENG102 English Composition IV (3)

#### Oral Communications (3)

COM263 Intercultural Communication (3)

For the following three categories, select a total of 15 credits. Students must choose coursework from more than one discipline for both the Arts and Humanities Category.

#### Arts (3)

ART208 Art History II (3)

MHL100 Music Appreciation (3)

THE100 Theater Appreciation (3)

#### Humanities (3)

LIT201 American Literature I (3)

LIT202 American Literature II (3)

LIT203 English Literature I (3)

LIT204 English Literature II (3)

LIT233 American Ethnic Literature (3)

LIT254A Literature and Film (3)

PHI105 Introduction to Ethics (3)

#### Social and Behavioral Sciences (6-9)

*Select AGEC courses from different disciplines:*

BUS123 Business Relations (3)

BUS190 Principles of Leadership and Management (3)

ECN201 Principles of Macroeconomics (3)





ECN202 Principles of Microeconomics (3)

AND

*Select one from the following list:*

GEO101 Introduction to Cultural and Historical Geography (3)

PSY101 Introduction to Psychology (3)

SOC100 Introduction to Sociology (3)

### Physical and Biological Sciences (8)

BIO100 Biology Concepts (4)

CHM130 Fundamental Chemistry (4)

ENV101 Environmental Science (4)

NTR141 Nutrition and Wellness (4)

PHY100 Physical Universe (4)

### Mathematics (3-4)

MAT141 College Mathematics, Standard (4) or higher

### Subject Options (0-6)

Based on your major, review the specific A.A. Degree requirements in the CAC catalog, consult an academic advisor, and see the Arizona Transfer website at <http://aztransfer.com/college/>

### Special Awareness Requirements (0-9)

*Select AGEC courses to fulfill these requirements:*

1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender)
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences, or Transfer Electives, may also be used to satisfy requirements in the three Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.



### Core Requirements (30)

CIS120 Survey of Computer Information Systems (3)

CUL170 Dining and Beverage Operations (2)

HRM101 Facilities Management (3)

HRM102 Management of Guest Services (3)

HRM103 Managing Food Service Operations (3)

HRM145 Convention and Meeting Management (3)

HRM252 Managing Hospitality Human Resources (3)

ACC100 Fundamentals of Accounting (3)

OR

ACC201 Financial Accounting (3)

CUL130 Culinary Principles & Applications I (3)

OR

CUL160 Baking and Pastry I (3)

HRM100 Introduction to Hospitality (3)

OR

REC101 Recreation, Leisure and Quality of Life (3)

*Select one of the following courses:*

CUL105 Food Safety Foundations (1)

CUL205 HACCP Principles (1)

NTR105 ServSafe Certification (1)

### Other Requirements (4)

PAC or DAN Course (1) (*Recommended: PAC101A*)

Reading Competency: RDG094 College Reading

### Computer Competency (3):

CIS120 Survey of Computer Information Systems (3)   
(*Fulfilled in Core Requirements*)

Students must earn a grade of “C” or better in each AGEC-A course.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC which includes the AGEC-A requirements.

Note: This A.A.S. Degree requires the AGEC-A Certificate. Students must apply for both the AGEC-A Certificate and the Degree.

The Hotel and Restaurant Management A.A.S. Degree requires 66 credits.



## HOTEL AND RESTAURANT MANAGEMENT CERTIFICATE

**District-Wide**

### Total Credits: 18

The Hotel and Restaurant Management Certificate provides specialized workplace skills which enhance options for progressive or lateral career movement in hotel and lodging or restaurant management. Included are foundational concepts and skills in the hospitality industry, human resources and employment law, supervision, guest services, facilities and event management.

Completion of these basic skills within one year increases employability of graduates. Certificate courses stack toward the Hotel and Restaurant Management A.A.S. Degree and most courses are eligible for transfer to universities offering bachelor degree programs in Hotel and Restaurant Management. HRM courses are accepted to fulfill the Business A.A.S. Degree's fourteen (14) elective credits.

Each HRM course utilizes curriculum from the American Hotel and Lodging Association. Students may receive a nationally-recognized and industry-standardized AHLA Course Certificate upon achieving 70% competency on each course final exam. <http://www.ahla.com/>

### Core Requirements (12)

- HRM100 Introduction to Hospitality (3)
- HRM101 Facilities Management (3)
- HRM102 Management of Guest Services (3)
- HRM252 Managing Hospitality Human Resources (3)

### Electives (6)

*HRM prefix highly recommended for HRM majors and CUL prefix highly recommended for Restaurant Management or Culinary Arts majors.*

*Select six credits from the following list:*

- CUL105 Food Safety Foundations (1)

**OR**

- NTR105 ServSafe Certification (1)

- CUL130 Culinary Principles and Applications I (3)

**OR**

- CUL160 Baking and Pastry I (3)

- CUL170 Dining and Beverage Operations (2)

- CUL205 HACCP Principles (1)

- HRM103 Managing Food Service Operations (3)

- HRM145 Convention and Meeting Management (3)

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

This Certificate requires 18 credits.



## CHEMISTRY

### CHEMISTRY A.S.

**Signal Peak Campus**

### Total Credits: 60-64

The Chemistry A.S. Degree is appropriate for students who plan to transfer to the university to earn a baccalaureate degree in physical science areas such as Chemistry and related pre-professional programs. It is also appropriate for students interested in becoming lab technicians.

### General Education Requirements

#### AGEC-S (35-37)

#### Written Communications (6)

- ENG101 English Composition III (3)  

- ENG102 English Composition IV (3)  

#### Arts and Humanities (6)

*Select one Art (3) and one Humanities (3) AGEC course.*

#### Social and Behavioral Sciences (6)

*Select AGEC courses from two different disciplines.*

#### Physical and Biological Sciences (8)

- CHM151 General Chemistry I (4)  

- CHM152 General Chemistry II (4)  



### Mathematics (3)

MAT221 Analytical Geometry and Calculus I (4)   
or higher

### Subject Options (6-8)

MAT231 Calculus with Analytical Geometry II (4)

MAT241 Analytical Geometry and Calculus III (4)

MAT262 Ordinary Differential Equations (3)

BIO181 General Biology I (4)

BIO182 General Biology II (4)

BIO205 Microbiology (4)

### Special Awareness Requirements (0-9)

Select AGEC courses to fulfill these requirements.

1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender)
3. At least three semester credits of coursework emphasizing Global/International Awareness or Historical Awareness

Note: Courses used in other areas, such as Arts and Humanities, Social and Behavioral Sciences, or Transfer Electives, may also be used to satisfy requirements in these the Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

### Core Requirements (16)

CHM235 Organic Chemistry I (4)

CHM236 Organic Chemistry II (4)

PHY121 University Physics I: Mechanics (4)

PHY122 University Physics II: Electricity and Magnetism (4)

### Transferable Electives (0-12)

Based on your major, consult the Transfer Guide at <http://aztransfer.com/college/> and select mathematics courses above the second course in the calculus sequence and/or Science courses from: Astronomy, Biology, Chemistry, Engineering, Environmental Science, Geology or Physics.

Select elective credits that transfer to the chosen university. Consult the CEG.

### Other Requirements (3)

Reading Competency: RDG094 College Reading

#### Computer Competency (3):

AGB124 Microcomputers in Agriculture

OR

CIS120 Survey of Computer Information Systems (3)

OR

Transferable Computer Competency course (Consult the

Course Equivalency Guide to determine transferability to the three state public universities.)

Students must earn a grade of “C” or better in each A.S. degree required course.

Students must earn a minimum of 20 credits from CAC which includes the AGEC-S requirements.

The Chemistry A.S. Degree requires 60-64 credits.

## COMMUNICATIONS

### COMMUNICATION SKILLS FOR THE PROFESSIONAL CERTIFICATE

#### District-Wide

#### Total Credits: 21

The Communication Skills for the Professional Certificate prepares students with strong professional communication skills applicable to a wide-variety of employment situations. The Certificate also familiarizes students with communication technologies. Students are prepared for continued education in communication studies.

#### Prerequisites

RDG094 College Reading (3)

ENG100 English Composition II (3)

#### Core Requirements (15)

COM100 Fundamentals of Human Communication (3)

COM259 Professional Communication (3)

COM101 Interpersonal Communication (3)

OR

COM263 Intercultural Communication (3)

COM202 Introduction to Group Communication (3)

OR

COM206 Public Speaking (3)

ENG101 English Composition III (3)

OR

ENG121 Applied Technical Writing (3)

Select one of the following course pairs (6):

MSC120 Graphic Design and Adobe InDesign (3)

AND

MSC122 Introduction to Web Design (3)

OR

CIS120 Survey of Computer Information Systems (3)

AND

CBA210 Web Development Tools (3)



**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

**COMMUNICATION STUDIES  
CERTIFICATE**

*District-Wide*

**Total Credits: 21**

The Communication Studies Certificate prepares students with strong general communication skills applicable to a wide-variety of employment situations. The Certificate also prepares students for continued education in communication studies.

**Prerequisites**

- RDG094 College Reading (3)
- ENG100 English Composition II (3)

**Core Requirements (15)**

- COM100 Fundamentals of Human Communication (3)
- ENG101 English Composition III (3)

Select three of the following courses (9):

- COM101 Interpersonal Communication (3)
- COM202 Introduction to Group Communication (3)
- COM206 Public Speaking (3)
- COM259 Professional Communication (3)
- COM263 Intercultural Communication (3)

Select two of the following courses (6):

- ENG102 English Composition IV (3)
- ENG121 Applied Technical Writing (3)
- MSC101 Media and Society (3)
- PSY101 Introduction to Psychology (3)
- PSY200 Social Psychology (3)
- SOC100 Introduction to Sociology (3)

**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

**COMPUTER**

**APPLICATION DEVELOPMENT AND  
WEB DESIGN CERTIFICATE**

*Signal Peak Campus*

**Total Credits: 29**

This Application Development and Web Design Certificate offers students preparation for an entry-level position in application and web development.

**Recommended Proficiencies**

- RDG094 College Reading (3) *R*

**Core Requirements (29)**

- CIS111 Introduction to the Internet (2)
- CIS112 Web Page Design Fundamentals (3)
- CIS120 Survey of Computer Information Systems (3)
- CIS214 Application Development in Excel (3)
- CIS217 Application Development in Access (3)
- CBA133A Spreadsheet Applications in Excel (3)
- CBA134A Database Management in Access (3)
- CBA210 Web Development Tools (3)
- CBA211 JavaScript Programming (3)
- CBA212 Adobe Flash Animation (3)

**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.







## COMPUTER APPLICATIONS FOR BUSINESS USERS CERTIFICATE

*Signal Peak Campus and Casa Grande Center*

### Total Credits: 29

This Computer Applications for Business Users Certificate prepares students for positions within an office environment and includes specialized training in Microsoft Office programs. An employment readiness component provides instruction and skill building in the "soft skills" required to obtain and maintain employment.

### Prerequisite

SKL115 Employment Readiness Program Part I (3)

### Corequisite

SKL116 Employment Readiness Program Part II (3)

### Recommended Proficiencies

MAT082 Basic Arithmetic (3)

RDG094 College Reading (3)

### Core Requirements (29)

CBA110A Computers for Beginners (1)  
 CBA110C MS Windows Basics (1)  
 CBA113A MS Excel - Basic (1)  
 CBA113B MS Excel - Intermediate (1)  
 CBA114A MS Access - Basic (1)  
 CBA116A MS PowerPoint - Basic (1)  
 CBA117A MS Publisher - Basic (1)  
 CBA118 MS Outlook (1)  
 CBA122A MS Word - Module 1 (2)  
 CBA122B MS Word - Module 2 (2)  
 OAS101 Keyboard - Alphabetic (1)  
 OAS103 Keyboard - Speed/Accuracy (1)  
 OAS104 Ten-Key Pad (1)  
 SKL110 Life Math Skills (3)  
 SKL141 Overview of Office Assistant (2)  
 SKL142 Green Office Solutions (1)  
 SKL143 Basic Accounting Concepts (1)  
 SKL144 Proofreading for Accuracy (1)  
 SKL145 Communication Skills (3)  
 SKL149 Practicum for Computer Applications for Business Users (3)

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

## COMPUTER PROGRAMMING A.A.S.

*Signal Peak & Superstition Mountain Campuses*

### Total Credits: 65

The Programming A.A.S. Degree focuses on the analysis, design and programming skills necessary for entry-level programming positions. Successful completion may lead to Certified Software Development Professional and Sun Certified Java Programmer.

### General Education Requirements (19-23)

#### Written Communications (3)

ENG101 English Composition III (3) (SUN ENG 1101)

OR

ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

Select a COM course, or an AGECE course if you plan to transfer to earn a bachelor's degree.

#### Arts and Humanities (3)

Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above or an AGECE course.

#### Social and Behavioral Sciences (3)

ECN201 Principles of Macroeconomics (3)

ECN202 Principles of Microeconomics (3)

Or select an Anthropology, Economics, Geography, History, Political Science, Psychology or Sociology course numbered 100 or above or an AGECE course.

#### Physical and Biological Sciences (4)

Select a Biological or Physical Science course numbered 100 or above, or an AGECE course.

#### Mathematics (6-7)

BUS101 Business Mathematics (3) AND

MAT121 Intermediate Algebra, Standard (4) or higher

### Core Requirements (42)

BUS100 Introduction to Business (3)  
 BUS207 Business Communications (3)  
 CIS112 Web Page Design Fundamentals (3)  
 CIS120 Survey of Computer Information Systems (3)   
 CIS121 Microcomputer Operating System Fundamentals (3)  
 CIS123 Introduction to Programming (3)  
 CIS150 Windows Server (3)  
 CIS181 C#.Net (4)  
 CIS214 Application Development in Excel (3)  
 CIS216 Java Programming (4)  
 CIS217 Application Development in Access (3)



- CIS218 C++ Programming (4)
- CIS233 Web Application Development using PHP (3)

**Other Requirements (4)**

PAC or DAN Course (1)  
 Reading Competency: RDG094 College Reading

**Computer Competency (3):**

- CIS120 Survey of Computer Information Systems (3)
- (Fulfilled in the Core Requirements)*

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 65 credits.

**COMPUTER PROGRAMMING CERTIFICATE**

***Signal Peak & Superstition Mountain Campuses***

**Total Credits: 23**

The Computer Programming Certificate emphasizes knowledge and skills required to design, develop, test and document structured and object-oriented programs utilizing a variety of programming languages. It prepares students for entry-level positions in computer programming. Successful completion may lead to Certified Software Development Professional and Sun Certified Java Programmer.

**Recommended Proficiencies**

RDG094 College Reading (3)

**Core Requirements (23)**

- CIS112 Web Design Fundamentals (3)
- CIS120 Survey of Computer Information Systems (3)
- CIS121 Microcomputer Operating System Fundamentals (3)
- CIS123 Introduction to Programming (3)
- CIS150 Windows Server (3)
- CIS216 JAVA Programming (4)
- CIS218 C++ Programming (4)

**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

**GEOGRAPHIC INFORMATION SYSTEMS (GIS) A.A.S.**

***Maricopa, San Tan, Signal Peak & Superstition Mountain Campuses***

**Total Credits: 64-67**

Creation, analysis, and mapping of Geographic Information Systems (GIS) data, including environmental transportation systems and/or communities applications to prepare students for entry-level positions utilizing GIS, AutoCAD, GPH and GPS technology and/or to progress toward a baccalaureate degree.

**Prerequisite:**

MAT101 Essential Mathematics (4) or higher

**General Education Requirements (23-24)**

For the following six categories, choose from the recommended courses or select AGEC courses from the equivalent category.

**Written Communications (3)**

- ENG101 English Composition III (3)
- ENG121 Applied Technical Writing (3)

**Oral Communications (3)**

- COM100 Fundamentals of Human Communication (3)  
*(Recommended)*
- Or select a COM course, or an AGEC Communication course.*

**Arts and Humanities (3)**

*Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGEC course.*

**Social and Behavioral Sciences (3)**

- GEO101 Introduction to Cultural and Historical Geography (3)

**OR**

*Select any Social & Behavioral Science course or an AGEC course.*

**Physical and Biological Sciences (8)**

- GPH111 Introduction to Physical Geography (4)

**AND**

- BIO100 Biology Concepts (4)


*Or select Physical & Biological courses, or AGEC Physical/Biological Lab courses.*



### Mathematics (3-4)

MAT121 Intermediate Algebra, Standard (4)

OR

MAT162 Applied Statistics (3)  (Recommended)  
or higher

### Core Courses (18)

GIS101 Introduction to Geographic Information Technologies (3)

GIS102 Map and Image Interpretation (3)

GIS111 Introduction to GIS (4)

GIS112 Intermediate GIS (4)

GIS113 Advanced GIS (4)



### Course Electives (Select 18-19 credits)

Select elective credits to meet the 64 credit Degree requirement.

CET221 Basic Surveying and Grade Staking (4)

DFT127 AutoCAD I (3)

DFT128 AutoCAD II (3)

DFT131 AutoCAD III (3)

GIS150 GIS and Global Positioning Systems (GPS) (3)

GIS196 GIS Internship I (3)

GIS210 GIS Programming (3)

GIS230 Applied GIS: The Environment (3)

GIS231 Applied GIS: Transportation Systems (3)

GIS232 Applied GIS: Communities (3)

GIS250 Remote Sensing I (4)

GIS251 Remote Sensing II (4)

GIS296 GIS Internship II (3)

GIS299 GIS Research Methods (4)


### Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading 

### Computer Competency (3):

AGB124 Microcomputers in Agriculture (3)

CIS120 Survey of Computer Information Systems (3)  (Recommended) OR

Transferable Computer Competency course  
(Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale. Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 64-67 credits.

## GIS DRAFTING AND MAPPING CERTIFICATE

**Maricopa, San Tan, Signal Peak & Superstition Mountain Campuses**

Create, analyze and map Geographic Information Systems (GIS) data to prepare students for positions using GIS and GPS technology and/or to progress towards the GIS A.A.S. Degree.

**Total Credits: 33**

### Prerequisite:

MAT101 Essential Mathematics (4) or higher

### Core Requirements (33)

GIS101 Introduction to Geographic Information Technologies (3)

GIS102 Map and Image Interpretation (3)

GIS111 Introduction to GIS (4)

GIS112 Intermediate GIS (4)

GIS113 Advanced GIS (4)

DFT127 AutoCAD I (3)

DFT128 AutoCAD II (3)

DFT131 AutoCAD III (3)

GIS150 GIS and Global Positioning Systems (GPS) (3)

GIS196 GIS Internship I (3)

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.



**MICROCOMPUTER  
BUSINESS APPLICATIONS A.A.S.**

**Signal Peak & Superstition Mountain  
Campuses**

**Total Credits: 66**

The Microcomputer Business Applications A.A.S. Degree prepares students to select and use computer business application tools in a variety of business situations. Students learn basic web page skills for interaction between business application data and web pages. Successful completion may lead to Microsoft Certified Office User and Certified Internet Webmaster.

**General Education Requirements (19-23)**

**Written Communications (3)**

ENG101 English Composition III (3)

OR

ENG121 Applied Technical Writing (3)

**Oral Communications (3)**

*Select a COM course, or an AGECE course if you plan to transfer to earn a bachelor's degree.*

**Arts and Humanities (3)**

*Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGECE course.*

**Social and Behavioral Sciences (3)**

*Select an Anthropology, Economics, Geography, History, Political Science, Psychology or Sociology course numbered 100 or above, or an AGECE course.*

**Physical and Biological Sciences (4)**

*Select a Biological or Physical Science courses numbered 100 or above, or an AGECE Lab course.*

**Mathematics (3-4)**

*Select a college-level Mathematics course*

BUS101 Business Mathematics (3)

OR

MAT101 Essential Mathematics (4) or higher

**Core Requirements (46)**

ACC100 Fundamentals of Accounting (3)

BUS100 Introduction to Business (3)

BUS123 Business Relations (3)

BUS207 Business Communications (3)

BUS260 Applied Business Seminar (3)

CBA122A MS Word - Module 1 (2)

CBA133A Spreadsheet Applications in Excel (3)

CBA133B Advanced Spreadsheet Applications in Excel (3)

CBA134A Database Management in Access (3)

CBA210 Web Development Tools (3)

CIS111 Introduction to the Internet (2)

CIS112 Web Page Design Fundamentals (3)

CIS120 Survey of Computer Information Systems (3)

CIS121 Microcomputer Operating System Fundamentals (3)

CIS214 Application Development in Excel (3)

CIS217 Application Development in Access (3)

**Electives**

*Select college-level Electives numbered 100 or higher to meet 66-credit requirement.*

**Other Requirements (4)**

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading

**Computer Competency (3):**

CIS120 Survey of Computer Information Systems (3)   
*(Fulfilled in Core Requirements)*

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 66 credits.

**MICROCOMPUTER BUSINESS  
APPLICATIONS SPECIALIST  
CERTIFICATE**

**Aravaipa, Maricopa, San Tan, Signal Peak  
& Superstition Mountain Campuses and  
Corporate Center**

**Total Credits: 24**

The Microcomputer Business Applications Specialist Certificate provides students with skills in business application software required for entry-level employment in an office environment.

**Prerequisite:**

RDG094 College Reading (3)





### Core Requirements (24)

BUS101	Business Mathematics (3)
CBA116A	MS PowerPoint – Basic (1)
CBA117A	MS Publisher – Basic (1)
CBA118	MS Outlook (1)
CBA122A	MS Word – Module 1 (2)
CBA122B	MS Word – Module 2 (2)
CBA133A	Spreadsheet Applications in Excel (3)
CBA134A	Database Management in Access (3)
CIS111	Introduction to the Internet (2)
CIS121	Microcomputer Operating System Fundamentals (3)
OAS101	Keyboard – Alphabetic (1)
OAS103	Keyboard – Speed/Accuracy (1)
OAS104	Ten-Key Pad (1)

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

## NETWORK ADMINISTRATION CERTIFICATE

*Signal Peak Campus*

### Total Credits: 27

This Certificate prepares students for an entry-level position as a network administrator. Successful completion may lead to Microsoft Certified System Administration, Network+ Certification, and Network Technician Certification.

### Recommended Proficiencies

RDG094 College Reading (3)

### Core Requirements (27)

CIS120	Survey of Computer Information Systems (3)
CIS121	Microcomputer Operating System Fundamentals (3)
CIS130	Networking Essentials (3)
CIS150	Windows Server (3)
CIS152	Network Infrastructure (3)
CIS153	Network Security (3)
CIS213	Linux Server (3)
CIS215	CISCO Routers (3)
CIS219	Exchange Server (3)

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

## NETWORK SYSTEMS ADMINISTRATION A.A.S. *Maricopa, San Tan, Signal Peak & Superstition Mountain Campuses*

### Total Credits: 65

This A.A.S. Degree prepares students for an entry-level position as a network administrator. Graduates may enter a Baccalaureate Degree program and/or sit for Network+ Certification and A+ Network Certification examinations.

### Prerequisite:

RDG094 College Reading (3)

### Recommended Proficiencies

For students transferring to the University of Arizona BAS Network Administration program, SPA101 and SPA102 are strongly recommended.

### General Education Requirements (19-23)

#### Written Communications (3)

ENG101 English Composition III (3)

OR

ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

COM263 Intercultural Communication (3) (Recommended) or select a COM or an AGECE course.

#### Arts and Humanities (3)

PHI105 Introduction to Ethics (3) (Recommended) Or select an Art or Humanities course, or an AGECE course.

#### Social and Behavioral Sciences (3)

ECN201 Principles of Macroeconomics (3) Or select a Social/Behavioral Science course, or an AGECE course.



## Physical and Biological Sciences (4)

Select a Biological or Physical Science courses numbered 100 or above, or an AGECE course.

## Mathematics (3-4)


Select a college-level Mathematics course

BUS101 Business Mathematics (3)

OR

MAT121 Intermediate Algebra, Standard (4) or higher

## Core Requirements (45)

- BUS100 Introduction to Business (3)
- BUS207 Business Communications (3)
- CIS120 Survey of Computer Information Systems (3)  (Fulfills Computer Competency requirement)
- CIS121 Microcomputer Operating System Fundamentals (3)
- CIS123 Introduction to Programming (3)
- CIS130 Networking Essentials (3)
- CIS135 Principles of Telephony and Telecommunications (3)
- CIS150 Windows Server (3)
- CIS152 Network Infrastructure (3)
- CIS153 Network Security (3)
- CIS210 Cloud Computing (3)
- CIS213 Linux Server (3)
- CIS215 CISCO Routers (3)
- CIS219 Exchange Server (3)
- CIS220 Security for Wireless Networks (3)

## Electives


Select college-level courses to total 65 credits to earn this degree.

## Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading 

## Computer Competency (3):

CIS120 Survey of Computer Information Systems (3)  (Fulfilled under Core Requirements)

For students transferring to the University of Arizona B.A.S. Network Administration program, SPA101 and SPA102 are strongly recommended.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 65 credits

# CREATIVE ARTS

## ENTERTAINMENT INDUSTRY TECHNOLOGY

## ARTIST AND VENUE MANAGEMENT

### A.A.S.



*Signal Peak Campus*

## Total Credits: 70

The Artist and Venue Management A.A.S. Degree prepares individuals for entry-level positions in the entertainment industry by providing an opportunity to gain a broad knowledge of business, entertainment law, marketing, management and the ability to manage entertainment facilities or performers.

## General Education Requirements (19-23)

### Written Communications (3)

ENG101 English Composition III (3)   (Recommended)

OR


ENG121 Applied Technical Writing (3)

### Oral Communications (3)

COM100 Fundamentals of Human Communication (3)  



Or select a COM course, or an AGECE course.

### Arts and Humanities (3)

EIT100 History of Rock n' Roll (3)  (Recommended)

Or select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGECE course.

### Social and Behavioral Sciences (3)

PSY101 Introduction to Psychology (3)  

(Recommended)

Or select a Social and Behavioral Science course, or an AGECE course.

### Physical and Biological Sciences (4)

Select a Biological and Physical Lab Science course numbered 100 or above, or an AGECE Science Lab course.

### Mathematics (3-4)

Select a college-level Mathematics course

BUS101 Business Mathematics (3)

OR

MAT101 Essential Mathematics (4) or higher

### Core Requirements (47)

ACC100 Fundamentals of Accounting (3)

ACC121 Income Tax Fundamentals (3)

BUS100 Introduction to Business (3)



BUS122	Small Business Management (3)
BUS190	Applied Business Management (3)
CBA210	Web Development Tools (3)
EIT101	Introduction to Entertainment (3)
EIT120	Entertainment Law (3)
EIT130	Live Audio Production I (3)
EIT140	Lighting I (3)
EIT151	Digital Audio Workstation (3)
EIT203	Entertainment Capstone Project (2)
EIT221	Entertainment Marketing and Promotion (3)
EIT222	Artist Management (3)
EIT223	Events and Venue Management (3)
EIT296	Entertainment Internship (3)

### Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading 

### Computer Competency (3):

AGB124 Microcomputers in Agriculture

CIS110 Fundamentals of Computer Literacy or higher

OR

Transferable Computer Competency course  
(Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 70 credits.


## ARTIST AND VENUE MANAGEMENT CERTIFICATE

**Signal Peak Campus**

### Total Credits: 35

The Artist and Venue Management Certificate prepares individuals for entry-level positions in the entertainment industry by providing an opportunity to gain a broad knowledge of business, entertainment law, marketing, management and the ability to manage entertainment facilities or performers.

### Core Requirements (35)

ACC100	Fundamentals of Accounting (3)
ACC121	Income Tax Fundamentals (3)
BUS100	Introduction to Business (3)
BUS122	Small Business Management (3)
EIT100	History of Rock n' Roll (3) 

EIT101	Introduction to Entertainment (3)
EIT120	Entertainment Law (3)
EIT203	Entertainment Capstone Project (2)
EIT221	Entertainment Marketing and Promotion (3)
EIT222	Artist Management (3)
EIT223	Events and Venue Management (3)
EIT296	Entertainment Internship (3)

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

## LIVE AUDIO AND LIGHTING A.A.S.



**Signal Peak Campus**

### Total Credits: 67

The Live Audio and Lighting A.A.S. Degree prepares individuals for entry-level positions in the entertainment industry. It provides skills necessary to work with touring entertainers and audio/lighting companies in the set up operation of live concert productions.

### General Education Requirements (19-23)



#### Written Communications (3)

ENG101 English Composition III (3)   (Recommended)


OR

ENG121 Applied Technical Writing (3)



#### Oral Communications (3)

COM100 Fundamentals of Human Communication (3)    
Or select a COM course, or an AGEC course.

#### Arts and Humanities (3)

EIT100 History of Rock n' Roll (3)  (Recommended)  
Or select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGEC course.

#### Social and Behavioral Sciences (3)

PSY101 Introduction to Psychology (3)   (Recommended)  
Or select a Social and Behavioral Science course, or an AGEC course.

#### Physical and Biological Sciences (4)

Select a Biological and Physical Lab Science course numbered 100 or above, or an AGEC Science Lab course.



**Mathematics (3-4)**

Select a college-level Mathematics course

BUS101 Business Mathematics (3)

OR

MAT101 Essential Mathematics (4) or higher

**Core Requirements (44)**

- BUS122 Small Business Management (3)
- CBA210 Web Development Tools (3)
- EIT101 Introduction to Entertainment (3)
- EIT120 Entertainment Law (3)
- EIT130 Live Audio Production I (3)
- EIT140 Lighting I (3)
- EIT151 Digital Audio Workstation (3)
- EIT203 Entertainment Capstone Project (2)
- EIT221 Entertainment Marketing and Promotion (3)
- EIT231 Live Audio Production II (3)
- EIT232 Equipment Maintenance (3)
- EIT241 Concert Lighting (3)
- EIT242 Rigging (3)
- EIT296 Entertainment Internship (3)
- ELC122 Direct Current and Alternating Current Circuit Analysis (3)

**Other Requirements (4)**

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading *R*

**Computer Competency (3):**

AGB124 Microcomputers in Agriculture

CIS110 Fundamentals of Computer Literacy or higher

OR

Transferable Computer Competency course

(Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 67 credits.

**LIVE AUDIO AND LIGHTING CERTIFICATE**

*Signal Peak Campus*

**Total Credits: 35**

The Live Audio and Lighting Certificate prepares individuals for entry-level positions in the entertainment industry. It provides skills necessary to work with touring entertainers and audio/lighting companies in the set up operation of live concert productions.

**Recommended Proficiencies**

RDG094 College Reading (3) *R*

**Core Requirements (35)**

- EIT100 History of Rock 'n Roll (3) *A*
- EIT101 Introduction to Entertainment (3)
- EIT130 Live Audio Production I (3)
- EIT140 Introduction to Lighting (3)
- EIT203 Entertainment Capstone Project (2)
- EIT221 Entertainment Marketing and Promotion (3)
- EIT231 Live Audio Production II (3)
- EIT232 Equipment Maintenance (3)
- EIT241 Concert Lighting (3)
- EIT242 Rigging (3)
- EIT296 Entertainment Internship (3)
- ELC122 Direct Current and Alternating Current Circuit Analysis (3)

**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.







## POPULAR MUSIC PERFORMANCE

### A.A.S.

#### *Signal Peak Campus*

#### **Total Credits: 64**

The Popular Music Performance A.A.S. Degree prepares individuals for entry-level positions in the entertainment industry by providing an opportunity to gain a broad knowledge of skills needed for live songwriting, all aspects of live pop music performance and recording.

#### **Prerequisite**

The soloist or group must perform a live audition for the coordinator of the Entertainment Industry Technology program.

#### **General Education Requirements (19-23)**

#### **Written Communications (3)**

ENG101 English Composition III (3) (Recommended)  
OR

ENG121 Applied Technical Writing (3)

#### **Oral Communications (3)**

COM100 Fundamentals of Human Communication (3)   
*Or select a COM course, or an AGECE course.*

#### **Arts and Humanities (3)**

EIT100 History of Rock n' Roll (3) (Recommended)  
*Or select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGECE course.*

#### **Social and Behavioral Sciences (3)**

PSY101 Introduction to Psychology (Recommended)  
*Or select a Social and Behavioral Science course, or an AGECE course.*

#### **Physical and Biological Sciences (4)**

*Select a Biological and Physical Lab Science course numbered 100 or above, or an AGECE Science Lab course.*

#### **Mathematics (3-4)**

*Select a college-level Mathematics course*

BUS101 Business Mathematics (3)

OR

MAT101 Essential Mathematics (4) or higher

#### **Core Requirements (43.5)**

BUS122 Small Business Management (3)

CIS112 Web Page Design Fundamentals (3)

EIT101 Introduction to Entertainment (3)

EIT120 Entertainment Law (3)

EIT130 Live Audio Production I (3)

EIT140 Lighting I (3)

EIT151 Digital Audio Workstation (3)

EIT170 Performance Skills (1)  
*(Must enroll four (4) times for credit)*

EIT171 Songwriting I (2)

EIT203 Entertainment Capstone Project (2)

EIT221 Entertainment Marketing and Promotion (3)

EIT222 Artist Management (3)

EIT272 Songwriting II (2)

ENG200 Creative Writing (3)

MTC100 Fundamentals of Music (3)

MTC101 Aural Fundamentals (.5)

#### **Other Requirements (4)**

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading

#### **Computer Competency (3):**

CIS112 Web Page Design Fundamentals (3)  
*(Recommended, also fulfills Core requirement)*

OR

AGB124 Microcomputers in Agriculture

OR

CIS110 Fundamentals of Computer Literacy or higher

OR

Transferable Computer Competency course  
(Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 64 credits.

## POPULAR MUSIC PERFORMANCE CERTIFICATE

### *Signal Peak Campus*

#### **Total Credits: 35.5**

The Popular Music Performance Certificate prepares individuals for entry-level positions in the music entertainment industry by providing an opportunity to gain a broad knowledge of skills needed for song writing and all aspects of live popular music performance and recording.

#### **Prerequisite**

The soloist or group must perform a live audition for the coordinator of the Entertainment Industry Technology program. Program acceptance is based on approval.



**Recommended Proficiencies**

RDG094 College Reading

**Core Requirements (35.5)**

- EIT100 History of Rock n' Roll (3)
- EIT101 Introduction to Entertainment (3)
- EIT120 Entertainment Law (3)
- EIT130 Live Audio Production I (3)
- EIT140 Introduction to Lighting (3)
- EIT151 Digital Audio Workstation (3)
- EIT170 Performance Skills (1)  
*(Must enroll two (2) times for credit)*
- EIT171 Songwriting I (2)
- EIT203 Entertainment Capstone Project (2)
- EIT221 Entertainment Marketing and Promotion (3)
- EIT222 Artist Management (3)
- EIT272 Songwriting II (2)
- MTC100 Music Fundamentals (3)
- MTC101 Aural Fundamentals (.5)

**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

**RECORDING ENGINEERING A.A.S.**

*Signal Peak Campus*

**Total Credits: 67.5**

The Recording Engineering A.A.S. Degree prepares individuals for entry-level positions in the entertainment industry by providing an opportunity to gain a broad knowledge of creating a home recording studio or a professional multi-track studio. Skills include recording, production, editing, and arranging various types of audio recordings.

**Recommended Proficiencies**

RDG094 College Reading

**General Education Requirements (19-23)**

**Written Communications (3)**

ENG101 English Composition III (3) *(Recommended)*

OR

ENG121 Applied Technical Writing (3)

**Oral Communications (3)**

COM100 Fundamentals of Human Communication (3)

*Or select a COM course, or an AGECE course.*

**Arts and Humanities (3)**

EIT100 History of Rock n' Roll (3) *(Recommended)*  
*Or select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGECE course.*

**Social and Behavioral Sciences (3)**

PSY101 Introduction to Psychology (3) *(Recommended)*  
*Or select a Social and Behavioral Science course, or an AGECE course.*

**Physical and Biological Sciences (4)**

*Select a Biological and Physical Lab Science course numbered 100 or above, or an AGECE Science Lab course.*

**Mathematics (3-4)**

*Select a college-level Mathematics course*

BUS101 Business Mathematics (3)

OR

MAT101 Essential Mathematics (4) or higher

**Core Requirements (44.5)**

- BUS122 Small Business Management (3)
- CBA210 Web Development Tools (3)
- EIT101 Introduction to Entertainment (3)
- EIT120 Entertainment Law (3)
- EIT130 Live Audio Production I (3)
- EIT151 Digital Audio Workstation (3)
- EIT153 Recording Engineering I (3)
- EIT203 Entertainment Capstone Project (2)
- EIT221 Entertainment Marketing and Promotion (3)
- EIT231 Live Audio Production II (3)
- EIT232 Equipment Maintenance (3)
- EIT254 Recording Engineering II (3)
- EIT255 Recording Engineering III (3)
- EIT296 Entertainment Internship (3)
- MTC100 Fundamentals of Music (3)
- MTC101 Aural Fundamentals (.5)

**Other Requirements (4)**

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading

**Computer Competency (3):**

- AGB124 Microcomputers in Agriculture
- CIS110 Fundamentals of Computer Literacy or higher

OR

Transferable Computer Competency course  
(Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 67.5 credits.



## RECORDING ENGINEERING CERTIFICATE

*Signal Peak Campus*

### Total Credits: 35

The Recording Engineering Certificate prepares individuals for entry-level positions in the entertainment industry by providing an opportunity to gain a broad knowledge of creating a home recording studio or a professional multi-track studio. Skills include recording, production, editing and arranging various types of audio recordings.

### Recommended Proficiencies

RDG094 College Reading

### Core Requirements (35)

EIT100	History of Rock n' Roll (3)	
EIT101	Introduction to Entertainment (3)	
EIT120	Entertainment Law (3)	
EIT130	Live Audio Production I (3)	
EIT151	Digital Audio Workstation (3)	
EIT153	Recording Engineering I (3)	
EIT203	Entertainment Capstone Project (2)	
EIT231	Live Audio Production II (3)	
EIT232	Equipment Maintenance (3)	
EIT254	Recording Engineering II (3)	
EIT255	Recording Engineering III (3)	
EIT296	Entertainment Internship (3)	

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.



## FINE ARTS A.A.

*Signal Peak Campus*

### Total Credits: 60-64

The Fine Arts A.A. Degree prepares students to transfer to a university B.A., B.F.A. or Bachelors of Teaching in the Arts degree program. Those seeking Art History or Museum Studies as majors may need additional foreign language courses.

### General Education Requirements AGEC-A (35-36)

#### Written Communications (6)

ENG101	English Composition III (3)	
ENG102	English Composition IV (3)	

#### Oral Communications (3)

*Select an AGECE course.*

*For the following two categories, for each category select courses from different disciplines to total 15 credits..*

#### Arts & Humanities (6-9)

##### Arts (3)

*Fulfilled by the Studio Art Core Requirements.*

##### Humanities (3)

*Select an AGECE course.*

#### Social and Behavioral Sciences (6-9)

*Select AGECE courses from different disciplines.*

#### Physical and Biological Sciences (8)

*Select AGECE courses with a laboratory component.*

#### Mathematics (3-4)

MAT141 College Mathematics, Standard (4) or higher

#### Subject Options (0-6)

Based on your major, review the specific A.A. Degree requirements in the CAC catalog, consult an academic advisor, and see the Transfer Guides at <http://aztransfer.com/college/>

#### Special Awareness Requirements (0-9)

*Select courses from the AGECE list to fulfill these requirements.*

1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry



- At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender) (*Fulfilled by the Core Requirements*)
- At least three semester credits of coursework in Global/International Awareness or Historical Awareness (*Fulfilled by the Core Requirements*)

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences, or Transfer Electives may also be used to satisfy requirements in the three Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

### Core Requirements (30)

- ART101 Two Dimensional Design (3)
- ART102 Three Dimensional Design (3)
- ART107 Drawing I (3)
- ART109 Color Theory (3)
- ART207 Art History I (3)
- ART208 Art History II (3)
- MSC205 Portfolio Preparation (3)
- Transferable Studio Electives (9)

*Fulfillment of the Core Requirements may also fulfill the AGEC-A Arts Requirements.*

### Electives

Select approved elective courses which transfer as “Elective or better” to all three AZ public universities to complete the required A.A. Degree credits.

### Other Requirements (3)

Reading Competency: RDG094 College Reading

### Computer Competency (3):

- AGB124 Microcomputers in Agriculture
- CIS110 Fundamentals of Computer Literacy or higher

OR

Transferable Computer Competency course  
(Consult the CEG.)

### Other A.A. Degree Requirements

Some A.A. Degrees require up to 16 credits of a Second Language to demonstrate proficiency. Many four-year degrees require either a second semester or fourth semester level of a second language and strongly encourage students to complete this requirement at the community college prior to transfer.

Check your university catalog, Transfer Guides at <http://aztransfer.com/college/> or meet with an academic advisor. Students may demonstrate proficiency by completion of coursework and/or a proficiency test.

Students undecided about their major are encouraged to complete a fourth semester of a second language. CAC offers Spanish, French, Sign Language or other Foreign Languages and Literatures. Contact an academic advisor for assistance.

Students must earn a grade of “C” or better in each A.A. degree required course.

Students must earn a minimum of 20 credits from CAC which includes the AGEC-A requirements.

This A.A. Degree requires 60-64 semester credits.

## GRAPHIC DESIGN A.A.S.

*Signal Peak Campus*

### Total Credits: 65

Hands-on Graphic Design training prepares students for employment in entry-level positions in Advertising, Marketing, Print and Web Design fields.

### Recommended Proficiencies

RDG094 College Reading (3)

### General Education Requirements (25)

#### Written Communications (6)

- ENG101 English Composition III (3)
- ENG102 English Composition IV (3)

#### Oral Communications (3)

Select a COM course, or an AGEC course.

#### Arts and Humanities (6)

*Select two of the following:*

- ART100 Art Appreciation (3)
- ART207 Art History I (3)
- ART208 Art History II (3)

*Or select Art, Humanities, Literature, Music, Philosophy or Theatre courses numbered 100 or above, or an AGEC course.*

#### Social and Behavioral Sciences (3)

*Select a Social and Behavioral Science course, or an AGEC course.*

#### Physical and Biological Sciences (4)

*Select a Biological and Physical Lab Science course numbered 100 or above, or an AGEC Science Lab course.*





### Mathematics (3-4)



Select a college-level Mathematics course

BUS101 Business Mathematics (3)

OR

MAT101 Essential Mathematics (4) or higher

### Core Requirements (36)

ART101 Two-Dimensional Design (3)   
 ART102 Three-Dimensional Design (3)   
 ART107 Drawing I (3)  
 ART109 Color Theory (3)  
 BUS122 Small Business Management (3)  
 MSC101 Introduction to Mass Communication (3)  
 MSC120 Graphic Design and Adobe InDesign (3)  
 MSC122 Introduction to Web Design (3)  
 MSC125 Introduction to Illustrator (3)  
 MSC130 Digital Photography and Photoshop (3)  
 MSC220 Advanced Graphic Design (3)  
 MSC230 Advanced Digital Photography and Adobe Photoshop (3)

### Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading 

### Computer Competency (3):

AGB124 Microcomputers in Agriculture

CIS110 Fundamentals of Computer Literacy or higher

OR

Transferable Computer Competency course  
(Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 65 credits.



## CULINARY ARTS

### BAKING AND PASTRY CERTIFICATE

*Maricopa and Signal Peak Campuses*

### Total Credits: 18

This Certificate is designed to prepare students for employment in such establishments as retail bakeries, fine dining restaurants and hotels, upscale pastry and bake shops, commercial baking and entrepreneurship. The core courses will help students develop a solid foundation in basic baking skills. The student may tailor the degree to meet individual goals in areas such as bread baking, cake decorating, wedding cake production, and/or chocolate and sugar show pieces. Students pursuing an Associate of Applied Science (AAS) Culinary Arts Degree may specialize in Baking and Pastry. All courses in the Baking and Pastry Certificate are requirements for the Culinary Arts A.A.S. Degree. High school diploma or GED are recommended.

### Prerequisites:

RDG094 and MAT082 or equivalent placement test scores.

### Recommended Proficiencies:

High school diploma or GED recommended.

### Core Requirements (14)

NTR105 ServSafe Certification (1)

OR

CUL105 Food Safety Foundations (1)

CUL160 Baking and Pastry I (3)

CUL260 Baking and Pastry II (3)

NTR223 Food Service Management (3)

OR

HRM103 Managing Food Service Operations (3)

NTR104 Nutrition (3) AND NTR104L Personal Wellness Lab (1)


OR

NTR104 Nutrition (3) AND (1) Culinary Arts elective

OR

CUL268 Nutrition and Special Needs Baking (3) AND CUL (1) elective

OR

NTR141 Nutrition and Wellness (4) 

(NTR141 may also fulfill Physical and Biological Sciences Requirement for Culinary A.A.S. Degree)



**Electives: Choose 4 or more**

- CUL161 Cake Decorating (1)
- CUL162 Cake, Fillings and Frostings (1)
- CUL261 Advanced Cake Decorating (1)
- CUL262 Wedding Cakes (1)
- CUL263 Everything Chocolate (1)
- CUL264 Confectionary Show Pieces (1)
- CUL265 Artisan and Specialty Breads (1)
- CUL266 Advanced Pastry (1)

**Other Requirements**

Reading Competency: RDG094 College Reading

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of one-third of required Certificate credits from CAC.



**CULINARY ARTS A.A.S.**

**Maricopa and Signal Peak Campuses**

**Total Credits: 65**

The Culinary Arts Associate of Applied Science (AAS) Degree provides training in basic and advanced culinary skills and includes a practicum experience within a commercial kitchen for application of skills and knowledge. Concentrations include Culinary Arts, Baking and Pastry, Nutrition and Dietetics, and Business/Hospitality specialties. Students are prepared for positions as professional chefs, cooks, pastry chefs, and entry-level management or for advancement in the food service industry.

**Recommended Proficiencies**

College-level math and English Placement test scores. High school diploma or GED recommended.

**General Education Requirements (19-23)**

**Written Communications (3)**

- ENG101 English Composition III (3)
- ENG121 Applied Technical Writing (3)

**Oral Communications (3)**

Select a COM course, or an AGECE course.

**Arts and Humanities (3)**

Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGECE course.

**Social and Behavioral Sciences (3)**

Select an Anthropology, Economics, Geography, History, Political Science, Psychology or Sociology course numbered 100 or above, or an AGECE course.

**Physical and Biological Sciences (4)**

- NTR141 Nutrition and Wellness (4) (Also fulfills core requirement)

Or select a Biological and Physical Lab Science course numbered 100 or above, or an AGECE Science Lab course.

**Mathematics (3-4)**

- Select a college-level Mathematics course
- BUS101 Business Mathematics (3)

OR

- MAT101 Essential Mathematics (4) or higher

**Core Requirements (27)**

- CUL125 Sustainable Food Practices (1)
- CUL130 Culinary Principles and Applications I (3)
- CUL160 Baking and Pastry I (3)
- CUL170 Dining and Beverage Operations (2)
- CUL185 Catering Operations (2)
- CUL230 Culinary Principles and Applications II (3)
- CUL260 Baking and Pastry II (3)
- CUL290 Commercial Cooking Practicum (2)
- CUL105 Food Safety Foundations (1)

OR

- NTR105 ServSafe Certification (1)

Select one of the following (4):

- NTR104 Nutrition (3) AND
- NTR104L Personal Wellness Lab (1)

OR

- NTR104 Nutrition (3) AND CUL elective (1)

OR

- CUL268 Nutrition and Special Needs Baking (3) AND CUL elective (1)

OR

- NTR141 Nutrition and Wellness (4) (NTR141 also fulfills Physical and Biological Sciences)

If the Physical and Biological Sciences requirement is fulfilled by NTR141, select four (4) additional credits.



Select one of the following (3):

NTR223 Food Service Management (3)

**OR**

HRM103 Managing Food Service Operations (3)

### Electives (15 - 19)

Students may choose electives from all four categories below to meet 65 credit Degree requirement. Many of the electives are part of the Baking and Pastry Certificate, the Culinary Arts Certificate and the Hotel and Restaurant Management Certificate. Careful selection of electives makes it possible for a student to earn multiple certificates while earning an AAS degree. If NTR141 is chosen from the above lists, select 19 elective credits.

#### Culinary Arts Electives

CUL110 Asian Cuisine (1)  
 CUL112 Italian Cuisine (1)  
 CUL114 Mexican and Latin American Cuisine (1)  
 CUL116 French Cuisine (1)  
 CUL121 Culinary Concepts (1)  
 CUL205 HACCP Principles (1)  
 CUL292 Study Abroad: Italian Cuisine and Culture (4)  
 NTR142 Applied Food Science (3)

#### Baking and Pastry Electives

CUL161 Cake Decorating (1)  
 CUL162 Cake, Fillings and Frostings (1)  
 CUL261 Advanced Cake Decorating (1)  
 CUL262 Wedding Cakes (1)  
 CUL263 Everything Chocolate (1)  
 CUL264 Confectionary Show Pieces (1)  
 CUL265 Artisan Specialty Breads (1)  
 CUL266 Advanced Pastry (1)  
 CUL268 Nutrition and Special Needs Baking (3)

#### Nutrition and Dietetics Electives

NTR135 Healthy Weight for Adults (1)  
 NTR191 Nutrition Counseling Skill Development (3)  
 NTR232A Food and Culture (1)  
 NTR240 Clinical Nutrition (3)

#### Business/Hospitality Electives

ACC100 Fundamentals of Accounting (3)  
 BUS100 Introduction to Business (3)  
 BUS122 Small Business Management (3)  
 BUS123 Business Relations (3)  
 BUS180 Introduction to Marketing (3)  
 BUS201 Legal Environment of Business (3)  
 BUS250 Business Entrepreneurship (3)  
 HRM100 Introduction to Hospitality (3)  
 HRM101 Facilities Management (3)  
 HRM102 Management of Guest Services (3)  
 HRM145 Convention and Meeting Management (3)  
 HRM252 Managing Hospitality Human Resources (3)

### Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading 

### Computer Competency (3):

AGB124 Microcomputers in Agriculture

CIS110 Fundamentals of Computer Literacy or higher

**OR**

Transferable Computer Competency course  
 (Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 65 credits.

## CULINARY ARTS CERTIFICATE I

*Maricopa and Signal Peak Campuses*

### Total Credits: 16

Culinary Arts Certificate I prepares students to become entry-level culinary professionals within a commercial food service operation. Credits earned may be applied toward the Culinary Arts Certificate II or the Culinary Arts A.A.S. Degree.

### Recommended Proficiencies

College level math and English Placement test scores.  
 High school diploma or GED recommended.

### Core Requirements (16)

CUL130 Culinary Principles and Applications I (3)

CUL160 Baking and Pastry I (3)

CUL170 Dining and Beverage Operations (2)

CUL105 Food Safety Foundations (1)

**OR**

NTR105 ServSafe Certification (1)

NTR223 Food Service Management (3)

**OR**

HRM103 Managing Food Service Operations (3)

### Select one of the following (4):


NTR104 Nutrition (3) **AND**

NTR104L Personal Wellness Lab (1)

**OR**

NTR104 Nutrition (3) **AND** CUL elective (1)

**OR**

NTR141 Nutrition and Wellness (4) 

**OR**

CUL268 Nutrition and Special Needs Baking (3) **AND**  
 CUL elective (1)



## Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

## CULINARY ARTS CERTIFICATE II

*Maricopa and Signal Peak Campuses*

### Total Credits: 25

Culinary Arts Certificate II provides training in basic and advanced culinary skills, including the principles of professional cooking and baking, volume food production, food safety and sanitation, customer service, food service management skills, basic nutrition concepts and menu and facility planning. This Certificate prepares students for entry-level positions as cooks, chefs or food service managers.

### Recommended Proficiencies

College level math and English Placement test scores. High school diploma or GED recommended.

### Required Courses (25)

- CUL125 Sustainable Food Practices (1)
- CUL130 Culinary Principles and Applications I (3)
- CUL160 Baking and Pastry I (3)
- CUL170 Dining and Beverage Operations (2)
- CUL185 Catering Operations (2)
- CUL230 Culinary Principles and Applications II (3)
- CUL260 Baking and Pastry II (3)
- CUL105 Food Safety Foundations (1)

**OR**

- NTR105 ServSafe Certification (1)

- NTR223 Food Service Management (3)

**OR**

- HRM103 Managing Food Service Operations (3)

### Select one of the following (4):

- NTR104 Nutrition (3) **AND**
- NTR104L Personal Wellness Lab (1)

**OR**

- NTR104 Nutrition (3) **AND** CUL elective (1)

**OR**

- NTR141 Nutrition and Wellness (4)

**OR**

- CUL268 Nutrition and Special Needs Baking (3) **AND** CUL elective (1)

## Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

## DIESEL/HEAVY EQUIPMENT

### DIESEL AND HEAVY EQUIPMENT TECHNOLOGY A.A.S.

*Signal Peak Campus*

### Total Credits: 73

This Degree prepares students for employment as diesel and heavy equipment technicians with an array of career opportunities within the industry. A typical graduate will seek employment with an equipment dealer, equipment rental company, or a heavy highway construction company. Students receive training applicable for serving and repairing all types of diesel equipment.

The Diesel and Heavy Equipment Technology Degree is accredited by the Associated Equipment Distributors Foundation (AEDF) located at 600 22<sup>nd</sup> Street Suite 220 Oak Brook, IL 60523; 630-574-0650; <http://www.aedfoundation.org/>

### Prerequisites

Students must be admitted to D&HET Cohort and hold current and valid driver license, or instructor consent.

### General Education Requirements (19)

#### Written Communications (3)

- ENG101 English Composition III (3)
- ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

Select a COM course, or an AGECE course.

#### Arts and Humanities (3)

Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGECE course.





### Social and Behavioral Sciences (3)

Select an Anthropology, Economics, Geography, History, Political Science, Psychology or Sociology course numbered 100 or above, or an AGEC course.

### Physical and Biological Sciences (4)

Select a Biological and Physical Lab Science course numbered 100 or above, or an AGEC Science Lab course.

### Mathematics (3)

Select a college-level Mathematics course

BUS101 Business Mathematics (3)

OR

MAT101 Essential Mathematics (4) or higher

### Core Requirements (44)

DIE110 Introduction to Diesel Engines and Fuel Systems (3)

DIE111 Introduction to Electricity/Electronics (3)

DIE112 Introduction to Mobile Hydraulics (3)

DIE113 Introduction to Power Trains (3)

DIE114 Introduction to Power Train Repair and Diagnostics (4)

DIE115 Introduction to Diesel Engine Repair and Diagnostics (4)

DIE118 Computer Systems for Equipment Technicians (3)

DIE210 Advanced Diesel Engines and Fuel Systems (5)

DIE211 Advanced Electrical/Electronic Systems (3)

DIE212 Advanced Mobile Hydraulics (3)

DIE214 Advanced Power Train Repair and Diagnostics (5)

HEO121 Heavy Equipment Operations I (5)

### Electives: Select three of the following courses (9)

AGB124 Microcomputers in Agriculture (3)

CIS120 Survey of Computer Information Systems (3)

DIE116 Introduction to Diesel Technology (3)

DIE117 Workplace Success Principles, Practices, and Strategies (3)

DIE222 Mobile Refrigeration (3)

WLD Any Welding course (3)

DIE196 Diesel Equipment Technology and HEO Internship I (3)

AND

DIE296 Diesel Equipment Technology and HEO Internship II (3)

### Other Requirements (1-4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading

### Computer Competency (3):

AGB124 Microcomputers in Agriculture

OR

CIS110 Fundamentals of Computer Literacy or higher (Select CIS120 from Electives)

OR

Transferable Computer Competency course (Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 73 credits.

## DIESEL AND HEAVY EQUIPMENT TECHNOLOGY CERTIFICATE

*Signal Peak Campus*

### Total Credits: 53

The Diesel and Heavy Equipment Technology Certificate prepares students for employment as diesel and heavy equipment technicians with an array of career opportunities within the industry. A typical graduate will seek employment with an equipment dealer, equipment rental company, or a highway heavy construction company. Students receive training applicable for servicing and repairing all types of diesel equipment.

The Diesel and Heavy Equipment Technology Certificate is accredited by the Associated Equipment Distributors Foundation (AEDF) located at 600 22<sup>nd</sup> Street Suite 220 Oak Brook, IL 60523; 630-574-0650; <http://www.aedfoundation.org/>

### Prerequisites

Students must be admitted to D&HET Cohort; current and valid driver license; or instructor consent.

### Core Requirements (44)

DIE110 Introduction to Diesel Engines & Fuel Systems (3)

DIE111 Introduction to Electricity/Electronics (3)

DIE112 Introduction to Mobile Hydraulics (3)

DIE113 Introduction to Power Trains (3)

DIE114 Introduction to Power Train Repair & Diagnostics (4)

DIE115 Introduction to Diesel Engine Repair and Diagnostics (4)

DIE118 Computer Systems for Equipment Technicians (3)

DIE210 Advanced Diesel Engines and Fuel Systems (5)



- DIE211 Advanced Electrical/Electronic Systems (3)
- DIE212 Advanced Mobile Hydraulics (3)
- DIE214 Advanced Power Train Repair and Diagnostics (5)
- HEO121 Heavy Equipment Operations I (5)

**Electives: Select three courses (9)**

- AGB124 Microcomputers in Agriculture (3)
- CIS120 Survey of Computer Information Systems (3)
- DIE116 Introduction to Diesel Technology (3)
- DIE117 Workplace Success Principles, Practices, and Strategies (3)
- DIE222 Mobile Refrigeration (3)
- ENG121 Applied Technical Writing (3)
- WLD Any Welding course (3)
- DIE196 Diesel Equipment Technology and HEO Equipment Internship I (3)

AND

- DIE296 Diesel Equipment Technology and HEO Equipment Internship II (3)

**Other Requirements**

Reading Competency: RDG094 College Reading

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.



**HEAVY EQUIPMENT OPERATOR A.A.S.**

**Signal Peak Campus**

**Total Credits: 68**

The Heavy Equipment Operator A.A.S. degree prepares students to operate, maintain and service heavy equipment and layout construction projects.

The Heavy Equipment Operator Degree is accredited by the National Center for Construction Education and Research (NCCER), 13614 Progress Boulevard, Alachua, FL 32615; 888-622-3720; <http://www.nccer.org>

**General Education Requirements (19-23)**

**Written Communications (3)**

- ENG101 English Composition III (3)

OR

- ENG121 Applied Technical Writing (3)

**Oral Communications (3)**

Select a COM course, or an AGECE course.

**Arts and Humanities (3)**

Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGECE course.

**Social and Behavioral Sciences (3)**

Select a Social and Behavioral Science course, or an AGECE course.

**Physical and Biological Sciences (4)**

- AGS221 Soil Science (4)
- GLG Any Geology course (4)
- PHY100 Physical Universe (4)

Or select a Biological and Physical Lab Science course numbered 100 or above, or an AGECE Science Lab course.

**Mathematics (3-4)**

Select a college-level Mathematics course

- BUS101 Business Mathematics (3)

OR

- MAT101 Essential Mathematics (4) or higher


**Core Requirements (37)**

- CET125 Introduction to Earthmoving Methods and Operations (3)
- CET221 Basic Surveying and Grade Staking (4)
- DIE225 Preventive Maintenance (2)
- HEO121 Heavy Equipment Operations I (5)
- HEO122 Heavy Equipment Operations II (5)
- HEO127 Heavy Equipment Reconditioning (4)
- HEO128 Diesel Equipment Service and Repair (4)
- HEO221 Advanced Heavy Equipment Operations III (5)
- HEO222 Applied Heavy Equipment Construction (5)




### Electives:

Select from the following courses (8):

- HEO100 Introduction to Heavy Equipment (5)
- HEO223 Commercial Driver License Preparation (3)
- BUS Any Business course (3)
- PEH102 First Aid/CPR (2)
- WLD Any Welding course (3)
- DIE222 Mobile Refrigeration (3)
- COM202 Introduction to Group Communication (3) 
- DIE196 Diesel Equipment Technology and HEO Internship I (3)
- DIE296 Diesel Equipment Technology and HEO Internship II (3)

### Other Requirements (4)

- PAC or DAN Course (1)
- Reading Competency: RDG094 College Reading 

### Computer Competency (3):

- AGB124 Microcomputers in Agriculture (3)
- CIS110 Fundamentals of Computer Literacy (3) or higher **OR**

Transferable Computer Competency course  
(Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale. Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 68 credits.

## HEAVY EQUIPMENT OPERATOR CERTIFICATE

*Signal Peak Campus*

### Total Credits: 40

The Heavy Equipment Operator Certificate focuses on the operation, maintenance and service of heavy equipment, layout of construction projects, and supervisory duties in the field of Heavy Equipment Operators.

The Heavy Equipment Operator Certificate is accredited by the National Center for Construction Education and Research (NCCER), 13614 Progress Boulevard, Alachua, FL 32615; 888-622-3720; <http://www.nccer.org>

### General Education Requirements (6)

#### Communications (3)

Select a COM course, or an AGECE course.

### Mathematics (3-4)

Select a college-level Mathematics course

- BUS101 Business Mathematics (3)

**OR**

- MAT101 Essential Mathematics (4) or higher

### Core Requirements (23)

- CET125 Intro to Earthmoving Methods & Operations (3)
- CET221 Basic Surveying and Grade Staking (4)
- DIE225 Preventive Maintenance (2)
- HEO121 Heavy Equipment Operations I (5)
- HEO122 Heavy Equipment Operations II (5)

### Choose one of the following courses (4):

- HEO127 Heavy Equipment Reconditioning (4)
- HEO128 Diesel Equipment Service and Repair (4)



### Computer Competency (3)

Select one:

- CIS Any Computer Literacy course (3)
- AGB124 Microcomputers in Agriculture (3)

### Electives (8)

Select electives to meet 40 credit Certificate requirement.

- AGS221 Soil Science (4) 
- GLG Any Geology course (4)
- HEO100 Introduction to Heavy Equipment (5)
- HEO223 Commercial Driver License Preparation (3)
- HEO127 Heavy Equipment Reconditioning (4) (*If not selected above*)
- HEO128 Diesel Equipment Service and Repair (4) (*If not selected above*)
- HEO221 Advanced Heavy Equipment Operations III (5)
- HEO222 Applied Heavy Equipment Construction (5)
- MAT121 Intermediate Algebra, Standard (4) or higher
- PHY100 Physical Universe (4) 
- BUS Any Business course (3)
- PEH102 First Aid/CPR (2)
- WLD Any Welding course (3)
- DIE222 Mobile Refrigeration (3)
- COM202 Introduction to Group Communication (3) (*If not selected above*)
- DIE196 Diesel Equipment Technology & HEO Internship I (3)
- DIE296 Diesel Equipment Technology & HEO Internship II (3)

### Other CAC Requirements

Reading Competency: RDG094 College Reading 

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.



## EDUCATION

### EARLY CHILDHOOD EDUCATION

#### FAMILY CHILDCARE A.A.S.

*Signal Peak Campus*

#### Total Credits: 64

The Early Childhood Education Family Childcare A.A.S. program provides coursework to fulfill the education and training requirements for an A.A.S. Degree in the Family Childcare specialization and the Council for Professional Recognition Child Development Associate (CDA) Credential. The Degree program prepares individuals to operate a Childcare business in their home.

#### General Education Requirements (19-23)

##### Written Communications (3)

ENG101 English Composition III (3)  

ENG121 Applied Technical Writing (3)

##### Oral Communications (3)

Select a COM course, or an AGECE course.

##### Arts and Humanities (3)

Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGECE course.

##### Social and Behavioral Sciences (3)

Select a Social and Behavioral Science course, or an AGECE course.

##### Physical and Biological Sciences (4)

Select a Biological and Physical Lab Science course numbered 100 or above, or an AGECE Science Lab course.

##### Mathematics (3-4)

Select a college-level Mathematics course

BUS101 Business Mathematics (3)

OR

MAT101 Essential Mathematics (4) or higher

#### Core Requirements (24)

- ECE117 Guidance for Family Childcare (3)
- ECE121 Health for Family Childcare (1)
- ECE122 Safety for Family Childcare (1)
- ECE123 Nutrition for Family Childcare (1)
- ECE177 Ages and Stages of Children 0-12 (3)
- ECE229 Professional Portfolio Preparation (3)
- ECE255 Communications for Family Childcare (3)
- ECE257 The Business of Family Childcare (3)
- ECE272 Family Childcare Environments (3)
- ECE279 Curriculum for Family Childcare (3)

#### Electives (17)

Select electives 100 level or above to meet the 64 credit requirement.

#### Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading 

#### Computer Competency (3):

AGB124 Microcomputers in Agriculture

CIS110 Fundamentals of Computer Literacy or higher

OR

Transferable Computer Competency course (Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 64 credits.

### EARLY CHILDHOOD EDUCATION

#### FAMILY CHILDCARE CERTIFICATE

*Signal Peak Campus*

#### Total Credits: 24

The Early Childhood Education Family Childcare Certificate provides coursework to fulfill the education and training requirements for a Certificate of Completion in the Family Childcare specialization and the Council for Professional Recognition Child Development Associate (CDA) Credential. The Certificate program prepares individuals to operate a home Childcare business.

#### Core Requirements (24)

- ECE117 Guidance for Family Childcare (3)
- ECE121 Health for Family Childcare (1)
- ECE122 Safety for Family Childcare (1)
- ECE123 Nutrition for Family Childcare (1)
- ECE177 Ages and Stages of Children 0-12 (3)
- ECE229 Professional Portfolio Preparation (3)
- ECE255 Communications for Family Childcare (3)
- ECE257 The Business of Family Childcare (3)
- ECE272 Family Childcare Environments (3)
- ECE279 Curriculum for Family Childcare (3)

#### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.





## EARLY CHILDHOOD EDUCATION INFANT-TODDLER A.A.S.


*Maricopa, San Tan, Signal Peak &  
Superstition Mountain Campuses*

### Total Credits: 64

The Early Childhood Education Infant-Toddler A.A.S. program provides solid foundational knowledge, field experiences and common skills and strategies that prepare students for multiple roles in the Infant-Toddler field.

### General Education Requirements (19-23)

#### Written Communications (3)

ENG101 English Composition III (3)    
ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

Select a COM course, or an AGEC course.

#### Arts and Humanities (3)

Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGEC course.

#### Social and Behavioral Sciences (3)

Select a Social and Behavioral Science course, or an AGEC course.

#### Physical and Biological Sciences (4)

Select a Biological and Physical Lab Science course numbered 100 or above, or an AGEC Science Lab course.

#### Mathematics (3-4)

Select a college-level Mathematics course

BUS101 Business Mathematics (3)

OR

MAT101 Essential Mathematics (4) or higher

#### Core Requirements (10)

ECE120B Providing a Healthy Environment (1)  
ECE120D Ensuring a Safe Environment for Children (1)  
ECE125A Nutrition (1)  
ECE250 Professionalism (1)  
ECE280 Inclusion of Children with Special Needs (3)  
ECE283 Valuing Families and Diversity (3)

### Specialization Requirements (16)

ECE128A Environments for Infants and Toddlers (1)  
ECE129B Observation Skills in the Infant and Toddler Program (1)  
ECE129C Record Keeping Skills: Infant and Toddler Programs (1)  
ECE176 Early Childhood Development and Theories (3)  
ECE183 Curriculum and Learning Materials for Infants (1)  
ECE184 Curriculum and Learning Materials for Toddlers (1)  
ECE226A Cognitive Development of Infants and Toddlers (1)  
ECE226C Language Development of Infants and Toddlers (1)  
ECE227B Guidance and Discipline of Infants and Toddlers (1)  
ECE227C Enhancing Social Competency of Infants and Toddlers (1)  
ECE228B Physical Development in Infancy and Toddlerhood (1)  
ECE271 Creating Early Childhood Environments (3)

### Electives (15)

Select electives 100 level or above to meet the 64 credit requirement.

### Other Requirements (4)


PAC or DAN Course (1)

Reading Competency: RDG094 College Reading 

#### Computer Competency (3):

AGB124 Microcomputers in Agriculture

OR

CIS110 Fundamentals of Computer Literacy or higher  
(CIS120  is recommended for students planning to transfer and complete a bachelor's degree.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 64 credits.

## EARLY CHILDHOOD EDUCATION INFANT-TODDLER CERTIFICATE

*Signal Peak Campus*

### Total Credits: 29

The Early Childhood Education Infant-Toddler Certificate provides coursework to fulfill the education and training requirements for a Certificate of Completion in the Infant-Toddler specialization and the Council for Professional Recognition Child Development Associate (CDA) Credential.



**Core Requirements (13)**

- ECE120B Providing a Healthy Environment (1)
- ECE120D Ensuring a Safe Environment for Children (1)
- ECE125A Nutrition (1)
- ECE229 Professional Portfolio Preparation (3)
- ECE250 Professionalism (1)
- ECE280 Inclusion of Children with Special Needs (3)
- ECE283 Valuing Families and Diversity (3)

**Specialization Requirements for Infant-Toddler (16)**

- ECE128A Environments for Infants and Toddlers (1)
- ECE129B Observation Skills in the Infant and Toddler Program (1)
- ECE129C Record Keeping Skills: Infant and Toddler Programs (1)
- ECE176 Early Childhood Development and Theories (3)
- ECE183 Curriculum and Learning Materials for Infants (1)
- ECE184 Curriculum and Learning Materials for Toddlers (1)
- ECE226A Cognitive Development of Infants and Toddlers (1)
- ECE226C Language Development of Infants and Toddlers (1)
- ECE227B Guidance and Discipline of Infants and Toddlers (1)
- ECE227C Enhancing Social Competency of Infants and Toddlers (1)
- ECE228B Physical Development in Infancy and Toddlerhood (1)
- ECE271 Creating Early Childhood Environments (3)

**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.



**EARLY CHILDHOOD EDUCATION MANAGEMENT A.A.S.**

*Maricopa, Signal Peak & Superstition Mountain Campuses*

**Total Credits: 64**

The Early Childhood Education Management A.A.S. program provides for the development of skills and competencies in operating a Childcare program. The degree program prepares individuals to supervise, market and manage a Childcare program.

**General Education Requirements (19-23)**

**Written Communications (3)**

- ENG101 English Composition III (3)
- ENG121 Applied Technical Writing (3)

**Oral Communications (3)**

Select a COM course, or an AGECE course.

**Arts and Humanities (3)**

Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGECE course.

**Social and Behavioral Sciences (3)**

- ECE276 Child Development (3)
- (Also fulfills Core Requirement)

Or select a Social and Behavioral Science course, or an AGECE course.

**Physical and Biological Sciences (4)**

Select a Biological and Physical Lab Science course numbered 100 or above, or an AGECE Science Lab course.

**Mathematics (3-4)**

Select a college-level Mathematics course

- BUS101 Business Mathematics (3)

OR

- MAT101 Essential Mathematics (4) or higher

**Core Requirements (28)**

- ECE220 Managing Food, Health, and Safety in Childcare Programs (3)
- ECE221 ECE Program Financial Management (3)
- ECE222 Managing and Evaluating ECE Programs (3)
- ECE223 Planning and Promoting an ECE Program (3)
- ECE224 Supervision in Early Childhood Programs (3)
- ECE229 Professional Portfolio Preparation (3)



- ECE248 Early Childhood Program Philosophies (1)  
 ECE276 Child Development (3)   
*(Also fulfills Social and Behavioral Requirement)*  
 ECE280 Inclusion of Children with Special Needs (3)  
 ECE283 Valuing Families and Diversity (3)

### Electives (13)

Select electives 100 level or above to meet the 64 credit requirement.

### Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading

### Computer Competency (3):

AGB124 Microcomputers in Agriculture

OR

CIS110 Fundamentals of Computer Literacy or higher  
*(CIS120 is recommended for students planning to transfer and complete a bachelor's degree.)*

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 64 credits.

## EARLY CHILDHOOD EDUCATION MANAGEMENT CERTIFICATE

*Signal Peak Campus*

### Total Credits: 31

The Early Childhood Education Management Certificate provides for the development of skills and competencies in managing a Childcare program.

### Recommended Proficiencies

RDG094 College Reading (3)

### Core Requirements (31)

- ECE220 Managing Food, Health, and Safety in Childcare Programs (3)  
 ECE221 ECE Program Financial Management (3)  
 ECE222 Managing and Evaluating ECE Programs (3)  
 ECE223 Planning and Promoting an ECE Program (3)  
 ECE224 Supervision in Early Childhood Programs (3)  
 ECE229 Professional Portfolio Preparation (3)  
 ECE248 Early Childhood Program Philosophies (1)  
 ECE276 Child Development (3)

- ECE280 Inclusion of Children with Special Needs (3)  
 ECE283 Valuing Families and Diversity (3)  
 CIS120 Survey of Computer Information Systems (3)   
*(Recommended for students planning to transfer to earn a bachelor's degree)*

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

## EARLY CHILDHOOD EDUCATION PRESCHOOL A.A.S.

*Maricopa, San Tan, Signal Peak & Superstition Mountain Campuses*

### Total Credits: 64

The Early Childhood Education Preschool A.A.S. program provides coursework to fulfill the education and training requirements for an A.A.S. Degree with a Preschool specialization and the Council for Professional Recognition Child Development Associate (CDA) Credential. Graduates will be prepared to function as a teacher or aide in an Early Childhood program setting.

The A.A.S. Early Childhood Education/Preschool Degree is accredited by the National Association for the Education of Young Children (NAEYC) Commission on Early Childhood Associate Degree Accreditation located at 1313 L. Street NW, Suite 500, Washington, DC 20005-4101. 202-350-8862. [www.naeyc.org](http://www.naeyc.org)

### General Education Requirements (19-23)

#### Written Communications (3)

ENG101 English Composition III (3)

OR

ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

Select a COM course, or an AGEC course.

#### Arts and Humanities (3)

Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGEC course.



## Social and Behavioral Sciences (3)

ECE276 Child Development (3)

*(Also fulfills Core Requirement)*

*Or select a Social and Behavioral Science course, or an AGECE course.*

## Physical and Biological Sciences (4)

*Select a Biological and Physical Lab Science course numbered 100 or above, or an AGECE Science Lab course.*

## Mathematics (3-4)

*Select a college-level Mathematics course*

BUS101 Business Mathematics (3)

**OR**

MAT101 Essential Mathematics (4) or higher

## Core Requirements (35)

- ECE116 Guiding and Observing Children (3)
  - ECE120B Providing a Healthy Environment (1)
  - ECE120D Ensuring a Safe Environment for Children (1)
  - ECE125A Nutrition (1)
  - ECE176 Early Childhood Development and Theories (3)
  - ECE212 Creative Expressions for Young Children (3)
  - ECE229 Professional Portfolio Preparation (3)
  - ECE248 Early Childhood Program Philosophies (1)
  - ECE250 Professionalism (1)
  - ECE271 Creating Early Childhood Environments (3)
  - ECE276 Child Development (3)
  - (Also fulfills Social and Behavioral Requirement)*
  - ECE278 Effective Curriculum Design for Teachers of Young Children (3)
  - ECE280 Inclusion of Children with Special Needs (3)
  - ECE283 Valuing Families and Diversity (3)
  - ECE124 Active Learning in Math and Science (3)
- OR**
- ECE254 Emergent Language and Literacy (3)

## Electives (9)

*Select electives from the AGECE list to meet the 64 credit requirement.*

## Other Requirements (4)

- PAC or DAN Course (1)
- Reading Competency: RDG094 College Reading

## Computer Competency (3):

- AGB124 Microcomputers in Agriculture
- OR**
- CIS110 Fundamentals of Computer Literacy or higher *(CIS120 is recommended for students planning to transfer and complete a bachelor's degree.)*

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 64 credits.

## EARLY CHILDHOOD EDUCATION PRESCHOOL CERTIFICATE

*Signal Peak Campus*

### Total Credits: 28

The Early Childhood Education Preschool Certificate provides coursework to fulfill the education and training requirements for a Certificate of Completion in the Preschool specialization and the Council for Professional Recognition Child Development Associate (CDA) Credential.

## Core Requirements (25)

- ECE116 Guiding and Observing Children (3)
- ECE120B Providing a Healthy Environment (1)
- ECE120D Ensuring a Safe Environment for Children (1)
- ECE125A Nutrition (1)
- ECE176 Early Childhood Development and Theories (3)
- ECE229 Professional Portfolio Preparation (3)
- ECE250 Professionalism (1)
- ECE271 Creating Early Childhood Environments (3)
- ECE276 Child Development (3)
- ECE278 Effective Curriculum Design for Teachers of Young Children (3)
- ECE283 Valuing Families and Diversity (3)

## Other Requirements (3)

### Computer Competency (3):

- AGB124 Microcomputers in Agriculture
  - CIS110 Fundamentals of Computer Literacy or higher CIS course
- OR**

Computer Competency course

- CIS120 Survey of Computer Information Systems (3)
- (Recommended for students planning to transfer.)*

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.





## ELEMENTARY EDUCATION

### A.A.E.E.

#### District-Wide

### Total Credits: 60-64

The Associate of Arts in Elementary Education (A.A.E.E.) Degree is appropriate for students who require practical and professional skills and knowledge that can lead to upper division programs in elementary and special education, and prepares para-educators.

For a list of Common Courses associated with specific programs of study, go to the Common Course Matrix Archives and select the current year or the year you completed the course(s): <http://steeringcommittee.aztransfer.com/resources/ccm.html>.

AGEC courses are transferable to all three Arizona public universities provided students earn a grade of "C" or better. Contact an academic advisor for assistance.

### Recommended Proficiencies

College level English, math and reading courses or placement test scores to demonstrate proficiency

### AGEC-A (35-36 Credits)

The Arizona General Education Curriculum focused on the Arts (AGEC-A) is a 35 semester credit block that fulfills the lower division general education requirements of liberal arts majors (e.g., social science, fine arts, humanities). The AGEC-A requires a minimum of MAT141 or higher plus 32 credits. The AGEC block transfers to any Arizona public or tribal community college and to the three Arizona public universities.

### General Education Requirements

For the following eight categories select the recommended AGEC course, or an AGEC course from the equivalent AGEC category.

#### Written Communications (6)

ENG101 English Composition III (3)    
ENG102 English Composition IV (3)  

#### Oral Communications (3)

Select an AGEC course.

Students must choose coursework from more than one discipline for both the Arts and Humanities Category and the Social and Behavioral Sciences Category.

### Arts & Humanities (6-9)

Select a minimum of one Art (3) and one Humanities (3) AGEC course. Students may select up to 9 credits of coursework from two different prefixes to fulfill the Arts & Humanities Category.


#### Arts (6)

Select Art AGEC courses.

#### Humanities (3)

LIT291 Children's Literature for Educators (3)   
(Also fulfills AGEC Intensive Writing Requirement)















### Social and Behavioral Sciences (6-9)

HIS101 United States History I (3)  (Also fulfills AGEC Global Awareness Requirement)

Select an AGEC three credit course from Social and Behavioral Sciences in a discipline other than HIS.
















### Biological/Life Lab Sciences (4)

Select one AGEC course:

AGS101 World of Plants (4)   
AGS104 Agricultural Environmental Science (4)   
AGS106 Entomology (4)   
AGS221 Soil Science (4)   
AGS240 Plant Biology (4)   
BIO100 Biology Concepts (4)   
BIO156 Human Biology for Allied Health (4)   
BIO160 Introduction to Human Anatomy/Physiology (4)   
BIO181 General Biology I (4)   
BIO182 General Biology II (4)   
BIO201 Human Anatomy & Physiology I (4)   
BIO202 Human Anatomy & Physiology II (4)   
BIO205 Microbiology (4)   
NTR141 Nutrition and Wellness (4)  (Consult the CEG.)

### Physical Lab Sciences (4)

Select one AGEC course:

AST101 Survey of Astronomy (4)   
CHM130 Fundamental Chemistry (4)   
CHM151 General Chemistry I (4)   
CHM152 General Chemistry II (4)   
CHM235 General Organic Chemistry I (4)   
CHM236 General Organic Chemistry II (4)   
ENV101 Environmental Science (4)  (Consult the CEG.)  
GLG101 Physical Geology (4)   
GLG102 Historical Geology (4)   
GLG110 Environmental Geology (4)   
PHY100 Physical Universe (4)   
PHY111 College Physics I (4)   
PHY112 College Physics II (4)   
PHY121 University Physics I: Mechanics (4)   
PHY122 University Physics II: Electricity and Magnetism (4) 



## Mathematics (3-4 Credits)

MAT141 College Mathematics, Standard (4) or higher

## Subject Options (0-6)

Based on your major, review the specific A.A. Degree requirements in the CAC catalog, consult an academic advisor, and see the Transfer Guides at <http://aztransfer.com/college/>

## Special Awareness Requirements (0-9)

Select AGEC courses to fulfill these requirements.

- Intensive Writing/Critical Inquiry (3)  
LIT291 Children's Literature for Educators (3)   
*(Also fulfills AGEC Humanities Requirement)*
- Cultural Awareness (Ethnic/Race/Gender) (3)  
EDU230 Cultural Values in Education (3)   
*(Also fulfills Core Requirement)*
- Global/International/Historical Awareness (3)  
HIS101 United States History I (3)  
*(Also fulfills AGEC Social/Behavioral Sciences Requirement)*

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences, Core, Specialty Area or Transfer Electives, may also be used to satisfy the three (3) Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

## Core Requirements (21)

- EDU221 Introduction to Education (3)
- EDU222 Introduction to Special Education (3)
- EDU228 Behavior Management (3)
- EDU230 Cultural Values in Education (3) *(Also fulfills AGEC Cultural Awareness Requirement)*
- EDU240 Provisional Structured English Immersion (SEI) (3)
- MAT201 Math for Elementary Teachers I (3)
- MAT202 Math for Elementary Teachers II (3)

## Specialty Tracks (3 credits)

Select one of the three (3) Specialty Tracks below or select a combination of the courses below to total the 60-64 credits required to earn this A.A. Degree.

**Upper Elementary Teaching** majors select one or more:

- EDU225 Relationships in the Classroom (3)
- ENG205 Introduction to the Study of Language (3)

**OR**

**Early Childhood K-3 Teaching** majors select one:

- ECE176 Early Childhood Development and Theories (3)
- ECE271 Creating Early Childhood Environments (3)

- ECE 255 Communications Family Childcare (3)
- ECE 276 Child Development (3)
- ECE 278 Effective Curriculum Design (3)
- ECE 279 Curriculum Family Childcare (3)
- ECE 283 Valuing Families and Diversity (3)

**OR**

**Special Education majors** select one:

- EDU225 Relationships in the Classroom (3)
- ENG205 Introduction to the Study of Language (3)
- ECE176 Early Childhood Development and Theories (3)
- ECE271 Creating Early Childhood Environments (3)
- ECE 276 Child Development (3)
- ECE 278 Effective Curriculum Design (3)
- ECE 283 Valuing Families and Diversity (3)

Based on your major, review the specific A.A. Degree Requirements in the CAC catalog, consult an academic Advisor, and see the Transfer Guides at <http://aztransfer.com/college/>

## Other Requirements (3)

Reading Competency: RDG094 College Reading

## Computer Competency (3):

AGB124 Microcomputers in Agriculture (3)

**OR**

CIS120 Survey of Computer Information Systems (3)

**OR**

Transferable computer competency course (Consult the CEG to determine transferability to the three state public universities).

Additional transferable electives to achieve a minimum of 60-64 credit hours for the A.A.E.E. Degree.

## Other A.A.E.E. Degree Requirements

For students who plan to transfer to a four-year baccalaureate degree program, some programs require demonstrated proficiency in a Second Language, i.e. up to 16 credits of a Second Language to demonstrate proficiency. Many four-year degrees require either a second semester or fourth semester level of a second language and strongly encourage students to complete this requirement at the community college prior to transfer.

Check your university catalog, Transfer Guides at <http://aztransfer.com/college/>

or meet with an academic advisor regarding your major's second language requirement. Students may demonstrate proficiency by completion of coursework and/or a proficiency test.

Students undecided about their major are encouraged to complete a fourth semester of a Second Language. CAC offers Spanish, French, Sign Language and other Foreign



Languages and Literatures. Contact an academic advisor for assistance.

Note: Some Transfer Articulation Agreements require a specific number of credits in the Arts & Humanities or the Social and Behavioral Sciences AGEC categories. Refer to the official published TAG, TAP, CAC2NAU or other articulation pathway documents for details and consult an advisor.

Students must earn a grade of “C” or better in each A.A.E.E. degree required course.

Students must earn a minimum of 20 credits from CAC which includes the AGEC-A requirements.

The A.A.E.E. Degree requires a minimum of 60-64 credits.



## EMERGENCY MEDICAL SERVICES

### BASIC EMT CERTIFICATE

*Aravaipa & Superstition Mountain Campuses and Corporate Center*

#### Total Credits: 9.5

Emergency Medical Technician Certificate of Completion for students who successfully complete EMS100 (CPR for Professionals) and EMS125 (Basic EMT).

#### Prerequisites

Ninth grade reading level, immunizations, CPR Certification-Healthcare Provider or Professional Rescuer

#### Core Requirements (9.5)

EMS100 CPR for Professionals (.5)  
EMS125 Emergency Medical Technician (9)

#### Other Requirements

Students must receive a course completion card and be scheduled to take the National Registry of EMT exam.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

## CRITICAL CARE FOR PARAMEDICS CERTIFICATE

*Superstition Mountain Campus*

#### Total Credits: 6.25

Advanced level education and training in Emergency Medical Services with specific training in Critical Care for nurses, physicians, and paramedics. The EMS275 course prepares students to function as a member of the critical care transport team. Students gain a higher level of understanding of patient care in the pre-hospital setting. EMS275 combined with Advanced Cardiac Life Support (ACLS) and the course prerequisites prepares student to apply for a completion certificate.



## Prerequisites

- EMS272A Advanced Emergency Medical Technology/ Paramedic, Module I (17.5)
- EMS272B Advanced Emergency Medical Technology/ Paramedic Module II (8.5)
- EMS272C Advanced Emergency Medical Technology/ Paramedic, Module III (8.5)
- EMS272D Advanced Emergency Medical Technology/ Paramedic Practicum I (6)
  
- EMS272E Advanced Emergency Medical Technology/ Paramedic Practicum II (6)

**OR**

Certified Paramedic or Registered Nurse, or Physician or equivalent

## AND all of the following

1. EMS100 CPR for Professionals (.5) or current Cardio Pulmonary Resuscitation (CPR) certification per American Heart Association standards or equivalent
2. Current Advanced Cardiac Life Support (ACLS) certification per American Heart Association standards, BTLS or PHTLS, PALS or PEPP;
3. Current ARC Certification or AHA BLS Health Care Provider, or NSC Green Cross Professional Rescuer or Division Chair consent.

## Core Requirements (6.25)

- EMS275 Critical Care for Paramedics (CEMTP) (5.25)
- EMS240 Advanced Cardiac Life Support (ACLS) (1)

## Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.



## PARAMEDICINE A.A.S.

***Superstition Mountain Campus***

### Total Credits: 73.5

The Paramedicine A.A.S. Degree prepares students to work as paramedics with knowledge and skills required for emergency care, stabilization and immobilization of victims of illness and injury.

## Prerequisites

- EMS100 CPR for Professionals (or current CPR certification) (.5)
- EMS125 Emergency Medical Technician (Arizona Department of Health Services EMT Certified for 1 year) (9)
- FSC129 Hazardous Materials Awareness/Operations (3)

*The above three courses and their respective credits are not calculated into the total number of credits required for the A.A.S. Degree.*

## Recommended Proficiencies

Students must meet eligibility requirements established by the Arizona Department of Health Services, Bureau of EMS.

## General Education Requirements (19-20)

### Written Communications (3)

- ENG101 English Composition III (3)

**OR**

- ENG121 Applied Technical Writing (3) (*Recommended*)

### Oral Communications (3)

*Select a COM course, or an AGEC course.*

### Arts and Humanities (3)

*Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGEC course.*

### Social and Behavioral Sciences (3)

- PSY101 Introduction to Psychology (3)

**OR**

- SOC100 Introduction to Sociology (3)
- Or select a Social and Behavioral Science course, or an AGEC course.*

### Physical and Biological Sciences (4)

- BIO160 Introduction to Human Anatomy and Physiology (4) (*Recommended*)

*Or select a Biological and Physical Lab Science course numbered 100 or above, or an AGEC Science Lab course.*





### Mathematics (3-4)

Select a college-level Mathematics course

BUS101 Business Mathematics (3)

OR

MAT101 Essential Mathematics (4) or higher

### Core Requirements (50.5)

Core courses must be completed with a grade of "C" or above.

EMS190 Pediatric Education for Pre-Hospital Provider-PALS (1)

EMS191 Neonatal Resuscitation Program-NRP (1)

EMS240 Advanced Cardiac Life Support-ACLS (1)

EMS245 Pre-Hospital Trauma Management-PHTLS (1)

EMS272A Advanced Emergency Medical Technology/Paramedic, Module I (17.5)

EMS272B Advanced Emergency Medical Technology/Paramedic, Module II (8.5)

EMS272C Advanced Emergency Medical Technology/Paramedic, Module III (8.5)

EMS272D Advanced Emergency Medical Technology/Paramedic Practicum I (6)

EMS272E Advanced Emergency Medical Technology/Paramedic Practicum II (6)

### Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading 

### Computer Competency (3):

AGB124 Microcomputers in Agriculture

CIS110 Fundamentals of Computer Literacy or higher

OR

Transferable Computer Competency course (Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 73.5 credits.

## FIRE SERVICES

### DRIVER OPERATOR CERTIFICATE

*Maricopa, San Tan, Signal Peak & Superstition Mountain Campuses and Corporate Center*

### Total Credits: 8

The Fire Service Driver Operations Certificate of Completion is designed to provide advanced levels of training and experience as an emergency vehicle operator and to provide current fire service professionals with promotional opportunities.

### Recommendations

1. If pursuing the bachelor's degree program, contact the department advisor.
2. Some courses require:
  - a. State of Arizona Fire Marshal Certification(s)
  - b. State of Arizona Department of Health Services Certification(s)
  - c. American Heart, Red Cross, or other certifying agency course completion in CPR
  - d. International Fire Service Accreditation testing for certification

### Prerequisites

EMS125 Emergency Medical Technician (8)

FSC129 Hazardous Materials First Responder Operations (3)

FSC140 Firefighter I and II (13)

### Core Requirements (18)

FSC111 Driver Operator (2)

FSC117 Apparatus/Equipment (3)

FSC118 Hydraulics (3)

### Other Requirements

Students must earn a grade of "C" or better in all certificate courses.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.



## **FIRE OFFICER 1 CERTIFICATE**

***Maricopa, San Tan, Signal Peak & Superstition Mountain Campuses and Corporate Center***

### **Total Credits: 18**

The Fire Officer I Certificate of Completion provides advanced levels of training and education to current fire service officers or experienced firefighters. This Certificate will provide the course of instruction required for National and International certifications.

### **Recommendations**

1. If pursuing the bachelor's degree program, contact the department advisor.
2. Some courses require the following:
  - a. State of Arizona Fire Marshal Certification(s)
  - b. State of Arizona Department of Health Services Certification(s)
  - c. American Heart, Red Cross, or other certifying agency course completion in CPR
  - d. International Fire Service Accreditation testing for certification

### **Prerequisites**

EMS125	Emergency Medical Technician (8)
FSC129	Hazardous Materials First Responder Operations (3)
FSC140	Firefighter I and II (13)
FSC255	Fire Instructor I (3)

### **Core Requirements (18)**

FSC108	Fundamentals of Fire Prevention (3)
FSC119	Fire Service Ethics
FSC204	Firefighter Tactics and Strategy (3)
FSC206	Health and Safety Officer (3)
FSC208	Firefighter Safety & Building Construction (3)
FSC220	Fire Officer Leadership (3)

### **Other Requirements**

Students must earn a grade of "C" or better in all core courses.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.

## **FIREFIGHTER OPERATIONS CERTIFICATE**

***Signal Peak Campus***

### **Total Credits: 19**

The Firefighter Operations Certificate of Completion is designed to prepare future firefighters for a career in the fire service. The program curriculum and course of instruction will provide the student with the knowledge and skills to effectively perform the essential functions of an entry level firefighter.

### **Recommendations**

1. Consult your department advisor.
2. Some courses require:
  - a. State of Arizona Fire Marshal Certification(s)
  - b. State of Arizona Department of Health Services Certification(s)
  - c. American Heart, Red Cross, or other certifying agency course completion in CPR
  - d. International Fire Service Accreditation Council (IFSAC) Certification

### **Prerequisites**

EMS125	Emergency Medical Technician (8)
FSC129	Hazardous Materials First Responder Operations (3)
FSC134	Fitness and Conditioning for Firefighters (3)

### **Core Requirements (19)**

FSC106	Introduction to Emergency Services (3)
FSC140	Firefighter I & II (13)
FSC180	Wildland Fire, Module I (3)

### **Other Requirements**

Students must earn a grade of "C" or better in all courses within the Certificate.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of Certificate credits from CAC.

*Upon successful completion of the fire academy (FSC 140), students sit for the State proctored examinations; successful students are awarded State of Arizona certification through the Arizona Center for Fire Service Excellence Fire Service Accreditation.*



## FIRE SCIENCE TECHNOLOGY A.A.S.

### Signal Peak Campus

### Total Credits: 65

The Fire Science Technology A.A.S. Degree offers advanced training for professional firefighters, including practical firefighting, hazardous materials, related operations, history and theory and fire service management.

### Recommendations

1. Students should consult their Academic Advisor.
2. Some courses require:
  - a. State of Arizona, (AZCFSE) Certification(s)  
State of Arizona Fire Marshal Certification(s)
  - b. State of Arizona Department of Health Services Certification(s)
  - c. American Heart, Red Cross, or other certifying agency course completion in CPR
  - e. IFSAC (International Fire Service Accreditation Council) certification

### Prerequisites

EMS125 Emergency Medical Technician (8) or equivalent, IEMT or Paramedic

### General Education Requirements (19-23)

#### Written Communications (3)

ENG101 English Composition III (3)   
ENG121 Applied Technical Writing (3) *(Recommended)*

#### Oral Communications (3)

COM206 Public Speaking (3) *(Recommended)*  
*Or select a COM or AGECE course.*

#### Arts and Humanities (3)

*Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above or an AGECE course.*

#### Social and Behavioral Sciences (3)

SOC100 Introduction to Sociology (3) *(Recommended)*  
*Or select an Anthropology, Economics, Geography, History, Political Science, Psychology or Sociology course numbered 100 or above or an AGECE course.*

#### Physical and Biological Sciences (4)

*Select a Biological and Physical Lab Science course numbered 100 or above, or an AGECE Science Lab course.*

### Mathematics (3-4)

*Select a college-level Mathematics course*

BUS101 Business Mathematics (3)

**OR**

MAT101 Essential Mathematics (4) or higher

### Core Requirements (37)

FSC106 Introduction to Emergency Services (3)  
FSC108 Fundamentals of Fire Prevention (3)  
FSC117 Fire Apparatus and Equipment (3)  
FSC119 Fire Service Ethics (3)  
FSC129 Hazardous Materials First Responder Operations (3)  
FSC134 Fitness Conditioning for Firefighters (3)  
FSC140 Firefighter I & II (13)  
FSC180 Wildland Fire, Module I (3)  
FSC208 Firefighter Safety/Building Construction (3)

### Electives (6)

*Select two:*

FSC202 Supervisory Training for Firefighters (3)  
FSC204 Firefighter Tactics and Strategy (3)  
FSC205 Command Strategies for Major Emergencies (3)  
FSC209 Fire Origin, Cause and Determination (3)

**OR** Any FSC course.

### Other Requirements (3)

PAC or DAN (1) *(Fulfilled by FSC134)*

Reading Competency: RDG094 College Reading

### Computer Competency (3):

AGB124 Microcomputers in Agriculture  
CIS110 Fundamentals of Computer Literacy or higher

**OR**

Transferable Computer Competency course (Consult the CEG.)

Students must earn a minimum grade of "C" or better in all course work, including the prerequisites.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

*\*Note: Requirements for Basic EMT (EMS125), IEMT (EMS208) and Paramedic (EMS272) are regulated by the Arizona Department of Health Services and are not negotiable.*

This A.A.S. Degree requires 65 credits.



## WILDLAND FIREFIGHTER I CERTIFICATE

*Signal Peak Campus and Corporate Center*

### Total Credits: 13

Advanced training in Wildfire Firefighting per the requirements established by the National Wildfire Coordinating Group (NWCG). This certification is designed for the professional firefighter currently employed with an agency that responds to wildland fire incidents. This certificate of completion course of instruction will provide the student the (NWCG) educational requirements that lead up to the level of Single Resource Boss.

In order to qualify and complete the certificate, students must acquire a minimum of 120 hours total, half of those hours (60 hours) must be hotline.

### Prerequisites:

FSC129 Hazardous Materials First Responder Operations (S-110 and I-100) (3)

**AND**

FSC180 Wildland Fire, Module 1 (S-130/190, S-133, S-134, L-180) (3)

Complete the above **OR** Program Director consent

### Core Requirements (13)

- FSC181 NWCG Advanced Firefighter Training (S-131) (.5)
- FSC182 NWCG Portable Pumps and Water Use (S-211) (1)
- FSC186 NWCG Crew Boss (Single Resource) (S-230) (1.5)
- FSC187 NWCG Engine Boss (Single Resource) (S-231) (.5)
- FSC189 NWCG Interagency Incident Business Management (S-260) (2)
- FSC190 NWCG Basic Air Operations (S-270) (1.5)
- FSC191 NWCG Intermediate Wildland Fire Behavior (S-290) (2)
- FSC192 Initial Attack Incident Commander (S-200) (1)
- FSC193 Followership to Leadership (L-280) (1)
- FSC203 Fire Operations in the Wildland/Urban Interface (S-215) (2)

### Other Requirements

Students must earn a grade of "C" or better in all courses within the Certificate, including the prerequisites.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.

## GEOLOGY AND PLANETARY SCIENCE

### GEOLOGY AND PLANETARY SCIENCE A.S.

*Signal Peak Campus*

### Total Credits: 60-64

The Associate of Science in Geology and Planetary Science Degree prepares students to transfer to a university to earn a baccalaureate degree in Geology or a related field.

### General Education Requirements AGEC-S (35-37)

#### Written Communications (6)

- ENG101 English Composition III (3)
- ENG102 English Composition IV (3)

#### Arts and Humanities (6)

*Select one Art (3) and one Humanities (3) AGEC course.*

#### Social and Behavioral Sciences (6)

*Select AGEC courses from two different disciplines.*

#### Physical and Biological Sciences (8)

- AST101 Astronomy (4)
- GLG101 Physical Geology (4)

#### Mathematics (3-4)

- MAT221 Analytical Geometry and Calculus I (4) or higher

#### Subject Options (6-8)

- ENV101 Environmental Science (4)
- GLG102 Historical Geology (4)
- GLG110 Environmental Geology (4)

#### Special Awareness Requirements (0-9)

*Select AGEC courses to fulfill these requirements.*

1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender)
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness





Note: Courses used in other areas, such as Arts and Humanities, Social and Behavioral Sciences, or Transfer Electives, may also be used to satisfy the three (3) Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

### Core Requirements (20)

- CHM151 General Chemistry I (4)
- CHM152 General Chemistry II (4)
- MAT231 Calculus with Analytical Geometry II (4)
- PHY121 University Physics I: Mechanics (4)
- PHY122 University Physics II: Electricity and Magnetism (4)

### Transferable Electives (0-8)

Based on your major, consult the Transfer Guide at <http://aztransfer.com/college/> and select mathematics courses above the second course in the calculus sequence and/or Science courses from: Astronomy, Biology, Chemistry, Engineering, Environmental Science, Geology or Physics.

Select elective credits that transfer to the chosen university to meet 60-64 credit A.S. Degree requirement.

### Other Requirements (3)

Reading Competency: RDG094 College Reading

### Computer Competency (3):

AGB124 Microcomputers in Agriculture

OR

CIS120 Survey of Computer Information Systems (3)

Students must earn a grade of “C” or better in each A.S. degree required course.

Students must earn a minimum of 20 credits from CAC which includes the AGECS requirements.

This A.S. Degree requires 60-64 credits.



## HEALTH CAREERS

### CLINICAL LABORATORY ASSISTANT CERTIFICATE

*Signal Peak Campus*

#### Total Credits: 27

The Clinical Laboratory Assistant Certificate prepares entry-level clinical laboratory assistants to perform various laboratory procedures including phlebotomy, specimen processing and quality control procedures under the supervision of physicians, laboratory scientists or technologists in a clinical laboratory setting.

#### Prerequisites:

High School Diploma or GED; MAT082, RDG094

#### Pre-Program Requirements:

Students must apply for admission to the Clinical Laboratory Assistant Certificate program with the CLA Preceptor or HCC Division Chair before enrollment in the program Specialty courses. Certified Phlebotomist or completion of both HKS155 and HKS255 required.

#### Pre-Program Requirements (8)

- HCC111 Healthcare Law and Ethics (2)
- HCC112 Interpersonal Skills (2)
- HCC113 Math and Dosage Calculations for Health Occupations (1)
- HCC116 Medical Terminology (3)

#### Certificate Requirements (19)

- BIO160 Introduction to Human Anatomy and Physiology (4)
- HPM169 Clinical Laboratory Assistant Basics I (4)
- HPM170 Clinical Laboratory Assistant Basics II (4)
- HPM171 Administrative Medical Procedures (4)
- HPM175P Clinical Laboratory Assistant Practicum (3)

#### Other Requirements

Students must earn a grade of “C” or better in all required courses.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.

All program courses must be successfully completed with a grade of “C” or better before enrolling in HPM175P and mandatory requirements must be met.

CPR Certification must be current for at least 6 months at the start of Practicum.



## **CODING AND REIMBURSEMENT CERTIFICATE**

*District-Wide*

### **Total Credits: 34**

The Coding and Reimbursement Certificate prepares entry-level medical coders and reimbursement specialists. The competencies covered in this program include revised coding standards, health records, data content, accreditation standards, reimbursement methodologies, privacy, confidentiality, legal and ethical issues.

The Certificate prepares students to sit for the Certified Coding Associate (CCA) credentialing exam from AHIMA at the national level as well as the AMBA Certified Medical Reimbursement Specialist (CMRS).

### **Prerequisite:**

High School Diploma or GED; MAT082, RDG094 CIS120 Survey of Computer Information Systems (3)

### **Core Requirements (5)**

HCC111 Healthcare Law and Ethics (2)  
HCC116 Medical Terminology (3)

### **Specialty Requirements (29)**

BIO160 Introduction to Human Anatomy and Physiology (4)   
HIM115 Health Information Technology I (3)  
HIM131 Introduction to Insurance and Insurance Billing I (3)  
HIM138 ICD Coding (3)  
HIM158 CPT Coding (3)  
HIM161 Introduction to Insurance and Insurance Billing II (3)  
HPM162 Basic Pharmacology for Health Occupations (3)  
HPM173 Pathophysiology (3)  
HIM175I Practicum Coding and Reimbursement (4)

### **Optional Added Elective**

HIM208 Advanced Coding (2)

### **Other Requirements**

Students must earn a grade of “C” or better in all required courses. Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.

## **COMMUNITY PUBLIC HEALTH A.S.** *Signal Peak Campus*

### **Total Credits: 61-64**

The Community Public Health Associate of Science degree establishes a foundational understanding of health and disease factors based on community public health principles. The degree prepares graduates for professional positions in community public health focused on improving the quality of life of individuals and communities.

### **Prerequisites:**

High School Diploma or GED  
MAT121 Intermediate Algebra, Standard  
RDG094 College Reading   
ENG101 English Composition III

### **General Education Requirements AGEC-S (35-37)**

#### **Written Communications (6)**

ENG101 English Composition III (3)   
ENG102 English Composition IV (3)

#### **Arts and Humanities (6)**

*Select one Art and one Humanities AGEC course:*

PHI105 Introduction to Ethics (3)   
*(Recommended, also fulfills Core Requirement and Intensive Writing IW AGEC Requirement)*

#### **Social and Behavioral Sciences (6)**

*Select AGEC courses from two different disciplines. Recommended:*

PSY101 Introduction to Psychology (3)   
SOC100 Introduction to Sociology (3)

#### **Physical and Biological Sciences (8)**

BIO181 General Biology I (4)   
BIO182 General Biology II (4)

#### **Mathematics (3-4)**

MAT221 Analytical Geometry and Calculus I (4)   
or higher

#### **Subject Options (6-8)**

CHM151 General Chemistry I (4)   
Based on your major, consult the Transfer Guide at <http://aztransfer.com/college/> and select mathematics courses above the first course in the calculus sequence and/or Science courses from Biology, Chemistry, Environmental Science, Nutrition and Dietetics or Physics. Select CHM151 and higher Chemistry courses.



### Special Requirements (0-9 Credits)

Select AGEC courses to fulfill these requirements.

- At least three semester credits of coursework in Intensive Writing and Critical Inquiry  
(Fulfilled by PHI105 Introduction to Ethics)
- At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender)  
(Fulfilled by COM263 Intercultural Communications)
- At least three semester credits of coursework in Global/International Awareness or Historical Awareness

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Science, or Transfer Electives, may also be used to satisfy the three Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

### Core Requirements (28)

- BIO201 Human Anatomy and Physiology I (4)
- BIO202 Human Anatomy and Physiology II (4)
- COM263 Intercultural Communications (3)   
(Also fulfills Cultural Awareness)
- CPH100 Introduction to Public Health (3)
- CPH178 Personal Health and Community Wellness (3)
- CPH296 Community Public Health Internship (2)
- MAT162 Applied Statistics (3)
- NTR200 Human Nutrition (3)
- PHI105 Introduction to Ethics (3)   
(Also fulfills Intensive Writing requirement)

### Other Requirements (3)

Reading Competency: RDG094

#### Computer Competency (3):

AGB124 Microcomputers in Agriculture (3)

OR

CIS120 Survey of Computer Information Systems (3)   
(Recommended)

Students must earn a grade of "C" or better in each Associate of Science degree required course.

Students must earn a minimum of 20 credits from CAC which includes the AGEC-S requirements.

For transfer into the School of Public Health at the University of Arizona, a grade of "B" or better is required for ENG102.

This A.S. Degree requires 61-64 credits.

## HEALTH INFORMATION TECHNOLOGY A.A.S.

**District-Wide**

### Total Credits: 71

The Health Information Technology (HIT) A.A.S. Degree program prepares students with the knowledge and technical skills necessary for managing and improving the quality of information within the healthcare delivery system. This Degree's focal points are the American Health Information Management Association (AHIMA) entry-level competencies.

The Health Information Technology Degree is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) located at 233 N. Michigan Ave, 21<sup>st</sup> Floor, Chicago, IL 60601-5800; 312-233-1100; [www.cahiim.org](http://www.cahiim.org)

Graduates from this program are eligible to sit for the Registered Health Information Technician (RHIT) credentialing exam.

### Prerequisites

High School Diploma or GED; MAT082, RDG094

### Pre-Program Requirements

Students must apply to the Health Information Director for admission to the HIT Degree after earning a score of 70 or above on the HESI test. Accepted HIT students may then request permission from the Director to enroll in the Degree Specialty courses.

### General Education Requirements (23)

#### Written Communications (3)

ENG101 English Composition III (3)

OR

ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

COM100 Fundamentals of Human Communication (3)

COM206 Public Speaking (3)

Or select a COM course.

#### Arts and Humanities (3)





Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGEC course.

#### Social and Behavioral Sciences (3)

Select a Social and Behavioral Science course, or an AGEC course.



## Physical and Biological Sciences (8)

- BIO201 Human Anatomy - Physiology I (4)    
**AND**  
 BIO202 Human Anatomy - Physiology II (4)  

## Mathematics (3-4)


Select a college-level Mathematics course

- BUS101 Business Mathematics (3)  
**OR**  
 MAT101 Essential Mathematics (4) or higher


## Core Requirements (44)

- CBA113A MS Excel Basic (1)  
 CBA114A MS Access Basic (1)  
 HCC111 Healthcare Law and Ethics (2)  
 HCC116 Medical Terminology (3)  
 HIM115 Health Information Technology I (3)  
 HIM117 Health Information Technology II (3)  
 HIM121 Legal Aspects of Health Information (2)  
 HIM138 ICD Coding (3)  
 HIM158 CPT Coding (3)  
 HIM160 Health Information Technology Seminar (2)  
 HIM 200 Healthcare Reimbursement (2)  
 HIM 205 Healthcare Statistics and Research (2)  
 HIM208 Advanced Coding (2)  
 HIM210 Supervision and Quality (2)  
 HIM215 Health Information Systems (3)  
 HIM275Q Health Information Technology Practicum (4)  
 HPM162 Basic Pharmacology for Health Occupations (3)  
 HPM173 Pathophysiology (3)

## Other Requirements (4)

- PAC or DAN Course (1)  
 Reading Competency: RDG094 College Reading 

## Computer Competency (3):

- CIS120 Survey of Computer Information Systems (3) 

Students must earn a grade of "C" or better in all required courses.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

The Health Information Technology A.A.S. Degree requires 71 credits.


## MESSAGE THERAPY A.A.S.

*Signal Peak and Superstition Mountain Campuses*

## Total Credits: 64

The Massage Therapy AAS Degree includes 735 hours of basic curriculum which prepares individuals for entry-level positions performing massage therapy in a variety of settings. With additional classes in general education and expanded medical courses, students may attain the AAS in Massage Therapy with a 1140 hour certificate. This program includes relaxation massage, therapeutic massage, massage therapy for special populations and spa treatments and hydrotherapy. Included in the program is a Chiropractic Assistant certification program. Additional topics include physiotherapy, body mechanics, acupuncture, anatomy, pathophysiology, business skills, and complementary and alternative medicine.

## Prerequisites



High School Diploma or GED; RDG094 

## Pre-Program Requirements:





Students must apply for admission to the degree program with the Massage Therapy Director before enrolling in the degree specialty courses.

## General Education Requirements (19-23)

### Written Communications (3)

- ENG101 English Composition III (3)    
**OR**  
 ENG121 Applied Technical Writing (3)



### Oral Communications (3)

- COM100 Fundamentals of Human Communication (3)    
 COM101 Interpersonal Communication (3)   
 COM263 Intercultural Communication (3)   
 Or select a COM course.


### Arts and Humanities (3)

Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or higher, or an AGEC course.

### Social and Behavioral Sciences (3)

- PSY101 Introduction to Psychology (3)    
 Or select Social/Behavioral Science course, or AGEC course.

### Physical and Biological Sciences (4)

- BIO160 Introduction to Human Anatomy and Physiology (4)   
**OR**  
 BIO201 Human Anatomy - Physiology I (4)  
**AND**  
 BIO202 Human Anatomy - Physiology II (4)





### Mathematics (3-4)

Select a college-level Mathematics course

BUS101 Business Mathematics (3)

OR


MAT101 Essential Mathematics (4) or higher

### Core Requirements (6)

HCC100 Introduction to Health Care (3)

HCC116 Medical Terminology (3)

### Specialty Requirements (35-39)

BIO160 Introduction to Human Anatomy and Physiology (4) 

OR

BIO201 Human Anatomy - Physiology I (4)

AND

BIO202 Human Anatomy - Physiology II (4)

(Also fulfills Biological Sciences requirement)

HPM136 Business Skills for Massage Therapy (3)

HPM150 Chiropractic Assistant Training (2)

HPM151 Study of Acupuncture for Healthcare Professionals (1)

HPM152 Study of Physiotherapy for Healthcare Professionals (1)

HPM154 Complementary and Alternative Medicine (3)

HPM160 Applied Anatomy for Massage Therapy (3)

HPM173 Pathophysiology (3)

HPM175L Practicum – Massage Therapy, Relaxation Massage (1)

HPM175M Practicum – Massage Therapy, Therapeutic Massage (1)

HPM175N Practicum – Massage Therapy for Special Populations (1)

HPM175O Practicum – Massage Therapy, Spa Treatments and Hydrotherapy (1)

HPM180 Therapeutic Massage I (3)

HPM181 Therapeutic Massage II (3)

HPM280 Therapeutic Massage III (3)

HPM281 Therapeutic Massage IV (3)

HPM282 Therapeutic Massage V (3)

### Elective (0 -1)

Select any 100 or higher college-level course to meet the 65 credit degree requirement.

### Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading 

### Computer Competency (3):

CIS 110 Fundamentals of Computer Literacy (3)  
(Recommended)

or Transferable Computer Competency course (Consult the CEG.)

**Note:** Prior to enrollment in any Practicum courses, mandatory requirements must be met.

CPR certification must be current for at least 6 months at the start of Practicum.

Students must earn a grade of “C” or better in all required courses.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale. Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 64 credits.




## MASSAGE THERAPY CERTIFICATE

**Signal Peak and Superstition Mountain Campuses**

### Total Credits: 39

Massage Therapy includes 735 hours of basic curriculum which prepares individuals for entry-level positions performing massage therapy in a variety of settings. This program includes relaxation massage, therapeutic massage, massage therapy for special populations, and spa treatments and hydrotherapy. Included in the program is a Chiropractic Assistant Certification program. Additional topics include physiotherapy, body mechanics, acupuncture, anatomy, pathophysiology, business skills, and complementary and alternative medicine.

### Prerequisites

High School Diploma or GED; RDG094 



**Pre-Program Requirements:**

Apply for admission to the Certificate program with the Massage Therapy Program Director before enrolling in the specialty requirements.

**Core Requirements (39)**

- BIO160 Introduction to Human Anatomy and Physiology (4)
- OR**
- BIO201 Human Anatomy-Physiology I (4)
- AND**
- BIO202 Human Anatomy-Physiology II (4)
  
- HPM136 Business Skills for Massage Therapy (3)
- HPM150 Chiropractic Assistant Training (2)
- HPM151 Study of Acupuncture for Health Care Professionals (1)
- HPM152 Study of Physiotherapy for Health Care Professionals (1)
- HPM154 Complementary and Alternative Medicine (3)
- HPM160 Applied Anatomy for Massage Therapy (3)
- HPM173 Pathophysiology (3)
- HPM180 Therapeutic Massage I (3)
- HPM181 Therapeutic Massage II (3)
- HPM280 Therapeutic Massage III (3)
- HPM281 Therapeutic Massage IV (3)
- HPM282 Therapeutic Massage V (3)
- HPM175L Practicum –Massage Therapy, Relaxation (Massage) (1)
- HPM175M Practicum – Massage Therapy, Therapeutic Massage (1)
- HPM175N Practicum - Massage for Special Populations (1)
- HPM175O Practicum – Massage Therapy, Spa and Hydrotherapy Treatment (1)

**Other Requirements**

Prior to enrollment in any practicum courses, mandatory requirements must be met.

CPR certification must be current for at least six months at the start of the Practicum.

Students must earn a grade of “C” or better in all required courses.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

**MEDICAL ASSISTANT A.A.S.**

*Signal Peak and Superstition Mountain Campuses*

**Total Credits: 64**

Preparation of entry-level Medical Assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains as established by the American Association of Medical Assistants (AAMA) located at 20 N. Wacker Drive, Suite 1575, Chicago, IL 60606; 800-228-2262; <http://www.aama-ntl.org>

This Degree includes general education requirements and prepares individuals to perform administrative and clinical procedures in ambulatory settings, including physician's offices, clinics and group practices.

The Medical Assistant A.A.S. degree is accredited by the American Association of Medical Assistants (AAMA). Graduates are eligible to take the AAMA examination to become certified medical assistants (CMA).

**Prerequisites**

High School Diploma or GED; MAT082, RDG094 *R*

**Pre-Program Requirements:**

After successful completion of all the General Education requirements, CIS120, physical education activity, CBA112A, CBA112B, CBA113A, OAS101, OAS103 and HCC116, students must pass the required HESI tests with a score of 70 or above in each test, AND apply for admission to the program with the HCC Division Chair before enrollment in the Degree program.

**General Education Requirements (19-23)**



**Written Communications (3)**

ENG101 English Composition III (3)  

**OR**

ENG121 Applied Technical Writing (3)

**Oral Communications (3)**

COM100 Fundamentals of Human Communication (3)    
Or select a COM course, or an AGEC course.

**Arts and Humanities (3)**

Select an Art, English, History, Honors, Humanities, Literature, Music, Philosophy or a Theatre course numbered 100 or above, or an Arts or Humanities AGEC course.

**Social and Behavioral Sciences (3)**

Select the recommended course or a Social and Behavioral Sciences course from Anthropology, Archaeology, Economics, Ethics, Geography, History, Political Science, Psychology or Sociology numbered 100 or above, or an AGEC course.



PSY101 Introduction to Psychology (3)   
(Recommended)

### Physical and Biological Sciences (4)

BIO160 Introduction to Human Anatomy & Physiology  
(4)

### Mathematics (3-4)

Select a college-level Mathematics course

BUS101 Business Mathematics (3)

OR

MAT101 Essential Mathematics (4) or higher

### Core Requirements (16)

CBA112A MS Word – Basic (1)

CBA112B MS Word – Intermediate (1)

CBA113A MS Excel – Basic (1)

HCC100 Introduction to Healthcare (3)

HCC111 Healthcare Law and Ethics (2)

HCC112 Interpersonal Skills (2)

HCC113 Math and Dosage Calculations for Health  
Occupations (1)

HCC116 Medical Terminology (3)

OAS101 Keyboard - Alphabetic (1)

OAS103 Keyboard - Speed/Accuracy (1)

### Specialty Requirements (25)

HIM131 Introduction to Insurance and Insurance Billing  
I (3)

HPM140 Medical Assisting Skills I (4)

HPM141 Medical Assisting Skills II (4)

HPM162 Basic Pharmacology for Health Occupations (3)

HPM171 Administrative Medical Procedures (4)

HPM173 Pathophysiology (3)

HPM175C Medical Assistant Degree Practicum (4)

*(All program courses must be successfully completed before enrolling in HPM175C. Prior to enrollment in HPM175C, specific mandatory requirements must be met. Consult with the program director.)*

### Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading

### Computer Competency (3):

CIS120 Survey of Computer Information Systems or higher  
CIS course

Healthcare Provider CPR and First Aid certification is required before enrolling in HPM175C and must be current for at least 6 months after the start of HPM175C.

Students must earn a grade of “C” or better in all required courses for this AAS degree. Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale. Students must earn at least 20 of the certificate credits from CAC.

This A.A.S. Degree requires 64 credits.

## MEDICAL ASSISTANT CERTIFICATE

**Signal Peak and Superstition Mountain  
Campuses**

### Total Credits: 37

This Certificate prepares competent entry-level Medical Assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains to perform administrative and clinical procedures in ambulatory settings, including physicians' offices, clinics, and group practices. These domains have been established by the American Association for Medical Assistants (AAMA).

### Prerequisites

High School Diploma or GED; MAT082, RDG094

### Pre-Program Requirements:

Pass the required HESI tests with a score of 70 or above in each test before enrollment in the program AND apply for admission to the program with the HCC Division Chair before enrollment in the program.

### Core Requirements (12)

BIO160 Introduction to Human Anatomy and  
Physiology (4)

HCC111 Healthcare Law and Ethics (2)

HCC112 Interpersonal Skills (2)

HCC113 Math and Dosage Calculations for Health  
Occupations (1)

HCC116 Medical Terminology (3) or  
equivalent

### Specialty Requirements (25)

HIM131 Introduction to Insurance and Insurance Billing I (3)

HPM140 Medical Assisting Skills I (4)

HPM141 Medical Assisting Skills II (4)

HPM162 Basic Pharmacology for Health Occupations (3)

HPM171 Administrative Medical Procedures (4)

HPM173 Pathophysiology (3)

HPM175E Medical Assistant Certificate Practicum (4)

### Other Requirements

Students must earn a grade of “C” or better in all required courses.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.



**PHARMACY TECHNICIAN  
CERTIFICATE**

*Signal Peak Campus*

**Total Credits: 36**

The Pharmacy Technician Certificate prepares entry-level Pharmacy Technicians by emphasizing medical and pharmaceutical terminology, calculations, record keeping, pharmaceutical techniques, and law and ethics. Most core requirements are offered as an online option.

**Prerequisites**

High School Diploma or GED MAT082; RDG094

**Pre-Program Requirements:**

Pass the required HESI tests with a score of 70 or above on each test before enrollment in the program AND Apply for admission to the program with the HCC Division Chair or Program Preceptor before enrollment in the program.

**Core Requirements (21)**

- BIO160 Introduction to Human Anatomy and Physiology (4)
- CIS120 Survey of Computer Information Systems (3)
- HCC100 Introduction to Health Care (3)
- HCC111 Health Care Law and Ethics (2)
- HCC112 Interpersonal Skills (2)
- HCC113 Math and Dosage Calculations for Health Occupations (1)
- HCC116 Medical Terminology (3)
- MAT086 Pre-Algebra (3)

**Specialty Requirements (15)**

- HPM105 Pharmacy Techniques (3)
- HPM162 Basic Pharmacology for Health Occupations (3)
- HPM164 Pharmacy Certification Review (2)
- HPM173 Pathophysiology (3)
- HPM175H Practicum - Pharmacy Technician (4)

**Other Requirements**

Students must earn a grade of “C” or better in all required courses.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.

**LAW ENFORCEMENT and  
ADMINISTRATION OF JUSTICE  
STUDIES A.A. AND A.A.S.**

See Administration of Justice.

**MANUFACTURING**

**FIELD PROGRAMMABLE GATE  
ARRAY (FPGA) CERTIFICATE**

*Signal Peak Campus*

**Total Credits: 18**

The Field Programmable Gate Array (FPGA) Certificate provides the basis for an entry-level career or the professional training required of a working engineer. FPGA, embedded fundamentals and MicroBlaze processor applications are emphasized.

**Recommended Proficiencies**

Computer programming and basic electronics coursework prepare students for success in this Certificate program.

**Core Requirements (18)**

- ELT128 FPGA Fundamentals (3)
- ELT223 Microcontroller Fundamentals (3)
- ELT260 Advanced FPGA Concepts (3)
- ELT265 MicroBlaze1 (3)
- ELT270 MicroBlaze2 (3)
- ELT275 Embedded Fundamentals (3)

**Other Requirements**

Students must earn a grade of “C” or better in all required courses.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.





## LABVIEW PROGRAMMING CERTIFICATE

*Signal Peak Campus*

**Total Credits: 16**

The LabVIEW Certificate provides the basis for an entry-level career in the LabVIEW programming environment using National Instruments hardware.

### Recommended Proficiencies

Computer programming and basic electronics coursework prepare students for success in this Certificate program.

### Core Requirements (16)

MET261	LabVIEW 1 Programming (3)
MET262	LabVIEW 2 Programming (3)
MET263	LabVIEW 3 Programming (3)
MET264	LabVIEW FPGA Applications (3)
MET265	LabVIEW Overview (4)

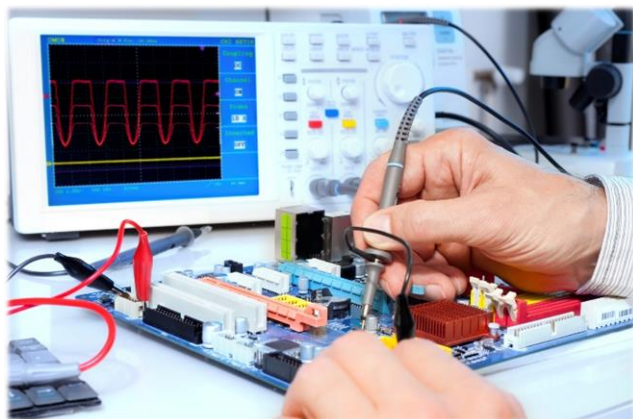
### Other Requirements

Reading Competency: RDG094 College Reading 

Students must earn a grade of “C” or better in all required courses.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.



## MANUFACTURING ELECTRONICS CERTIFICATE

*Signal Peak Campus*



**Total Credits: 32**

The Certificate provides the basis for an entry-level career in the electronics and related fields of both manufacturing and service-maintenance as technicians and provides upgrading of skills for persons presently employed.

### Recommended Proficiencies

Fundamental computer usage skills.

### Core Requirements (32)

CHM130	Fundamental Chemistry (4)  
ELC123	Direct Current Circuit Analysis (3)
ELC124	Alternating Current Circuit Analysis (3)
ELC128	Intro to Programmable Logic Controllers (3)
ELC220	Active Circuits (3)
ELC223	Integrated Circuit Devices (3)
ELT128	FPGA Fundamentals (3)
ENG121	Applied Technical Writing (3)
MAT121	Intermediate Algebra, Standard (4)
MET132	Fluid Power (Hydraulics-Pneumatics) (3)
MET221	Electro-Mechanical Technology (3)

### Other Requirements

Students must earn a grade of “C” or better in all required courses.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.

## MANUFACTURING ENGINEERING A.A.S.

*Signal Peak Campus*

**Total Credits: 67**

The Manufacturing Electronics A.A.S. Degree program provides opportunities for students to gain knowledge, skills and understanding of the concepts and applications of electronics in manufacturing. This Degree has been developed in cooperation with the semiconductor manufacturing industries. Students are prepared for employment in the electronics, service maintenance, and related manufacturing fields as entry-level technicians. For



those presently employed in the industry it provides an opportunity to upgrade skills.

### Recommended Proficiencies

Fundamental computer skills.

### General Education Requirements (24)

Select AGEC approved courses if A.A.S. to B.A.S. Degree desired.

#### Written Communications (3)

ENG101 English Composition III (3)

OR

ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

Select a COM course, or an AGEC course.

#### Arts and Humanities (3)

ART207 Art History I (3)

MHL100 Music Appreciation (3)

MHL207 Survey of Jazz/Pop Music (3)

THE100 Theater Appreciation (3)

Or select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGEC course.

#### Social and Behavioral Sciences (3)

ECN201 Principles of Macroeconomics (3)

Or select a Social and Behavioral Science course, or an AGEC course.

#### Physical and Biological Sciences (8)

CHM130 Fundamental Chemistry (4)

PHY100 Physical Universe (4) or higher

Or select a Biological or Physical Science course, or an AGEC Lab course.

#### Mathematics (3-4)

Select a college-level Mathematics course

MAT121 Intermediate Algebra, Standard (4) or higher

#### Core Requirements (33)

ELC122 Direct Current and Alternating Current Circuit Analysis (3)

ELC220 Active Circuits (3)

ELC221 Control Devices (3)

ELT128 FPGA Fundamentals (3)

ELT223 Microcontroller Fundamentals (3)

MET125 Principles of Fabrication (3)

MET132 Fluid Power (Hydraulics-Pneumatics) (3)

MET150 VB.NET for Engineering (3)

MET221 Electro-Mechanical Technology (3)

MET226 Electro-Mechanical Systems (3)

MET232 Solids Modeling - Solidworks (3)

### Specialization Options (6)

Select one of the following specialties.

#### Specialization Requirements for Semiconductor Industry:

ELC200 Radio Frequency RF/High Vacuum HV (3)

MET230 Semiconductor I - Seminar (3)

#### Specialization Requirements for all Automation Industries:

ELC128 Introduction to Programmable Logic Controllers (3)

ELC228 Advanced Programmable Logic Controllers (3)

#### Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading

#### Computer Competency (3):

AGB124 Microcomputers in Agriculture

CIS110 Fundamentals of Computer Literacy or higher

OR

Transferable Computer Competency course (Consult the CEG.)

Students must earn a grade of "C" or better in all required courses for this AAS degree.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC. This A.A.S. Degree requires 67 credits.

## NANOFABRICATION TECHNOLOGY

### A.A.S.

#### Signal Peak Campus

#### Total Credits: 70

The Nanofabrication Technology Degree program offers students the opportunity to enter the exciting world of Nanotechnology. Nanofabrication and nanotechnology is engineering at the atomic length scale, a size range which until recently was only available to nature. Being able to engineer such small structures opens the door to a multitude of new opportunities in the fields of chemical technology, bio-technology, biopharmaceutical labs, micro-technology labs, material science labs and electronic technology.



### Recommended Proficiencies

Strong math and science background.

### Prerequisites

CHM130 Fundamental Chemistry (4)   
 MAT092 Introductory Algebra (3)  
 RDG094 College Reading

### General Education Requirements (36)

#### Written Communications (3)

ENG100 English Composition III (3) or higher  
 ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

COM100 Fundamentals of Human Communication (3)  
 or higher

#### Arts and Humanities (3)

Select as Art, Humanities, Literature, Music, Philosophy or Theater course numbered 100 or above or an AGECE course.

#### Social and Behavioral Sciences (3)

PSY101 Introduction to Psychology (3)  
 Or select a Social and Behavioral Science course, or an AGECE course.

#### Physical and Biological Sciences (16)

CHM151 General Chemistry I (4)   
 CHM152 General Chemistry II (4)   
 PHY111 College Physics I (4)   
 PHY112 College Physics II (4)

#### Mathematics (8)

Select a college-level Mathematics course

MAT151 College Algebra (4)   
 MAT182 Trigonometry with Algebra Review (4)

### Core Requirements (30)

ELC122 Direct Current and Alternating Current  
 Circuit Analysis (3)  
 ELC200 Radio Frequency RF/High Vacuum HV (3)  
 ELC220 Active Circuits (3)  
 MET230 Semiconductor I - Seminar (3)  
 MET290 Material, Safety and Equipment Overview for  
 Nanotechnology (3)  
 MET291 Basic Nanotechnology Processes (3)  
 MET292 Materials in Nanotechnology (3)  
 MET293 Patterning for Nanotechnology (3)  
 MET294 Materials Modification in Nanotechnology (3)  
 MET295 Characterization, Testing of Nanotechnology  
 Structures and Materials (3)

### Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading

#### Computer Competency (3):

AGB124 Microcomputers in Agriculture  
 CIS110 Fundamentals of Computer Literacy or higher  
**OR**

Transferable Computer Competency course  
 (Consult the CEG.)

Students must earn a grade of “C” or better in all required courses for this AAS degree.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 70 credits.



## NUTRITION AND DIETETICS

### COMMUNITY NUTRITION WORKER CERTIFICATE

*District-Wide*

#### Total Credits: 16

The Community Nutrition Worker Certificate provides the opportunity for individuals to develop skills and competencies in the areas of food, nutrition and health necessary for careers in public health nutrition.



**Recommended Proficiencies**

High school diploma or GED

**Core Requirements (16)**

- NTR123 Nutrition throughout the Life Cycle (3)
- NTR127 Breastfeeding and Human Lactation (1)
- NTR134 Healthy Weight for Kids (1)
- NTR191 Nutrition Counseling Skill Development (3)
- NTR232A Food and Culture (1)

**Select one of the following options (4):**

- NTR141 Nutrition and Wellness (4)
- OR**
- NTR104 Nutrition (3)
- AND**
- NTR104L Personal Wellness Lab (1)

**Select at least three credits from the following options (3):**

- NTR130 Diabetes Overview (1)
- NTR131 Introduction to Diabetes (3)
- NTR136 Management of Gestational Diabetes (1)
- NTR137 Carbohydrate Counting (1)
- NTR201 Nutrition Literacy (1)
- NTR247 Weight Management Theory (3)
- NTR272 Certified Breastfeeding Counselor (3)

**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.  
 Students must earn at least one-third of the certificate credits from CAC.

**DIABETES CARE AND EDUCATION CERTIFICATE**

*District-Wide*

**Total Credits: 16**

The Diabetes Care and Education Certificate provides current training and information to paraprofessionals working with people at risk for developing diabetes or developing complications from diabetes.

**Recommended Proficiencies**

High school diploma or GED

**Prerequisites**

- RDG094 College Reading

**Core Requirements (10)**

- NTR131 Introduction to Diabetes (3)
- NTR141 Nutrition and Wellness (4)
- OR**
- NTR104 Nutrition (3)
- AND**
- NTR104L Personal Wellness Lab (1)
- NTR191 Nutrition Counseling Skill Development (3)

**Electives (6)**

- Select from the following options:*
- NTR134 Healthy Weight for Kids (1)
  - NTR135 Healthy Weight for Adults (1)
  - NTR136 Management of Gestational Diabetes (1)
  - NTR137 Carbohydrate Counting (1)
  - NTR201 Nutrition Literacy (1)
  - NTR232A Food and Culture (1)
  - NTR247 Weight Management Theory (3)

**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.

**DIETARY MANAGER TRAINING PROGRAM CERTIFICATE**

*District-Wide*

**Total Credits: 16**

The Dietary Manager Training Certificate prepares food service workers and/or supervisors for management in health care facilities and various other food service establishments.

The Dietary Manager Training Certificate has been approved by the Association of Nutrition and Foodservice Professionals (ANFP) located at 406 Surrey Woods Drive, S. Charles, IL 60174; 800-323-1908; [www.anfponline.org](http://www.anfponline.org). Upon successful completion, graduates are eligible to take the National Certification exam for the Certified Dietary Manager and the Certified Food Protection Professional credentials (CDM, CFPP).

**Recommended Proficiencies**

High school diploma or GED





### Core Requirements (16)

- NTR156 Foundations of Dietary Manager Internships (2)  
 NTR196 Dietary Manager Internship (3)  
 NTR223 Food Service Management (3)  
 NTR240 Clinical Nutrition (3)

CUL105 Food Safety Foundations (1)

OR

NTR105 ServSafe Certification (1)

Select one of the following options (3):

- NTR104 Nutrition (3)  
 NTR141 Nutrition and Wellness (4)   
 NTR200 Human Nutrition (3)

Select one credit from the following (1):

- NTR130 Diabetes Overview (1)  
 NTR134 Healthy Weight for Kids (1)  
 NTR136 Management of Gestational Diabetes (1)  
 NTR137 Carbohydrate Counting (1)  
 NTR232A Food and Culture (1)  
 NTR or CUL Elective (1) with Program Director consent

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.

## DIETETIC TECHNICIAN A.A.S.

### District-Wide

### Total Credits: 64

The Dietetic Technician Degree is designed for highly motivated individuals who would like to work in healthcare, schools and wellness. Students who successfully complete the coursework and internship are eligible to take the National Registration Examination for Dietetic Technicians (DTR) offered by the Commission on Dietetic Registration (CDR), the credentialing agency for the Academy of Nutrition and Dietetics.

The Dietetic Technician Degree is approved by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) located at 120 S. Riverside Plaza, Suite 2000, Chicago, IL 60606-6995; 1-800-877-1600; [www.eatright.org/ACEND/](http://www.eatright.org/ACEND/)

Note: Contact the Dietetic Education Program office for advising.

### Recommended Proficiencies

High school diploma or GED

### General Education Requirements (22-23)

#### Written Communications (3)

ENG101 English Composition III (3)

OR

ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

COM100 Fundamentals of Human Communication (3)

Or select a COM course, or an AGECE course.

#### Arts and Humanities (3)

Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGECE course.

#### Social and Behavioral Sciences (3)

Select an Anthropology, Economics, Geography, History, Political Science, Psychology or Sociology course numbered 100 or above, or an AGECE course.

#### Physical and Biological Sciences (7-8)

BIO160 Introduction to Human Anatomy/Physiology (4)

OR

BIO201 Human Anatomy - Physiology I (4) AND

BIO202 Human Anatomy - Physiology II (4)

AND

CHM130 Fundamentals of Chemistry (4)

OR

CHM138 Chemistry for Allied Health (3) (equivalent or higher)

#### Mathematics (3-4)

Select a college-level Mathematics course

BUS101 Business Mathematics (3)

OR

MAT101 Essential Mathematics (4) or higher

### Core Requirements (35)

NTR123 Nutrition throughout the Life Cycle (3)

NTR129 Introduction to Health Care for Nutrition Professionals (3)

NTR142 Applied Food Science (3)

NTR150 Overview of Nutrition Professions (1)

NTR157 Foundations of Dietetic Technician Internship (2)

NTR191 Nutrition Counseling Skill Development (3)

NTR200 Human Nutrition (3)

NTR201 Nutrition Literacy (1)

NTR222 Nutrition Assessment (3)

NTR223 Food Service Management (3)

NTR232A Food and Culture (1)

NTR240 Clinical Nutrition (3)

NTR295 Dietetic Technician Professional Practice Internship (1)

NTR296 Dietetic Technician Internship (6)

CUL105 Food Safety Foundations (1)

OR

NTR105 ServSafe Certification (1)



**Elective (1)**

Select any NTR or CUL course (1)

**Other Requirements (4)**

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading *R*

**Computer Competency (3):**

AGB124 Microcomputers in Agriculture

CIS110 Fundamentals of Computer Literacy or higher

**OR**

Transferable Computer Competency course (Consult the CEG.)

Completion of NTR and CHM course requirements within five (5) years of beginning the program required.

Students must meet all ACEND requirements. CAC recommends that students work in a nutrition-related field which is desirable for obtaining a supervised practice site.

Students must earn a grade of "C" or better in all required courses for this A.A.S. degree.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale. Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 64 credits.

**NUTRITION AND HEALTH PROMOTION CERTIFICATE**

*District-Wide*

**Total Credits: 25**

The Nutrition and Health Promotion Certificate is designed to provide knowledge and training for people who are working with individuals who need education and coaching to lead a healthy lifestyle. This certificate is based on health promotion and disease prevention.

**Recommended Proficiencies**

High school diploma or GED

**Prerequisites**

RDG094 College Reading *R*

**Core Requirements (25)**

CUL105 Food Safety Foundations (1)

NTR123 Nutrition throughout the Life Cycle (3)

NTR129 Introduction to Healthcare for Nutrition Professionals (3)

NTR141 Nutrition and Wellness (4) *a*

**OR**

NTR104 Nutrition (3) **AND**

NTR104L Personal Wellness Lab (1)

**OR**

NTR200 Human Nutrition (3) **AND**

NTR104L Personal Wellness Lab (1)

NTR150 Overview of Nutrition Professions (1)

NTR191 Nutrition Counseling Skill Development (3)

NTR222 Nutrition Assessment (3)

NTR232A Food and Culture (1)

NTR240 Clinical Nutrition (3)

NTR247 Weight Management Theory (3)

**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.

**RENEWABLE ENERGY TECHNOLOGY**

**BIOFUELS TECHNICIAN CERTIFICATE**

*Signal Peak Campus*

**Total Credits: 16**

The Biofuels Technician Certificate provides students with an applied foundation in Biofuels production technology, incorporating all three of the major production areas: biodiesel, bioethanol fuel and biogas. The curriculum is designed to prepare students for entry level employment or further study in the field.

**Prerequisite**

RDG094 College Reading (3) *R*

**Core Requirements (16)**

RET250 Ethanol Process Fundamentals (3)

RET252 Biofuels Facilities Design and Boiler Systems (3)

RET255 Distillation and Evaporation Theory (3)

RET275 Biodiesel Production and Design (3)

RET296 Renewable Energy Technology Internship (4)



## Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.



## RENEWABLE ENERGY TECHNOLOGY A.A.S.

*Signal Peak Campus*

### Total Credits: 64-65

The Renewable Energy Technology A.A.S. Degree provides solid foundational knowledge, skills, strategies and field experience to prepare students for multiple roles within alternative energy fields. Students select a specialization area of either Biofuels or Photovoltaic Technology.

### Prerequisite

RDG094 College Reading (3)

### General Education Requirements (22-23)

#### Written Communications (3)

ENG101 English Composition III (3)

OR

ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

Select a COM course, or an AGEC course.

### Arts and Humanities (3)

Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGEC course.

### Social and Behavioral Sciences (3)

Select an Anthropology, Economics, Geography, History, Political Science, Psychology or Sociology course numbered 100 or above, or an AGEC course.

### Physical and Biological Sciences (8)

AGS101 World of Plants (4)   
 AGS104 Agricultural Environmental Science (4)   
 BIO100 Biology Concepts (4)   
 CHM130 Fundamental Chemistry (4)   
 ENV101 Environmental Science (4)   
 PHY100 Physical Universe (4)

Or select Biological and Physical Lab Science courses numbered 100 or above, or an AGEC Science Lab courses.

### Mathematics (2-4)

Select a college-level Mathematics course

MAT111 Math for Electricians (2)  
 MAT121 Intermediate Algebra, Standard (4)  
 MAT162 Applied Statistics (3) or higher

### Core Requirements (14)

RET105 Introduction to Renewable Energy (3)  
 RET160 OSHA Safety for Renewable Energy (1)  
 RET296 Renewable Energy Technology Internship (4)

#### Select one of the following (3):

DFT120 Interpreting Engineering Drawings (3)  
 DFT127 Autocad I: Computer Drafting and Design (3)  
 DFT128 Autocad II: Computer Drafting and Design (3)  
 MET232 Solid Works (3)

#### Select one of the following (3):

MET125 Principles of Fabrication (3)

OR

WLD110 Survey of Welding (3)

### Select one Specialization:

#### Biofuels Specialization Requirements (23)



ELC221 Control Devices (3)  
 DIE110 Introduction to Diesel Engines and Fuel Systems (3)  
 MET132 Fluid Power (3)  
 RET150 Pollution Controls and Industrial Waste (2)  
 RET250 Ethanol Process Fundamentals (3)  
 RET252 Biofuels Facilities Design and Boiler Systems (3)  
 RET255 Distillation and Evaporation Theory (3)  
 RET275 Biodiesel Production and Design (3)

#### Photovoltaic Technology Specialization Requirements (24)

Select one:

BUS100 Introduction to Business (3)  
 BUS101 Business Mathematics (3)



- BUS122 Small Business Management (3)
- ELC126 Residential Wiring (3)
- ELC201 Solar Photo Voltaic I (3)
- ELC202 Solar Photo Voltaic II (3)
- POS101 American Government and Politics (3)  
- SKL115 Employment Readiness Part 1 (3)
- SKL116 Employment Readiness Part 2 (3)
- Elective (3) Consult CAC RET Advisor.

### Other Requirements (4)

PAC or DAN Course (1)

Reading Competency: RDG094 College Reading 

### Computer Competency (3):

AGB124 Microcomputers in Agriculture

CIS110 Fundamentals of Computer Literacy or higher

**OR**

Transferable Computer Competency course (Consult the CEG.)

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires 64-65 credits.

## SOLAR PHOTO VOLTAIC TECHNICIAN CERTIFICATE

*Signal Peak Campus*

### Total Credits: 9

The Solar PV Technician Certificate program offers students the opportunity to gain experience, knowledge and safety practices of solar photo voltaic systems.

### Recommended Proficiencies

Students must understand basic electricity and the lethal dangers of both alternating current (AC) and more specifically the characteristics of direct current (DC).

### Core Requirements (9)

- ELC126 Residential Wiring (3)
- ELC201 Solar Photo Voltaic I (3)
- ELC202 Solar Photo Voltaic II (3)

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

## SPORTS AND FITNESS

### ATHLETIC STUDIES A.A.

*Signal Peak Campus*

### Total Credits: 60-64

The Athletic Studies A.A. Degree prepares students to transfer to a four-year college/university by completing the AGEC-A Certificate and gathering a broad background in sports, intercollegiate athletics, sports management and exercise.



### Recommended Proficiencies

College-level reading and mathematics placement test scores or equivalent coursework.

### General Education Requirements AGEC-A (35-36)

### Written Communications (6)

ENG101 English Composition III (3)  

ENG102 English Composition IV (3)  

### Oral Communications (3)

*Select an AGEC course.*


*For the following two categories, for each category select courses from different disciplines to total 15 credits.*



### Arts and Humanities (6-9)

*Select Art and Humanities AGEC courses.*

### Social and Behavioral Sciences (6-9)

*Select AGEC courses from at least two different disciplines.*


PEH101 Personal Health (3) 


PSY101 Introduction to Psychology (3)  

### Physical and Biological Sciences (8)

*Select AGEC courses with a laboratory component.*

### Mathematics (3-4)

MAT141 College Mathematics, Standard (4) 

MAT162 Applied Statistics (3) 

### Subject Options (0-6)

Based on your major, review the specific A.A. Degree requirements in the catalog, consult an academic advisor and see the Transfer Guides at <http://aztransfer.com/college/>





### Special Awareness Requirements (0-9)

Select AGEC courses to fulfill these requirements.

1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender)
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences, or Transfer Electives, may also be used to satisfy the three (3) Special Awareness Requirements categories. A course may not be used to satisfy more than one Special Awareness Requirements category.

### Core Requirements (26)

- PAC201J Advanced Weight Training (2)  
 PED100 History and Philosophical Foundations of Sport and Physical Education (3)  
 PED101 History of Intercollegiate Athletics (3)  
 PED102 The Management of Sport (3)  
 PED103 Foundations of Exercise (3)  
 PED105 Women and Sport in the U.S. (3)  
 PED112 Introduction to Strength Training (3)  
 PEH200 Sport Safety Training/CPD/AED for the Professional Rescuer (3)

#### Select three of the following (3):

- PED202A Team Sports Officiating Baseball (1)  
 PED202B Team Sports Officiating Basketball (1)  
 PED202C Team Sports Officiating Football (1)  
 PED202D Team Sports Officiating Soccer (1)  
 PED202E Team Sports Officiating Softball (1)  
 PED202F Team Sports Officiating Volleyball (1)

### Other Requirements (3)

Reading Competency: RDG094 College Reading 

#### Computer Competency (3):

AGB124 Microcomputers in Agriculture (3)

OR

CIS120 Survey of Computer Information Systems (3) 

### Other A.A. Degree Requirements

Some A.A. Degrees require up to 16 credits of a Second Language to demonstrate proficiency. Many four-year degrees require either a second semester or fourth semester level of a second language and strongly encourage students to complete this requirement at the community college prior to transfer.

Check your university catalog, Transfer Guides at <http://aztransfer.com/college/> or meet with an academic advisor. Students may demonstrate proficiency by completion of coursework and/or a proficiency test.

Students undecided about their major are encouraged to complete a fourth semester of a second language. CAC offers Spanish, French, Sign Language and other Foreign Languages and Literatures. Contact an academic advisor for assistance.

Students must earn a grade of “C” or better in each A.A. degree required course.

Students must earn a minimum of 20 credits from CAC which includes the AGEC-A requirements.

This A.A. Degree requires 60-64 semester credits.



## GROUP FITNESS INSTRUCTOR CERTIFICATE

*Signal Peak Campus*

### Total Credits: 19

Upon completion, the student will be eligible to sit for certification as an American Council on Exercise (ACE) Group Fitness Instructor. The Group Fitness Instructor Certificate core focuses on the foundations necessary to successfully compete and succeed in the fitness industry as a Certified Group Fitness Instructor. Courses include introductions to biomechanics, sports nutrition, sports psychology, motor development, exercise physiology, injury prevention, emergency procedures and health screening.

### Recommended Proficiencies

College-level reading, writing and oral communication skills recommended.



**Core Requirements (19)**

- NTR141 Nutrition and Wellness (4)
- PED103 Foundations of Exercise (3)
- PED104 Anatomical Kinesiology (3)
- PEH200 Sports Safety Training (3)
- PEH203 Group Fitness Instructor Methods (3)

**Three Physical Activity Courses required (3)**

*The following courses are recommended:*

- PAC101J Basic and Beginning Techniques of Weight Training (1)
- PAC101K Basic and Beginning Techniques of Yoga (1)
- PAC105 Physical Fitness: Core Emphasis (1)

**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.

**HUMAN PERFORMANCE CERTIFICATE**

*Signal Peak Campus*

**Total Credits: 19**

Upon completion of this Human Performance Certificate, the student will be eligible to sit for certification as an American Council on Exercise (ACE) Personal Trainer. The program core focuses on the foundations necessary to successfully compete and succeed in the fitness industry as a Certified Personal Trainer. Courses include introductions to biomechanics, sports nutrition, sports psychology, motor development, exercise physiology, injury prevention, emergency procedures and health screening.

**Recommended Proficiencies**

College level reading, writing and oral communication skills recommended.

**Core Requirements (19)**

- BUS100 Introduction to Business (3)
- NTR141 Nutrition and Wellness (4)
- PED103 Foundations of Exercise (3)
- PED104 Anatomical Kinesiology (3)
- PEH200 Sports Safety Training (3)

**Three Physical Activity Courses required (3)**

*The following courses are recommended:*

- PAC101J Basic and Beginning Techniques of Weight Training (1)

- PAC101K Basic and Beginning Techniques of Yoga (1)
- PAC105 Physical Fitness: Core Emphasis (1)  
**OR** any PAC course.

**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.

**RECREATION MANAGEMENT CERTIFICATE**

*Signal Peak Campus*

**Total Credits: 19**

This Certificate prepares students for employment in recreation and tourism management and program delivery positions in diverse public, nonprofit, and private organizations such as municipal and county parks and recreation departments, state and national resource agencies, YMCAs, Boys and Girls Clubs of America, and other nonprofit agencies, clinical rehabilitation centers, hospitals, visitor and convention bureaus, senior centers, resorts and spas, destination management companies and other components of the tourism/commercial recreation industry.

**Recommended Proficiencies**

College-level reading, writing and oral communication skills recommended.

**Core Requirements (19)**

- HRM100 Introduction to Hospitality (3)
- PAC Any Physical Activity Course (1)
- PED102 The Management of Sport (3)
- REC101 Recreation, Leisure, and the Quality of Life (3)
- REC108 Recreation Practicum (3)
- REC203 Leisure Delivery Systems (3)
  
- REC230 Program Planning (3)
- OR**
- REC250 Leadership in Recreation (3)

**Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.



## SPORTS INFORMATION CERTIFICATE

*Signal Peak Campus*

### Total Credits: 19

The Sports Information Certificate is designed to provide current training and information to students interested in the promotion and operation of sporting events. This program will enhance the understanding and application of strategies to effectively manage and promote youth, high school, collegiate, and professional sporting events.

### Recommended Proficiencies

High School diploma or GED; College-level reading, writing and oral communication skills recommended.

### Prerequisite

RDG094 College Reading (3)

### Core Requirements (19)

CIS112 Web Page Design Fundamentals (3)  
 MSC101 Media and Society (3)   
 MSC102 Writing for the Print Media I (3)  
 MSC110 Publications (3)  
 PED101 History of Intercollegiate Athletics (3)  
 PED102 The Management of Sport (3)

### PAC course (1):

*Select one of the recommended courses:*

PAC101A Basic and Beginning Techniques of Golf (1)  
 PAC101M Basic and Beginning Techniques of Basketball (1)

### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.



## SPORTS MANAGEMENT A.A.S.

*Signal Peak Campus*

### Total Credits: 71

The Sports Management Degree prepares individuals to meet the needs of the sports industry. Students completing this degree will be exposed to sport promotion, health and fitness center management, sporting goods management/sales, and the successful operation of numerous types of sport organizations, ranging from various professional teams/leagues, to many national and international amateur sports organizations, federations, conferences, and associations.

The program's Business core focuses on the basics of accounting, computer information systems, marketing, management, the legal environment of business, human relations, and supervisory techniques. The program's Sports/Fitness core focuses on the basics of the history/philosophical foundations of sport/physical education, strength/athletic training, sports nutrition, lifetime fitness/wellness, sports safety training, and physical activity.

### Recommended Proficiencies

High School diploma or GED; College-level reading, writing and oral communication skills recommended.

### Prerequisite

RDG094 College Reading (3)

### General Education Requirements (35)

#### Written Communications (3)

ENG101 English Composition III (3)

OR

ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

*Select a COM course, or an AGECE course.*

#### Arts (3)

*Select an Art course, or an AGECE course.*

#### Humanities (3)

PHI105 Introduction to Ethics (3) *(Recommended)*

*Or select a Humanities course, or an AGECE course.*

#### Social and Behavioral Sciences (12)

ECN201 Principles of Macroeconomics (3)

ECN202 Principles of Microeconomics (3)

MSC101 Media and Society (3)

PEH101 Personal Health (3)

PSY101 Introduction to Psychology (3)

*Or select Social and Behavioral Science courses, or AGECE courses.*



## Physical and Biological Sciences (8)

NTR141 Nutrition and Wellness (4) AND  
 BIO160 Introduction to Human Anatomy and  
 Physiology (4)

*Or select Biological and Physical Lab Science courses  
 numbered 100 or above, or AGEC Science Lab courses.*

## Mathematics (3-4)

MAT162 Applied Statistics (3) (Recommended)

*Or select a college-level Mathematics course*

BUS101 Business Mathematics (3)  
 MAT101 Essential Mathematics (4) or higher

## Core Requirements (30)

### Business Core (12)

ACC201 Financial Accounting (3)   
 BUS123 Business Relations (3)  
 BUS190 Principles of Management and Leadership (3)   
 BUS201 Legal Environment of Business (3)

### Sports and Fitness Core (18)

PED100 History and Philosophical Foundations of  
 Sport and Physical Education (3)  
 PED102 The Management of Sport (3)

### Select four of the following courses (12):

PED101 History of Intercollegiate Athletics (3)  
 PED103 Foundations of Exercise (3)  
 PED105 Women and Sport in the U.S. (3)  
 PED108 Introduction to Athletic Training (3)  
 PED112 Introduction to Strength Training (3)  
 PEH200 Sports Safety Training (3)

### Other Requirements (6)

Physical Education Activity: Select 3 credits  
 Reading Competency: RDG094 College Reading

### Computer Competency (3):

AGB124 Microcomputers in Agriculture  
 CIS110 Fundamentals of Computer Literacy or higher

OR

Transferable Computer Competency course  
 (Consult the CEG.)

Students must earn a grade of "C" or better in all required  
 courses.

Students must earn a cumulative grade point average  
 (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

*Students desiring to earn an AGEC Certificate (35 credits),  
 see AGEC Certificate requirements.*

This A.A.S. Degree requires 71 credits.

# TECHNOLOGY

## COMPUTER AIDED DESIGN CERTIFICATE

**Signal Peak Campus**

**Total Credits: 25**

This Certificate offers preparation for entry-level positions  
 in computer aided design and drafting.

### Core Requirements (15)

DFT127 Autocad I (3)  
 DFT128 Autocad II (3)  
 MAT101 Essential Mathematics (4) or higher

### Select one of the following (3):

DFT130 Advanced Computer Aided Drafting  
 Applications (1) (*Register three terms to earn  
 3 credits*)  
 DFT131 Autocad III (3)

### Select one of the following (3):

COM100 Fundamentals of Human Communication (3)   
 ENG121 Applied Technical Writing (3)

### Electives (10)

*Select 10 credits from any of the following areas:*

CET Civil Engineering Technology  
 CIS Computer Information Systems  
 DFT Drafting  
 ELC Electricity  
 ELT Electronics  
 HEO Heavy Equipment Operator  
 WLD Any Welding course

OR

MAT121 Intermediate Algebra, Standard (4) (*If not used  
 above*)

### Other Requirements

Students must earn a cumulative grade point average  
 (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate  
 credits from CAC.





## WELDING TECHNOLOGY A.A.S.

### Signal Peak Campus

### Total Credits: 71

The Welding Degree prepares students for employment as a welder/fabricator with an array of career opportunities within the industry. Topics include welding processes of shielded metal arc welding, gas tungsten arc welding, gas metal arc welding, pipe welding, welding design and fabrication, blueprint reading for welders and autocad skills. A typical graduate seeks employment in mining, steel fabrication, steel erection, process piping, pipeline and related facilities, aerospace and manufacturing industries and other industries. After completion of this degree, students may apply for a Certificate in Drafting.

### General Education Requirements (19-23)

#### Written Communications (3)

ENG101 English Composition III (3)  

OR

ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

Select a COM course, or an AGECE course.

#### Arts and Humanities (3)

Select an Art, Humanities, Literature, Music, Philosophy or a Theater course numbered 100 or higher, or an AGECE course.

#### Social and Behavioral Sciences (3)

Select an Anthropology, Economics, Geography, History, Political Science, Psychology or Sociology course, or a Social and Behavioral Science AGECE course.

#### Physical and Biological Sciences (4)

Select an Agriculture, Astronomy, Biology, Chemistry, Geology, Environmental Science, Nutrition or Physics course numbered 100 or higher, or a Physical and Biological Sciences AGECE course.

#### Mathematics (3)

BUS101 Business Mathematics (3)

OR

MAT101 Essential Mathematics (4) or higher

#### Core Requirements (42)

DFT127 Autocad I (3)

DFT128 Autocad II (3)

DFT131 Autocad III (3)

MET125 Principles of Fabrication (3)

WLD110 Survey of Welding Processes (3)

WLD121 Shielded Metal Arc Welding I (3)

WLD122 Shielded Metal Arc Welding II (3)

WLD125 Pipe Welding I (3)

WLD128 Blueprint Reading for Welders (3)

WLD221 Gas Tungsten Arc Welding (3)

WLD222 Gas Metal Arc Welding (3)

WLD225 Shielded Metal Arc Welding III(3)

WLD227 Welding Design and Fabrication (3)  
enroll twice for credit (6)

#### Select two courses (6):

BUS100 Introduction to Business (3)

BUS122 Small Business Management (3)

BUS123 Business Relations (3)

BUS190 Principles of Management and Leadership (3)

WLD196 Welding Technology Internship I (3)

#### Other Requirements (4)

PAC or DAN course (1)

Reading Competency: RDG094 College Reading

#### Computer Competency (3):

AGB124 Microcomputers in Agriculture (3)

CIS110 Fundamentals of Computer Literacy (3) or higher

OR

Transferable Computer Competency course  
(Consult the CEG)

Students intending to transfer to a B.A.S. Degree or other bachelor's degree should consult a CAC advisor.

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

This A.A.S. Degree requires a minimum of 71 credits.





## WELDING CERTIFICATE

### *Signal Peak Campus*

### **Total Credits: 33**

This Welding Certificate provides students with entry-level welding skills enabling them to gain employment as welding technicians.

### **Core Requirements (18)**

- WLD121 Shielded Metal Arc Welding I (3)
- WLD122 Shielded Metal Arc Welding II (3)
- WLD221 Gas Tungsten Arc Welding (3)
- WLD222 Gas Metal Arc Welding (3)
- WLD227 Welding Design and Fabrication (3)  
*(Register two terms to earn 6 credits)*

### **Select one of the following (3):**

- ENG101 English Composition III (3) 📖 📝
- ENG121 Applied Technical Writing (3)

### **Electives (12)**

*Select 12 credits from any of the following courses:*

- DFT127 AutoCAD I (3)
- DFT128 AutoCAD II (3)
- DFT131 AutoCAD III (3)
- MAT141 College Mathematics, Standard (4) 📖
- WLD110 Survey of Welding Processes (3)
- WLD120 Oxy-Acetylene Welding (3)
- WLD125 Pipe Welding I (3)
- WLD128 Blueprint Reading for Welders (3)
- WLD223 Automatic and Semi-Automatic Welding (3)
- WLD225 Shielded Metal Arc Welding III (3)

### **Other Requirements**

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the certificate credits from CAC.



# DEGREES AND CERTIFICATES WITH SPECIAL REQUIREMENTS

## CORRECTIONS

### ADVANCED CORRECTIONS CERTIFICATE

*Superstition Mountain Campus, Florence  
and San Tan Centers*

#### Total Credits: 39

This Advanced Corrections Certificate is designed to upgrade the skills and knowledge of Correctional Officers currently working in the corrections field.

#### Prerequisites

RDG094 College Reading

Successful completion of Arizona Correctional Officers Training Academy (COTA) Certificate (21 credits).

#### Core Requirements (36)

COTA Certification (21)

BUS190 Principles of Management and Leadership (3)   
(\*May be fulfilled by successful completion of  
COTA Certificate)

COM101 Interpersonal Communication (3)

OR

COM263 Intercultural Communication (3)

POS220 U.S. and Arizona Constitutions (3)

PSY101 Introduction to Psychology (3)

SOC100 Introduction to Sociology (3)

#### Electives (3)

AJS101 Introduction to Administration of Justice (3)

AJS275 Criminal Investigations (3)

CIS120 Survey of Computer Information Systems  
(3)

PHI112 World Religions (3)

SPA Any Spanish course(s)

SOC200 Racial and Ethnic Minorities (3)   
or above

PSY200 Social Psychology (3) or above

\*Corrections Officers who have the rank of Sergeant or higher are required to request the Department of Corrections submit, to CAC Admissions, an official copy of their Sergeant Leadership Academy Certificate of Completion to receive credit for BUS190.

#### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.

### CORRECTIONS A.A.S.

*Superstition Mountain Campus*

#### Total Credits: 64

This Degree is designed to upgrade the skills and knowledge of Correctional Officers currently working in the field. Completion of the Arizona Correctional Officers Training Academy (COTA) Certificate program is required for admission into the degree program. Upon successful completion of COTA, students are eligible to apply up to 21 credits towards the Corrections A.A.S. Degree, per CAO Memo: COTA Certified Completers dated 09/07/2012.

#### Prerequisites:

RDG094 College Reading

Successful completion of (Arizona Correctional Officers Training Academy) Certificate (21 credits).

### General Education Requirements (19-23)

#### Written Communications (3)

ENG101 English Composition III (3)

OR

ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

COM101 Interpersonal Communication (3)

OR

COM263 Intercultural Communication (3)

#### Arts and Humanities (3)

*Select an AGEC course from the Humanities.*

#### Social Behavioral Sciences (3)

*Select one:*

PSY101 Introduction to Psychology (3)

SOC100 Introduction to Sociology (3)

#### Physical and Biological Sciences (4)

*Select an AGEC course with a laboratory component.*

#### Mathematics (3-4)

MAT121 Intermediate Algebra, Standard (4) or higher  
MAT course



## Core Requirements (42)

- COTA Certification (21)
- AJS101 Introduction to Administration of Justice (3)
- AJS123 Ethics and the Administration of Justice (3)
- AJS209 Substantive Criminal Law (3)
- AJS240 The Corrections Function (3)
- BUS190 Principles of Management and Leadership (3)
- (\*May be fulfilled by submission of official Sergeant Leadership Academy Certification to CAC Admissions)*
- CIS120 Survey of Computer Information Systems (3)
- POS220 U.S. and Arizona Constitutions (3)

## Electives (3)

Select 3 credits from the following courses:

- AJS225 Criminology (3)
- AJS275 Criminal Investigations (3)
- PHI112 World Religions (3)
- PSY200 Social Psychology (3) or higher
- SOC200 Racial and Ethnic Minorities (3) or higher
- SPA Any Spanish course(s)

## Other Requirements (0-4)

- PAC or DAN (1) *(Fulfilled by COTA physical training)*
- Reading Competency: RDG094 College Reading

## Computer Competency (3):

- CIS120 Survey of Computer Information Systems (3)   
*(Fulfilled under Core Requirements)*

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

The Corrections A.A.S. Degree requires 64 credits.

## DIESEL/HEAVY EQUIPMENT

### HEAVY EQUIPMENT MECHANIC'S APPRENTICESHIP CERTIFICATE

*Signal Peak Campus*

#### Total Credits: 30

The Heavy Equipment Mechanic's Apprenticeship training is sponsored by the Arizona Chapter of Associated General Contractors (AGC) for repair and maintenance of heavy equipment to journeyman standards. Students must be sponsored by an AGC contractor and meet the sponsoring contractor's entry level proficiencies to enroll in this program.

#### Prerequisites

Students must be sponsored by an Associated General Contractor (AGC).

#### Core Requirements (30)

- AGC112 Introduction to Mechanical Technology (.5)
- AGC113 Introduction to Mechanical Technology Lab (1)
- AGC114 Equipment Preventive Maintenance (.5)
- AGC115 Equipment Preventive Maintenance Lab (.5)
- AGC116 Mobile Air Conditioning (1)
- AGC117 Mobile Air Conditioning Lab (1.5)
- AGC126 Electrical and Electronic Systems (1)
- AGC127 Electrical and Electronic Systems Lab (1.5)
- AGC128 Hydraulic Systems (1)
- AGC129 Hydraulic Systems Lab (1.5)
- AGC136 Chassis and Drive Systems (1)
- AGC137 Chassis and Drive Systems Lab (1.5)
- AGC138 Brakes, Steering, Suspension Systems (1)
- AGC139 Brakes, Steering, Suspension Systems Lab (1.5)
- AGC248 Diesel Engines I (2)
- AGC249 Diesel Engines I Lab (3)
- AGC258 Diesel Engines II (2)
- AGC259 Diesel Engines II Lab (3)
- AGC268 Systems Diagnostics and Reconditioning (2)
- AGC269 System Diagnostics and Reconditioning Lab (3)

#### Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn at least one-third of the Certificate credits from CAC.





## JOHN DEERE CONSTRUCTION AND FORESTRY EQUIPMENT TECHNOLOGY A.A.S.

**Signal Peak Campus**

### Total Credits: 75

The John Deere Construction and Forestry Equipment Technology A.A.S. Degree prepares students for employment as diesel and heavy equipment technicians at John Deere Dealerships. Students must be sponsored by a John Deere Dealership; dealerships are located in Arizona, Nevada and California.

### General Education Requirements (19-23)

#### Written Communications (3)

ENG101 English Composition III (3)  

OR

ENG121 Applied Technical Writing (3)

#### Oral Communications (3)

Select a COM course or an AGECE course if you plan to transfer to earn a bachelor's degree.

#### Arts and Humanities (3)

Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGECE course.

#### Social and Behavioral Sciences (3)

Select an Anthropology, Economics, Geography, History, Political Science, Psychology or Sociology course numbered 100 or above, or an AGECE course.

#### Physical and Biological Sciences (4)

Select a course numbered 100 or above from biological or physical science disciplines, or an AGECE course.

#### Mathematics (3-4)

Select a college-level Mathematics course

BUS101 Business Mathematics (3)

OR

MAT101 Essential Mathematics (4) or higher

### Required Courses (55)

CFE101 John Deere Diesel Engines and Fuel Systems (12)

CFE102 John Deere Hydraulic and Electrical/Electronics Systems (12)

CFE201 John Deere Chassis and Drives (10)

CFE202 John Deere Heavy Equipment Reconditioning and Operations (10)

DIE222 Mobile Refrigeration (3)

DIE225 Preventive Maintenance (2)

WLD Any Welding course (3)

CIS Any Computer Competency Course (3)

Consult the CEG to determine course transferability.

### Other Requirements (1-4)

PAC or DAN course (1)

Reading Competency: RDG094 College Reading 

#### Computer Competency (3):

AGB124 Microcomputers in Agriculture

OR

CIS 110 Fundamentals of Computer Literacy (3)  
or higher (*May be fulfilled in Required Courses*)

OR

Transferable Computer Competency course (Consult the CEG).

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

Students must earn a minimum of 20 credits from CAC.

The John Deere Construction and Forestry Equipment Technology A.A.S. Degree requires 75 credits.

## OPERATOR'S APPRENTICESHIP PROGRAM CERTIFICATE (Associated General Contractors)

**Signal Peak Campus**

### Total Credits: 30

Heavy Equipment Operator's Apprenticeship training is sponsored by the Associated General Contractors (AGC) for operation of heavy equipment to journeyman standards. Students must be sponsored by an Associated General Contractor (AGC) to enroll in the program.

#### Prerequisites

Students must be sponsored by an Associated General Contractor (AGC).

### Core Requirements (30)

AGC102 Introduction to Construction Math (1)

AGC103 Basic Safety (.5)

AGC104 Soils I (1)

AGC105 Grades I (1)

AGC106 Machine Orientation I (.5)

AGC107 Machine Operation I (1)

AGC121 Equipment Preventive Maintenance (1)

AGC122 Introduction to Earth Moving (1)

AGC123 Machine Orientation II (.5)

AGC124 Machine Operation II (2.5)

AGC131 Safety Part II (1)



- AGC132 Rigging and Hoisting (1)
- AGC133 Machines Theory I (1)
- AGC134 Machine Operation III (2)
- AGC141 Soils II (1)
- AGC142 Grades II (1)
- AGC143 Machines Theory II (1)
- AGC144 Machine Operation IV (2)
- AGC151 Machines Theory III (.5)
- AGC152 Advanced Safety (1)
- AGC153 Soils III (1)
- AGC154 Machine Operation V (2.5)
- AGC161 Finishing and Grading (1.5)
- AGC162 Operator Supervision (1)
- AGC163 Machine Operation VI (2.5)

## Other Requirements

Students must earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.  
Students must earn at least one-third of the Certificate credits from CAC.

## HEALTH CAREERS

### NURSING A.A.S.

**Signal Peak Campus**

### Total Credits: 71

Central Arizona College's Registered Nursing Program prepares students for the medical workforce or to complete further education to specialize in clinical practice, teaching or administration.

The Nursing Degree is approved by the Arizona State Board of Nursing, 4747 N. 7th Street, Suite 200, Phoenix, AZ 85014; 602-771-7803; [www.azbn.gov](http://www.azbn.gov) and accredited by Accreditation Commission for Education in Nursing, 3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326; 404-975-5000; <http://acenursing.org>

Current Nursing students may apply to take the Practical Nurse Licensing Examination (NCLEX-PN) after completing the general education requirements, NUR121, NUR122 and NUR150. Completion of the four-semester Program qualifies the student for the Nursing Associate of Applied Science Degree and for taking the Registered Nurse Licensing Examination (NCLEX-RN).

### Admission Requirements

In addition to the admission requirements of the

College, applicants must meet the current requirements established by the Nursing Admissions Committee in conjunction with the Nursing Faculty. These requirements include, but are not limited to:

1. Competence in Math, English, and Reading
2. Completion of BIO201 and BIO202
3. CNA License from the Arizona State Board of Nursing must be included in the application to the CAC Nursing program. (Request CNA License early to allow shipping and processing time.)
4. Attendance at a Nursing Information session within the past year
5. Eligibility to register for MAT121 or higher MAT course
6. Eligibility to register for ENG101
7. Successful completion of the HESI Entrance Test at CAC (within 3 attempts)
8. Cumulative GPA of 2.75 or higher
9. Completed CAC Nursing program application

Students must be able to meet the Essential Functions of the Nursing Program as listed in the Nursing Application and Information Packet. Admission to the Nursing Program is selective and based on a point system (specific established criteria). Acceptance into the College does not guarantee acceptance into the Nursing Program.





Further information may be obtained at URL: [http://www.centralaz.edu/Home/Academics/Divisions\\_and\\_Programs/Nursing\\_Division.htm](http://www.centralaz.edu/Home/Academics/Divisions_and_Programs/Nursing_Division.htm) .

Proper course sequencing is essential. Please see your academic advisor.

### Recommended Proficiencies





Competence in Math, English and Reading.

### Prerequisites (8)

- BIO201 Human Anatomy - Physiology I (4)  
  - BIO202 Human Anatomy - Physiology II (4)  
- (Counted as part of the Nursing A.A.S. Degree General Education requirements)  
Arizona Certified Nursing Assistant (CNA)  
**AND** acceptance into Nursing Program

### General Education Requirements (30)

#### Written Communications (6)

- ENG101 English Composition III (3)  
- ENG102 English Composition IV (3)  

#### Arts and Humanities (3)

Select an AGECE course.



### Social and Behavioral Sciences (9)

- PSY101 Introduction to Psychology (3)   
 PSY203 Developmental Psychology (3)   
 SOC100 Introduction to Sociology (3)

### Physical and Biological Sciences (8)

- BIO202 Human Anatomy - Physiology II (4)   
 (Fulfilled under Prerequisites)  
 BIO205 Microbiology (4)

### Mathematics (4)

- MAT121 Intermediate Algebra, Standard or higher

### Core Requirements (40)

Proper course sequencing is essential. Please see your academic advisor.

- NUR121 Intro to Nursing Transitions (8)  
 NUR122 Nursing Health Illness Transitions (8)  
 NUR126 Principles of Pharmacology and Drug Dosages (2)  
 NUR145 Pharmacology (3)  
 NUR221 Nursing Developmental Transitions (8)  
 NUR222 Nursing Organizational Transitions (8)  
 NTR200 Human Nutrition (3)

### Other Requirements (1)

PAC or DAN course (1)

Reading Competency: RDG094 College Reading

Students must earn a grade of "C" or better in all courses to receive this AAS degree.

Students must earn a minimum of 20 credits from CAC.

The Nursing A.A.S. Degree requires 71 credits.



## RADIOLOGIC TECHNOLOGY A.A.S.

### Superstition Mountain Campus

### Total Credits: 79

Radiologic Technology is a health care profession involving the use of ionizing radiation to generate diagnostic images in the diagnosis and treatment of disease. The Associate of Applied Science Degree in Radiologic Technology is a two-year program (six sequential semesters including summers) that prepares students for entry-level positions as radiographers. The program starts once per year in the Spring Semester.

The curriculum is designed in accordance with the Radiography Curriculum established by the American Society of Radiologic Technologists. Students are required by Arizona State Statute to complete 1,800 practicum hours within the two years. The Radiologic Technology course of study is a demanding experience and involves a full-time commitment of at least 40 hours per week plus homework. Students must earn a grade of "C" or better in all required courses.

Graduates of the program are eligible to:

1. Receive a Radiologic Technology Associate of Applied Science Degree;
2. Sit for the American Registry of Radiologic Technologists examination (ARRT);
3. Apply for an Arizona license to practice Radiography - CRT (Certified Radiologic Technologist).

The Radiologic Technology Degree is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 2850, Chicago, Illinois 60606-3182; 312-704-5300; [mail@jrcert.org](mailto:mail@jrcert.org)

### Recommended Proficiencies

Enrollment is limited and the selective admission process is highly competitive. Students must meet the minimum admission requirements of the program and those required for admission to Central Arizona College. Admission to the program is based on a point value system. Points are calculated by a formula related mainly to grade point average, residency, work experience, committee interview and other criteria.

CAC highly recommends candidates complete BIO201 and BIO202. Achieving a high level of success in the courses taken before applying to the program will improve a student's chance for admission to the radiography program.

### Admission requirements:

- High School Diploma or equivalency (GED)
- Record of Immunizations
- Pre-admission testing to prove college-level English, reading and math proficiency



## DEGREES AND CERTIFICATES WITH SPECIAL REQUIREMENTS

- Pass screening tests that will include: drug testing, criminal background check and fingerprinting
- Possess the ability to perform basic physical tasks as required
- Submission of the Radiologic Technology Program Application Form
- Two letters of recommendation

### Prerequisites

Radiologic Technology Cohort student.  
HCC116 Medical Terminology (3) or equivalent course.

### General Education Requirements (23)

Candidates who have completed a prior associate's degree or earned General Education course credits with a grade of "C" or better from regionally accredited institutions may count them toward the General Education Requirements below.

### Written Communications (3)

ENG101 English Composition III (3) (SUN ENG 1101)

OR

ENG121 Applied Technical Writing (3)

### Oral Communications (3)

Select a COM course or an AGECE course if you plan to transfer to earn a bachelor's degree.



### Arts and Humanities (3)



Select an Art, Humanities, Literature, Music, Philosophy or Theatre course numbered 100 or above, or an AGECE course.

### Social and Behavioral Sciences (3)

Select an Anthropology, Economics, Geography, History, Political Science, Psychology or Sociology course numbered 100 or above, or an AGECE course.

### Physical and Biological Sciences (8)

BIO201 Human Anatomy - Physiology I (4)  

BIO202 Human Anatomy - Physiology II (4)  

### Mathematics (3)

MAT121 Intermediate Algebra, Standard (4) or higher

### Required Courses (55)

RAD100 Fundamentals of Radiologic Science and Healthcare (1)

RAD110 Radiographic Positioning I (4)

RAD120 Principles of Radiographic Exposure I (3)

RAD130 Patient Care in Radiologic Science (2)

RAD140 Practicum I (240-280 hours) (3)

RAD150 Radiation Physics I (3)

RAD160 Radiographic Positioning II (4)

RAD170 Principles of Radiographic Exposure II (3)

RAD180 Practicum II (240-280 hours) (3)

RAD200 Practicum III (600-650 hours) (7)

RAD210 Radiation Physics II (3)

RAD230 Radiobiology and Radiation Protection (3)

RAD240 Practicum IV (360-390 hours) (4)

RAD250 Basic Pharmacology and Drug Administration (1)

RAD260 Radiographic Pathology (2)

RAD270 Advanced Imaging (2)

RAD280 Registry Review (3)

RAD290 Practicum V (360-390 hours) (4)

### Other Requirements (4)

PAC or DAN course (1)

Reading Competency: RDG094 College Reading 

### Computer Competency (3):

(Fulfilled in RAD Core Requirements)

Students must earn a grade of "C" or better in all courses to receive this degree.

Students must earn a minimum of 20 credits from CAC.

The Radiologic Technology A.A.S. Degree requires 79 credits.





# Course Descriptions



Professor Marilyn Edelman – Maricopa Campus Science Night



### Course Delivery

Central Arizona College offers classes in a variety of modalities and formats for our students' convenience including on-site, face-to-face, hybrid, online, interactive television, open entry/closed exit and accelerated. While assignments and methods vary, all classes, regardless of modality or format, hold students to the same rigorous, high academic standards.

The course schedule indicates the delivery format of a class. Students are responsible for understanding the methods and expectations of the format for each course they choose prior to the first day of class. Information about online and hybrid classes can be found on the Central Arizona College website.

### Prerequisites and Corequisites

A *prerequisite* is a requirement the student must meet prior to enrollment in a course. A *corequisite* is a requirement the student must meet concurrently with a course.

For a student to receive credit for a course that is a prerequisite or corequisite, the student must receive a grade of "C" or better in the course, complete a competency exam, or provide an equivalent assessment score.

"*Instructor consent*" may be secured directly from the course instructor and permits a student to enroll in a course without the prerequisite or corequisite; however, it does not guarantee a waiver of prerequisites or corequisites for any other course.

Dropping a corequisite will result in the student being withdrawn from the course requiring the corequisite.

### Additional Options: Times for Credit and Grading

Courses may not be repeated for credit unless it is noted in the course description. Courses may not be repeated in the same semester.

Students may select "*Satisfactory/Unsatisfactory*" grading for courses if that option is noted in the course description; however, students may not choose "*Satisfactory/Unsatisfactory*" for courses applied to a certificate or degree.

### SPECIAL COURSES

#### 088/098 Selected Topic, Developmental

*Various Credits*

Developmental instruction in a specific discipline such as English, mathematics, reading, social sciences and other areas is offered to provide a foundation for college-level course work.

### 196/296 Internships

*Credit Varies*

Courses in the 196 or 296 series offer internship opportunities to fulfill credential requirements and/or help introduce students to the workforce. For internship opportunities in addition to the 196 and 296 courses, please contact CAC's Coordinator for Experiential Learning at 520-494-5987.

### 197/297 Career Advancement

*Up to 4 Credits*

Courses in the 197 or 297 series offer a combination of on-the-job and related college training with the flexibility to meet students' specialized vocational needs. Courses may be offered in any discipline with appropriate approvals and may be repeated for credit.

### 198/298 Selected Topics

*Credit Varies*

Courses in the 198 or 298 series offer special and current topics on a short-term basis. Selected topics can be in the form of a class or special offering in any discipline with appropriate approvals. These classes may not transfer and are degree applicable only with special approval.

### APPROVED COURSES


The following list of Central Arizona College academic courses includes courses which are offered every semester as well as courses offered only on a cyclical program basis. Please see the Class Schedule for a listing of currently offered courses. Also, consult an academic advisor to view program sequencing guides to efficiently and effectively complete your academic goals.

### **SUN** Shared Unique Number System

The Shared Unique Number (SUN) code for select general education and major preparation courses offers Arizona course transfer information. The SUN designation/icon indicates transferability within the Arizona Transfer System that includes the three public universities and select public and tribal community colleges. For specific course transferability status based on the term taken and a grade of "C" or better, consult the Course Equivalency Guide (CEG) on the AZTransfer website: <http://aztransmac2.asu.edu/cgi-bin/WebObjects/CEG>. Also, consult your CAC advisor and the bachelor degree program institution for specific applicability of the transferable course to your specific academic goals or baccalaureate degree program.



## Arizona General Education Curriculum (AGEC)

The Arizona General Education Curriculum (AGEC)  icon indicates the course is approved to fulfill one or more AGEC categories.

The AGEC provides students attending any Arizona public community college with the opportunity to build a general education curriculum that is transferable upon completion to another Arizona public community college or university. The AGEC has three forms: the **AGEC-A** (35 credits), **AGEC-B** (35 credits) and **AGEC-S** (35-37 credits).

Arizona community and tribal colleges are obligated to accept AGEC coursework from another Arizona public community or tribal postsecondary institution. AGEC requirements will be accepted and applied as defined by the source institution. CAC accepts AGEC approved courses from Arizona colleges and universities and applies them toward CAC AGEC requirements.

The only exception is AGEC coursework where the "special requirements" are embedded (completed by a combination of coursework) as the requirement may not be complete in absence of a completed AGEC. Application of AGEC coursework containing embedded "special requirements" is up to the discretion of the receiving institution.

The certified CAC **AGEC Certificate** (35 credits) is transferable from one Arizona public community college to another Arizona public community college as well as from an Arizona public community college to an Arizona public university. In addition, the CAC AGEC transfers as a block of 35 credits toward baccalaureate degrees among CAC articulation agreement institutions.

### AGEC Grandfather Clause

CAC accepts transferred general education courses toward AGEC requirements, provided the courses were taken prior to Fall 1999 and the current course equivalent at CAC fulfills one or more AGEC requirements. Students must provide evidence of fulfilling the Intensive Writing AGEC requirement.

### Cross Listed Courses

Courses indicated as cross listed with another course are courses that are identical in content. Students will only receive credit for one of the two courses. Consult an academic advisor to determine the best course to achieve your academic goal.

ICON LEGEND:

AGEC: 

Intensive Writing: *IW*

Reading Required: RDG094: *R*

SUN Course: 



## ACCOUNTING (ACC)

### ACC100 Fundamentals of Accounting

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

The basics of accounting for a small business with emphasis on recording transactions, posting to the general ledger, preparing financial statements, recording payroll, accounting for inventory and accrual accounting. *Prerequisite:* RDG094.

### ACC121 Income Tax Fundamentals

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Theory, rules and procedures used in preparing federal income tax returns for individuals, corporations and partnerships.

*Prerequisite:* ACC100 or ACC201 .

### ACC201 Financial Accounting

3 Credits (3 Lectures) ACC 2201

**Typically Offered:** Fall, Spring and Summer

Theory and practice of accounting applicable to the accumulation, reporting and uses of financial information.

*Prerequisite:* RDG094.

### ACC202 Managerial Accounting

3 Credits (3 Lectures) ACC 2202

**Typically Offered:** Fall, Spring and Summer

Selection and analysis of accounting information for internal organization use by management. *Prerequisite:* ACC201 .

### ACC222 Payroll Accounting

3 Credits (3 Lectures)

**Typically Offered:** Spring

Functions and practical operation of payroll accounting, with examination of current payroll tax laws, methods of computing wages and salaries, timekeeping methods and microcomputer software for payroll systems. *Prerequisites:* ACC100 OR ACC201 ; CIS120 OR CBA133A OR CBA113A.

### ACC226 Accounting with QuickBooks Pro

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Practical application of accounting utilizing QuickBooks Pro. Topics covered will include the general ledger, accounts receivable, accounts payable, job costing, payroll and inventory. *Prerequisite:* ACC100 OR ACC201 .

### ACC227 Accounting with Sage 50 Complete®

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Practical application of accounting concepts utilizing Sage 50 Complete® (formerly Peachtree®). This course covers: accounts payable, accounts receivable, payroll, inventory, job costing, fixed assets, and time and billing features of Sage 50 Complete®. *Prerequisite:* ACC100 OR ACC201 or instructor consent. *Note:* Students with accounting experience may request an instructor waiver.

## ADMINISTRATION OF JUSTICE (AJS)

### AJS101 Introduction to Administration of Justice

3 Credits (3 Lectures) AJS1101

**Typically Offered:** Fall, Spring and Summer

History and philosophy of the Criminal Justice System. Organization and jurisdiction of local, state and federal law enforcement, judicial and correctional systems. Career opportunities and qualifying requirements, terminology and constitutional precedence. *Prerequisite:* RDG094.

### AJS110 Public Safety Dispatch Education and Training

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

An introduction to the theories, methods and techniques of public safety dispatching for police, fire and EMS agencies to include actual scenario-based instruction and practice.

### AJS122 Traffic Control

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

Analysis of traffic control, fundamentals of traffic accident investigation and motor vehicle law, including Arizona laws.

### AJS123 Ethics and the Administration of Justice

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Explore ethical issues in the justice system. Focus on ethics and the law, the police, the courts and corrections. Review ethical theory related to the administration of justice. *Prerequisite:* RDG094.





**AJS124 Defense Tactics**

3 Credits (2.75 Lectures, 1 Lab)

**Typically Offered:** Consult CAC Class Schedule.

Physical control of suspects, including handcuffing, search security, baton, come-alongs and defense tactics. *Prerequisites:* *Certification of Good Health.*

**AJS130 Firearms**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Consult CAC Class Schedule.

Firearm safety, marksmanship, combat shooting, and legal responsibilities.

**AJS140 Communications in Law Enforcement**

3.5 Credits (3 Lectures, 2 Labs)

**Typically Offered:** Consult CAC Class Schedule.

Use of modern technology in gathering and processing information, written reports and techniques of police radio use.

**AJS209 Substantive Criminal Law**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Philosophy of legal sanctions and historical development from common law to modern American criminal law, classifications of crimes, elements of and parties to crimes, general definitions of crimes and common defense. *Prerequisite:* AJS101

**AJS210 Constitutional Law**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Focus on selected aspects of civil liberties and civil rights in the United States. Emphasis is on the Constitution and the United States Supreme Court cases that delineate the legal doctrines relevant to defining the Constitution's guarantees of liberty. *Prerequisite:* AJS101 or POS101

**AJS212 Juvenile Justice Procedures**

3 Credits (3 Lectures)

**Typically Offered:** Fall

History and development of juvenile justice theories, procedures and institutions. *Prerequisite:* SOC100 or AJS101

**AJS222 Criminalistics**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Introduction to the scientific aspects of criminal investigation and the crime laboratory's role in the criminal justice system. Emphasis on the collection, preservation and transportation of evidence and the techniques of examining physical evidence to include modern criminalistic research developments. *Prerequisite:* AJS101

**AJS224 Police Administration**

3 Credits (3 Lectures)

**Typically Offered:** Fall

Principles of administration, organization and management; responsibilities and interrelationships of administrative and line-and-staff services; and analysis of functional divisions of modern police and correctional operations. *Prerequisite:* AJS101

**AJS225 Criminology**

3 Credits (3 Lectures) *IW*

**Typically Offered:** Fall, Spring and Summer

Theories of criminality and the economic, social and psychological impact of crime, victimization and relationships between statistics and crime trends. *Prerequisite:* AJS101 or SOC100. *Corequisite:* ENG102

**AJS230 The Police Function**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Theories of procedures and methods of operation of public police emphasizing discretionary powers, with a survey of career opportunities and current trends in law enforcement. *Prerequisite:* AJS101

**AJS240 The Corrections Function**

3 Credits (3 Lectures)

**Typically Offered:** Spring

History and development of correctional theories and institutions. *Prerequisite:* AJS101

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094: *R*

SUN Course:



## **AJS260 Procedural Criminal Law**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Introduction to procedural criminal law; focusing on court holdings, procedural requirements, and effect on the daily operations of law enforcement. *Prerequisite:* AJS101 🌀.

## **AJS270 Community Relations**

3 Credits (3 Lectures) 📐

**Typically Offered:** Spring

Recognition and understanding of community problems; methods of coping with crisis situations, victimology, ethnic and minority cultures; and cooperating with personnel in community action programs and local police operations. *Prerequisite:* AJS101 🌀.

## **AJS275 Criminal Investigations**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Theory of criminal investigation, crime scene procedures, case preparation, interviewing and basic investigative techniques. *Prerequisite:* AJS101 🌀.

## **AJS295 Internship**

3 Credits (Internship)

**Typically Offered:** Spring

Internship in the Criminal Justice field to provide employment experience. *May be taken two times for credit; may only use once for elective credit. Prerequisite:* AJS101 🌀.

## **AGRICULTURE BUSINESS (AGB)**

### **AGB100 Introduction to Agriculture Business**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

Entrepreneurship in agribusiness, including marketing, budgeting, financial statements, purchasing, business structure, customer relations and inventory control.

### **AGB121 Fundamentals of Agricultural and Environmental Economics**

3 Credits (3 Lectures) 🌀

**Typically Offered:** Spring

An introductory analysis of the agriculture economy addressing economic principles, farm management and marketing of agriculture products. *Prerequisite:* RDG094.

### **AGB123 Agriculture Accounting**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Agriculture accounting principles and practices.

### **AGB124 Microcomputers in Agriculture**

3 Credits (2 Lectures, 3 Labs) 🌀

**Typically Offered:** Fall and Spring

Introduction to the operation and capabilities of microcomputers in agriculture applications. Simple programming, data analysis, graphical display, spreadsheets and word processing are included. *Prerequisite:* RDG094.

### **AGB130 Agricultural Leadership**

1 Credit (1 Lecture) 🌀

**Typically Offered:** Fall and Spring

Identification of agricultural leadership styles and roles; development of leadership techniques and skills required in working with organizations and youth groups, including communicating, guiding, evaluating and ethical considerations. *May be taken two times for credit. Prerequisite:* RDG094. *Note:* Fall semester course develops the November FFA Field Day; Spring semester course develops the February Field Day.

### **AGB213 Introduction to Agricultural Commodity and Food Marketing**

3 Credits (3 Lectures) 🌀

**Typically Offered:** Fall, Spring and Summer

An investigation of the organizational, institutional and economic principles that form the agricultural and food marketing systems in the United States. Applications of microeconomics, market performance and international trade analysis are included. *Prerequisite:* RDG094.




### AGB225 Agriculture Business Analysis

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Agricultural business analysis using accounting to determine profit and loss, financing the credit needs of an agriculture business, creating budgets and prioritization of enterprises.

### AGB234 Agricultural Leadership Development



3 Credits (3 Lectures) 

**Typically Offered:** Fall and Spring

Characteristics of effective leaders, including leadership styles and strategies for the management and organization of youth groups in agriculture. Practice in leadership development techniques. *Prerequisite: RDG094.*

## AGRICULTURE SCIENCE (AGS)

### AGS101 World of Plants

4 Credits (3 Lectures, 3 Labs)  

**Typically Offered:** Fall and Spring

The structure, function and use of plants in the living world and scientific experiences relating to the plant kingdom and the plant environment. *Prerequisite: RDG094.*



### AGS104 Agricultural Environmental Science

4 Credits (3 Lectures, 3 Labs)  

**Typically Offered:** Fall, Spring and Summer

Science-based approaches to understanding the environmental concepts of ecosystems, population dynamics and agricultural sustainability. *Prerequisite: RDG094.*

### AGS106 Entomology

4 Credits (3 Lectures, 3 Labs)  

**Typically Offered:** Fall and Spring

Identification, classification, control and management of insects and other land arthropods affecting humans and their environment. *Prerequisite: RDG094.*



### AGS110 Agricultural Mechanics I

3 Credits (2 Lectures, 3 Labs)



**Typically Offered:** Fall, Spring and Summer

Develop fundamental knowledge and skills related to production and urban agricultural industry, including operation and maintenance of mechanical hand tools, electrical wiring, plumbing and irrigation, arc, gas metal arc welding and oxy-fuel welding. *Field trips required. Necessary safety equipment will be provided by the student.*

### AGS122 Natural Resources and Conservation

3 Credits (3 Lectures)  

**Typically Offered:** Fall and Spring

The conservation and multiple use of natural resources, including recreation, water, forestry, range, soils, wildlife, fossil and alternative fuels. *Prerequisite: ENG101 .*  
*Corequisite: ENG102 .*

### AGS140 Agricultural Mechanics II

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Study of production and urban agricultural industry, including Global Positioning Systems, urban and production agricultural equipment, concrete construction, surveying, three-view drawings and bill of materials. *Field trips required. Necessary safety equipment will be provided by the student. Prerequisite: AGS110 or instructor consent.*

### AGS195A Careers in Environmental Science

1 Credit (.5 Lecture, 2 Labs) 

**Typically Offered:** Fall, Spring and Summer

An introduction to the various careers and industries associated with the environmental science field. Students build industry network relationships. *Field trip required. Corequisite: RDG094.*

### AGS196 Agriculture Internship

1 Credit (1 Internship) 

**Typically Offered:** Fall, Spring and Summer

Students work in agriculture internship placements tailored to the students' academic program, interests and skills. *May be taken more than four times for credit. Prerequisite: RDG094 and instructor consent.*

ICON LEGEND:

AGEC: 

Intensive Writing: *IW*

Reading Required: RDG094: 

SUN Course: 



## **AGS204 Environmental Sustainability**

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall and Spring

Understanding the Earth's environment and the important challenges facing humanity, including climate change, pollution, and loss of biodiversity and water shortages. *Students must attend at least one local governmental environmental science forum. Prerequisite: RDG094.*

## **AGS221 Soil Science**

4 Credits (3 Lectures, 3 Labs) *R*

**Typically Offered:** Fall and Spring

Fundamental principles of soil science, including the origin, nature and classification of soils; emphasizing the chemical, physical and biological properties in relation to growth; and nutrition of plants and non-plant uses of soils. *Prerequisite: RDG094.*

## **AGS235 Principles of Horticulture**

3 Credits (2 Lectures, 3 Labs) *R*

**Typically Offered:** Fall and Spring

Principles and skills in the science, operations and management of field, orchard and ornamental horticultural plant propagation using seed, cutting, budding and grafting in propagating plants for greenhouses and outdoor nurseries. *Prerequisites: AGS240, RDG094.*

## **AGS240 Plant Biology**

4 Credits (3 Lectures, 3 Labs) *R*

**Typically Offered:** Spring

A study of the origin, evolution, anatomy, function and ecology of land plants. Genetics, cellular structure, reproduction and the anatomy of monocot and dicot stems, roots, leaves, flowers and fruits are described. Includes aspects of plant physiology, photosynthesis, respiration and plant soil-water relationships. *Prerequisite: RDG094.*

## **AGS296 Agriculture Internship**

3 Credit (3 Internships) *R*

**Typically Offered:** Fall, Spring and Summer

Students work in agriculture internship placements tailored to the students' academic program, interests and skills. *May be taken two times for credit. Prerequisite: RDG094 and instructor consent. Note: Students may serve as an intern for a local agricultural company more than one semester during their CAC enrollment.*

## **ANIMAL SCIENCE (ANS)**

### **ANS101 Animal Industry**

3 Credits (2 Lectures, 3 Labs) *R*

**Typically Offered:** Fall

Fundamental principles of animal, dairy, equine and poultry science focusing on production, marketing and distribution. *Prerequisite: RDG094.*

### **ANS102 Horsemanship I**

3 Credits (1 Lecture, 6 Labs)

**Typically Offered:** Fall and Spring

Fundamental knowledge and skill development in horse anatomy and function. Conformation and riding is emphasized in this course. Individual help is given in areas needed. *The student must supply a horse and tack for this course.*

### **ANS104 Human and Animal Interrelationships from Domestication to Present**

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall and Spring

Evaluation of interrelationships between humans and animals from ancient to modern times, including evolution through domestication of animals in Europe and the New World. *Prerequisite: RDG094.*

### **ANS110 Horse Event Production**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Horse event production for future equine professionals including organizing shows, events or clinics related to the equine industry.

### **ANS111 Horseshoeing I**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Fundamentals for the beginning horseshoer, including horse anatomy and physiology relative to the proper shoeing of horses.





### ANS121 Equine Facility Management I

1 Credit (1 Lecture)

**Typically Offered:** Fall and Spring

This course is designed to educate students in safe and effective equine facilities management. *Students boarding a horse in a CAC facility must sign up for the Equine Facility Management course.*

### ANS122 Equine Facilities Management II

1 Credit (1 Lecture)

**Typically Offered:** Fall and Spring

Students will plan, design and perform a cost analysis of a horse facility, paying attention to safety and ease of use. *Students boarding a horse at Central Arizona College must sign up for this course.*

### ANS131 Training the Roping Horse I

3 Credits (1 Lecture, 6 Labs)

**Typically Offered:** Fall and Spring

Fundamentals of starting a horse in roping events including the many stages of roping, from starting the horse in the pen and finishing the horse out of a roping box. The emphasis is on correct horsemanship principals as well as physical and mental preparation of the horse and rider. *The student must supply the horse and tack for this course. May be taken two times for credit.*

### ANS172 Introduction to Western Horsemanship

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

An introduction to the basic theories of western horsemanship with an emphasis on correct seat, leg and hand positions. Course includes proper equine handling techniques. Students will ride in a schooling show environment using western tack. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*


### ANS195 Careers in Veterinary Science

1 Credit (1 Lecture) 

**Typically Offered:** Fall

An introduction to the various careers and industries associated with the veterinary science field. Students build industry network relationships. *Group field trip required. Recommended: RDG094.*

### ANS200 Introduction to Equine Science

3 Credits (3 Lectures) 

**Typically Offered:** Fall and Spring

Introduction to equine sciences including basic structure and function of equine anatomy, disease prevention and treatment, common breeds and nutritional requirements of horses. *Prerequisite: RDG094.*

### ANS202 Horsemanship II

3 Credits (1 Lecture, 6 Labs)

**Typically Offered:** Fall and Spring

Advanced Horsemanship emphasizing correct horsemanship practices, stabling, training, healthcare and parasite control, horse anatomy and function, conformation and riding (cues, aids, gaits and maneuvers). *The student must supply a horse and tack for this class. Prerequisite: ANS102.*

### ANS211 Advanced Horseshoeing

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Advanced skills in shoeing horses to eliminate and/or correct lameness to the extent that the animal remains useful and pain free. *Prerequisite: ANS111.*

### ANS213 Animal Genetics

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Principles of domestic animal genetics, including molecular, classical and population genetics. *Prerequisite: BIO100 or higher.*

### ANS215 Anatomy and Physiology of Domestic Animals

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Spring

Functional anatomy and systemic physiology of domestic animals with emphasis on physiological systems of importance to animal production. *Prerequisite: BIO100 or higher.*

ICON LEGEND:

AGEC: 

Intensive Writing: *IW*

Reading Required: RDG094: 

SUN Course: 



## **ANS216 Equine Anatomy and Physiology**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Introduction to the structure and function of the equine. Includes cell structure, and anatomy and physiology of major systems including skeletal, muscular, circulatory and digestive systems. *Prerequisite: ANS200.*

## **ANS220 Artificial Insemination**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

Anatomy and physiology of reproduction, heat detection, semen handling, herd management and the techniques of artificial insemination.

## **ANS223 Training for Timed Events**

3 Credits (1 Lecture, 6 Labs)

**Typically Offered:** Fall and Spring

Fundamental concepts and basic horsemanship skills applied to training a timed event horse, including conformation and bloodlines, types and uses of equipment and training methods. Physical and mental conditioning of both horse and rider along with fundamentals needed to help the horse perform to its highest potential in a competition setting. *May be taken three times for credit.*

## **ANS226 Feeds and Feeding**

3 Credits (3 Lectures)

**Typically Offered:** Fall

Identification and preparation of feeds, digestion and utilization of various feed products, and computation of standard rations for livestock.

## **ANS231 Training the Roping Horse II**

3 Credits (1 Lecture, 6 Labs)

**Typically Offered:** Fall and Spring

Advanced training of the roping horse, both in the pen and from the roping box. Emphasis on correct horsemanship principles, as well as, physical and mental preparation of the horse and rider. *The student must supply the horse and tack for this course. May be taken two times for credit. Prerequisite: ANS131 or instructor consent.*

## **ANTHROPOLOGY (ASB)**

### **ASB101 Physical Anthropology and Archaeology: Bones, Stones and Human Evolution**

3 Credits (3 Lectures)  

**Typically Offered:** Fall and Spring

Evidence and processes of human evolution and of culture change. Includes primates, fossil hominids and their tools, race, variation, heredity, environment and human biology, prehistoric culture and society. *Field work activities may be required. Prerequisite: RDG094.*



### **ASB102 Cultural Anthropology**

3 Credits (3 Lectures)  

**Typically Offered:** Fall and Spring

Principles and concepts of sociocultural anthropology and anthropological linguistics with illustrations from a variety of cultures around the world. *Field work activities may be required. Prerequisite: RDG094.*

### **ASB201 Indians of the Southwest**

3 Credits (3 Lectures)  

**Typically Offered:** Fall and Spring

Cultural geography and social institutions of contemporary Indian cultures of the American Southwest and their antecedents. Includes examining similarities and differences, gender roles, and the historic and contemporary relations of Southwestern Indian cultures and federal and state governments of Spain, Mexico and the U.S. *Field work activities may be required. Prerequisite: RDG094.*

## **ARCHAEOLOGY (ARH)**

### **ARH200 Principles of Archaeology**

3 Credits (3 Lectures)  

**Typically Offered:** Every other spring; consult CAC Class Schedule.

History of archaeological research; survey of concepts, methods, and goals of archaeology as a subdiscipline of anthropology. Analysis and synthesis of archaeological data. Theories in archaeology, including theories of cultural evolution. *Prerequisite: RDG094.*



**ART  
(ART)**

**ART100 Art Appreciation**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Introduction to the history, vocabulary, materials and processes of art with an emphasis on painting, sculpture and architecture. *Prerequisite: RDG094.*

**ART101 Two-Dimensional Design**

3 Credits (2 Lectures, 3 Labs) ART1112

**Typically Offered:** Fall, Spring and Summer

A study of perception, emphasizing the elements and principles of design as a basis of all creative work in the visual arts with emphasis on two-dimensional media. *Prerequisite: RDG094.*

**ART102 Three-Dimensional Design**

3 Credits (2 Lectures, 3 Labs) ART1115

**Typically Offered:** Fall and Spring

A study of perception, emphasizing the elements and principles of design as a basis of all creative work in the visual arts, with emphasis on three-dimensional media. *Prerequisite: RDG094.*

**ART103 Beginning Jewelry and Metalwork**

3 Credits (2 Lectures, 3 labs)

**Typically Offered:** Fall, Spring and Summer

Basic jewelry design and metalwork techniques for the beginner. *Prerequisite: RDG094.*

**ART104 Advanced Jewelry and Metalwork**

3 Credits (2 Lectures, 3 labs)

**Typically Offered:** Fall, Spring and Summer

Advanced jewelry design and metalwork techniques. *May be taken more than four times for credit. Prerequisite: ART103.*

**ART105 Ceramics I**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

An overview of hand building, wheel throwing, glazing, materials and concepts of ceramics as a foundation for further work in ceramic arts. *Satisfactory/Unsatisfactory grading option available. Prerequisite: RDG094.*

**ART106 Ceramics II**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Advanced ceramic techniques including in-depth study of construction technique and/or surface treatment. *May be taken up to four times for credit. Prerequisite: ART105.*

**ART107 Drawing I**

3 Credits (2 Lectures, 3 Labs) ART 1111

**Typically Offered:** Fall, Spring and Summer

Introductory study of linear perspective, classical shading theory and composition using basic drawing media, including perspective theory, local values of objects, depiction of 3-dimensional space and the basic principles of design.

**ART108 Intermediate Drawing**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Drawing with emphasis upon the creative use of different techniques as a means of expression. *May be taken up to four times for credit. Prerequisite: ART107 . Recommended: ART101 .*

**ART109 Color Theory**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

The study of color theory, color perception, psychology of color and their applications to visual design and composition.

**ART201 Painting I**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

An introduction to painting, techniques and subject matter with emphasis on skill building. *Prerequisite: ART107 . Recommended: ART101 .*

**ART202 Painting II**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Exploration of color, composition, techniques and subject matter in painting media. *Prerequisite: ART201. Recommended: ART101 .*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## ART203 Life Drawing

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

An introduction to drawing the human figure emphasizing form, structure and anatomy. *May be taken up to four times for credit. Prerequisite: ART107* 🎨

## ART204 Watercolor Painting

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

An introduction to the basic techniques of transparent watercolor with application of design and drawing principles in composition. *May be taken up to four times for credit. Prerequisite: ART107* 🎨. *Recommended: ART101* 🎨.

## ART205 Intermediate Painting

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Advanced projects in painting with emphasis on composition and personal stylistic development. *May be taken up to four times for credit. Prerequisite: ART202.*

## ART206 Portrait Drawing

3 Credits (2 Lectures, 3 Labs) *R*

**Typically Offered:** Spring

Drawing the human figure with emphasis on the structure and anatomy of the face. *May be taken up to four times for credit. Prerequisites: ART107* 🎨, *RDG094.*

## ART207 Art History I

3 Credits (3 Lectures) 🎨 ART 1101 *a* *R*

**Typically Offered:** Fall and Spring

A survey of the history of art from the Prehistoric Era through 1300 C.E. *Prerequisite: RDG094.*

## ART208 Art History II

3 Credits (3 Lectures) 🎨 ART 1102 *a* *R*

**Typically Offered:** Fall and Spring

A survey of the history of art from 1300 CE to the present. *Prerequisite: RDG094.*

## ART209 Visual Art, Music and Learning

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall, Spring and Summer

An introduction to the effects of the arts on learning, student learning styles, visual culture and visual arts, and music theory and culture. *Prerequisite: RDG094. Cross Listed: MHL209.*

## ART210 Ceramics Workshop

2 Credits (2 Lectures)

**Typically Offered:** Summer

An introductory course in the technology, processes, techniques and aesthetics of ceramic art. *Satisfactory/Unsatisfactory grading option is available. May be taken up to four times for credit. Prerequisite: ART105.*

## ART215 Printmaking

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

An introduction to methods of producing fine art prints. *May be taken up to four times for credit. Recommended: ART101* 🎨, *ART107* 🎨.

## ASTRONOMY (AST)

### AST101 Survey of Astronomy

4 Credits (3 Lectures, 3 Labs) *a* *R*

**Typically Offered:** Fall and Spring

An introduction to the history of astronomy, use of astronomical instruments, celestial motion, space flight, planetary systems, structure and evolution of stars, galaxies and cosmology. *Labs will include nighttime observing sessions. Prerequisites: RDG094, MAT092.*

## AUTOMOTIVE/DIESEL (AUT)

### AUT121 Auto Body Repairing and Refinishing I

4 Credits (2 Lectures, 6 Labs)

**Typically Offered:** Fall

An introduction to body repair techniques including surface preparation and painting procedures.





## AUT122 Auto Body Repairing and Refinishing II

4 Credits (2 Lectures, 6 Labs)

**Typically Offered:** Fall and Spring

Emphasis on detailed body repair procedures and advanced painting techniques. Principles of wire feed welding, unibody construction and repair. *Prerequisite: AUT121.*

## BIOLOGY (BIO)

### BIO090 Survey of Science for Success

1 Credit (1 Lecture)

**Typically Offered:** Fall

An overview of various science disciplines, including biology, chemistry, environmental science, physical science, earth science and astronomy. Designed to help students see the various ways science is used in everyday life and to encourage students to pursue further courses in science. *Satisfactory/Unsatisfactory grading option is available. Corequisite: RDG094*

### BIO100 Biology Concepts

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Basic principles and concepts of biology. Exploration of methods of scientific inquiry and behavior of matter and energy in biological systems. Fieldtrips may be required. *Prerequisite: RDG094.*

### BIO109 Natural History of the Southwest

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

A study of the common plants and animals of the southwest, including identification, distribution, adaptations, behavior and ecology; including regional geography/climate. Introduction to basic field and laboratory techniques used in natural history studies with an emphasis on the Sonoran Desert. Field trips required at student's expense. *Prerequisite: RDG094.*

## BIO156 Human Biology for Allied Health

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

An introductory course for allied health majors with an emphasis on humans. Topics include fundamental concepts of cell biology, histology, genetics and microbiology. *Prerequisite: RDG094.*

## BIO160 Introduction to Human Anatomy and Physiology

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

An introduction to and study of the structure and function of the human body. Structural organization, homeostasis, control mechanisms and the major organ systems of the body will be emphasized. *Prerequisite: RDG094.*

## BIO181 General Biology I

4 Credits (3 Lectures, 3 Labs) BIO 1181

**Typically Offered:** Fall, Spring and Summer

Biological principles of structure and function at the molecular and cellular levels, and processes of scientific inquiry. CHM130 or one year of high school chemistry is recommended. Field trips may be required at student expense *Prerequisite: RDG094.*

## BIO182 General Biology II

4 Credits (3 Lectures, 3 Labs) BIO 1182

**Typically Offered:** Fall and Spring

Basic evolution and biological diversity, ecology, plant form and function, and animal form and function are explored through processes of scientific inquiry. Field trips may be required at student expense. *Prerequisite: BIO181* .

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## BIO201 Human Anatomy – Physiology I

4 Credits (3 Lectures, 3 Labs) BIO 2201

**Typically Offered:** Fall, Spring and Summer

Study of structure and function of the human body. Topics include a general introduction and basic orientation of the human body, basic chemistry for biology, cells, tissues, integumentary system, skeletal system, muscular system, nervous system and the special senses. *Prerequisites:* RDG094 and (BIO156 or BIO181 ) or one year of high school biology with a grade of "C" or better.

## BIO202 Human Anatomy – Physiology II

4 Credits (3 Lectures, 3 Labs) BIO 2202

**Typically Offered:** Fall, Spring and Summer

Continuation of structure and function of the human body. Topics include endocrine, blood, cardiovascular, lymphatic/immune, respiratory, digestive, urinary, acid-base and fluid/electrolyte balance, pregnancy and human development and human genetics. *Prerequisites:* BIO201 , RDG094.

## BIO205 Microbiology

4 Credits (3 Lectures, 3 Labs) BIO 2205

**Typically Offered:** Fall, Spring and Summer

Structure and function of micro-organisms and the role they play in the environment and human disease, with emphasis on the medical importance of microbes. Laboratory work includes the handling and identification of micro-organisms. *Prerequisites:* RDG094 and (BIO156 or BIO181 ) or one year of high school biology with a grade of "C" or better; CHM130 or higher with laboratory or one year of high school chemistry with a grade of "C" or better).

## BIO206 Biotechnology Instrumentation I

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Principles and methodologies of recombinant DNA technology, including preparation of solutions and growth media in a laboratory setting and genetic analyses. *Prerequisite:* BIO181 *Recommended:* Completion of BIO181 with a grade of "C" or better.

## BIO207 Biotechnology Instrumentation II

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Principles and methodologies of protein expression, isolation, identification and purification, including immunological and cell culture techniques. *Prerequisite:* BIO206. *Recommended:* Completion of BIO206 with a grade of "C" or better.

## BIO240 General Genetics

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

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 and genetic control of metabolic pathways. This course also includes 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. *Prerequisite:* BIO181 . *Recommended:* Completion of BIO181 with a grade of "C" or better.

## BIO299 Introduction to Co-Op: Biotechnology Internship

1 Credit (1 Internship - 45 hours)

**Typically Offered:** Fall, Spring and Summer

Students who wish to gain more experience in the field of biotechnology should be encouraged to do so by receiving credit for their work, especially in the case of long-term internship placement. Students may complete an internship each semester including summers for a total of six semesters. *May be taken six times for credit. Prerequisite:* BIO206. *Recommended:* Completion of BIO206 with a grade of "C" or better.

## BUSINESS (BUS)

### BUS100 Introduction to Business

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Business administration trends, technology, communication, ethics, economics, business organization and ownership including entrepreneurship, management and production, marketing, finances, laws and regulations and human resources management. *Prerequisite:* RDG094.



**BUS101 Business Mathematics**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

A study of mathematical computations as applied in various business transactions including discounts, interest, payroll, bank reconciliation and basic business statistics. *Prerequisites:* MAT082 or higher; RDG094.

**BUS120 Personal Money Management**

3 Credits (3 Lectures)

**Typically Offered:** Fall

A study of consumer decision-making in a technological society where individuals have limited time and income, including planning and budgeting for food, shelter, transportation, healthcare, insurance, savings, investments, debt and taxes. *Prerequisite:* RDG094.

**BUS122 Small Business Management**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Factors in planning, owning and managing a small business with use of case materials to develop entrepreneurship and managerial/marketing skills. *Prerequisite:* RDG094.

**BUS123 Business Relations**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

The development of interpersonal skills necessary for improving supervision and leadership in the workplace through a basic understanding of interactions among people. *Prerequisite:* RDG094.

**BUS180 Introduction to Marketing**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

An introduction to marketing, including product, principles, practices and total marketing process planning and analysis. *Prerequisite:* RDG094.

**BUS190 Principles of Management and Leadership**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

A comparative examination of classic and contemporary theories of management and leadership to include the social, ethical, legal and team-building implications of workplace issues. *Prerequisite:* RDG094.

**BUS196 Applied Business Internship**

1 Credit (1 Internship)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Closed Exit

Designed for students who have successfully completed at least 15 college credits toward a certificate or degree, this job readiness and internship course helps students develop professional job skills and apply those skills to a 45-hour internship. CAC's Student Services Experiential Learning Coordinator will provide assistance in locating internship site. *May be taken three times for credit. Prerequisite:* Successfully complete a minimum of 15 college-level credits.

**BUS201 Legal Environment of Business**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

An examination of the legal framework governing rules of conduct among businesses and the legal implications of establishing business policy. *Prerequisite:* RDG094.

**BUS207 Business Communications**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Written and oral communication in organizations with emphasis on writing business letters, memos and reports; utilizing electronic and social media effectively in a business environment; speaking and listening skills; communication theory, critical analysis of appropriate writing; and communication in various business situations. *Prerequisite:* ENG101

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **BUS208 Business Statistics**

3 Credits (3 Lectures) BUS 2201

**Typically Offered:** Fall and Spring

A study of business applications using descriptive and inferential statistics, measurement of relationships and statistical process control management techniques.

*Prerequisites:* RDG094; MAT151 ; (CIS120 or instructor consent).

## **BUS220 Retail Management**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Management principles of retailing with application to small, medium, and large stores, evaluating store locations, layout, employment, merchandising management and current trends in retailing. *Recommendation:* RDG094

## **BUS250 Planning the Entrepreneurial Venture**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Research, develop and write detailed start-up business plans to create a successful business. Note: this course is a combination of BUS250A, BUS250B, BUS250C, and BUS250D.

## **BUS250A Entrepreneurship - Introduction**

.75 Credit (.75 Lecture)

**Typically Offered:** Consult CAC Class Schedule.

Investigate business ideas, examine traits of successful entrepreneurs, assess business opportunities and feasibility, and evaluate legal structures and management infrastructure.

## **BUS250B Entrepreneurship - Market Planning**

.75 Credit (.75 Lecture)

**Typically Offered:** Consult CAC Class Schedule.

Conduct research on a chosen product/service in relation to the industry, competition and other market considerations.

## **BUS250C Entrepreneurship - Financial Planning**

.75 Credit (.75 Lecture)

**Typically Offered:** Consult CAC Class Schedule.

Project the financial situation of a business concept including needed start-up funds, pricing strategies and sources of financing using break-even analysis, basic cash accounting systems and financial ratios.

## **BUS250D Entrepreneurship – The Business Plan**

.75 Credits (.75 Lecture)

**Typically Offered:** Consult CAC Class Schedule.

Finalizing the business planning activities required for the successful launching of a new venture.

## **BUS260 Applied Business Seminar**

3 Credits (2 Lectures, 1 Internship/Practicum)

**Typically Offered:** Fall, Spring and Summer

This is a capstone course that includes an internship or community service learning project experience for students completing degree requirements. Students develop career goals, professional job skills and collaborate as a team to research problems and critique actual local and global business community situations. A 45-hour internship site can be arranged by online students to complement coursework; face-to-face or ITV students complete an in-class community service learning project. Open to students who have successfully completed a minimum of 30 college credits. *Prerequisites:* CIS110 or CIS120 and successful completion of 30 college credits.

## **BUS292 Fundamentals of Logistics – Organizational Management**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Introduction to the fundamentals of logistics, including procurement, inventory, transportation, warehousing, materials handling, packaging, information management, sustainability and international logistics of supply chain and management. *Prerequisite:* RDG094.

## **CERTIFIED NURSING ASSISTANT (CNA)**

### **CNA125 Nursing Assistant**

6 Credits (4 Lectures, 6 Labs)

**Typically Offered:** Fall, Spring and Summer

Entry-level nursing skills, supervised clinical experience, and basic anatomy, physiology, nutrition, and medical terminology pertinent to nursing assistants in nursing homes or hospitals. Potential students convicted of a felony may not apply for state certification or licensure until five years after the absolute discharge of sentence. All court-ordered terms of probation or parole must be completed at least five years prior to the date of application. *Prerequisites:* HS diploma or GED, Registration Packet must be completed, Healthcare Provider Level CPR, MAT082 and RDG094.





## CHEMISTRY (CHM)

### CHM130 Fundamental Chemistry

4 Credits (3 Lectures, 2 Labs, 1 Recitation) CHM 1130

**Typically Offered:** Fall, Spring and Summer

The basic aspects of chemistry, including matter, energy, measurement, atoms, molecules, ions, chemical bonding, chemical arithmetic and nuclear reactions. Includes one credit of in-person labs. *Prerequisites:* MAT092, RDG094.

### CHM138 Chemistry for Allied Health

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Introduction to general, organic and biological chemistry for health. Includes measurements, atomic structure, bonding, nomenclature, states of matter, solutions, reactions, hydrocarbons, functional groups, carbohydrates, lipids, proteins, enzymes and metabolic pathways. *Prerequisites:* BUS101 or MAT092 OR MAT101 or higher; RDG094.

### CHM138LL Chemistry for Allied Health Lab

1 Credit (2 Labs, 1 Recitation - 45 hours total)

**Typically Offered:** Fall and Spring

Introduction to laboratory skills and activities related to general, organic and biological chemistry for allied health. *Prerequisites:* RDG094 and (BUS101 or MAT092 or MAT101 or higher). *Corequisite:* CHM138.

### CHM151 General Chemistry I

4 Credits (3 Lectures, 2 Labs, 1 Recitation) CHM 1151

**Typically Offered:** Fall and Spring

Chemistry topics including matter, energy, measurement, atoms, ions, molecules, chemical formulas and equations, chemical arithmetic, thermochemistry, states of matter, chemical bonding and solutions are covered. *Includes one credit of in-person labs. Prerequisites:* RDG094; MAT121 or MAT122; CHM130 or CHM138 or one year of high school chemistry with a grade of "C" or better.

### CHM152 General Chemistry II

4 Credits (3 Lectures, 2 Labs, 1 Recitation) CHM 1152

**Typically Offered:** Fall and Spring

Topics such as chemical kinetics, spontaneity of chemical change, chemical equilibrium, precipitation reactions, acid and base equilibria, complex ions, oxidation-reduction reactions and nuclear reactions are covered. *Includes one credit of in-person labs. Prerequisites:* CHM151 .

### CHM235 General Organic Chemistry I

4 Credits (3 Lectures, 2 Labs, 1 Recitation) CHM 2235

**Typically Offered:** Fall

A comprehensive study of organic chemistry with emphasis on reactivity and synthesis. Topics include the areas of structure and bonding, molecular properties, alkanes, cycloalkanes, stereochemistry, mechanisms for organic reactions, alkenes, alkynes, alkyl halides, conjugated dienes and alcohols. In-person lab experience includes laboratory techniques and practice with emphasis on separations, purification, synthesis, halide reactivity and spectroscopic identification of organic structures. *Prerequisite:* CHM152 .

### CHM236 General Organic Chemistry II

4 Credits (3 Lectures, 2 Labs, 1 Recitation) CHM 2236

**Typically Offered:** Spring

A continuation of CHM235, CHM236 explores the general principles of organic chemistry with advanced continued emphasis on reactivity and synthesis. Topics covered are ethers and epoxies, aldehydes and ketones, carboxylic acids and their derivatives, carbohydrates, lipids, amines, amino acids, polymers and aromatic compounds. In-person lab experience includes additional techniques in organic chemistry; preparation, separation and identification of organic compounds, including polymers, benzocaine, soaps and amines. *Prerequisite:* CHM235 .

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## CHINESE (CHI)

### CHI101 Elementary Chinese

5 Credits (4 Lectures, 1 Recitation)

**Typically Offered:** Fall

Modern spoken and written Chinese (Mandarin) for non-native speakers. Introduction to proper pronunciation, grammar, beginning conversation and the development of reading and writing skills. Survey of cultural aspects of the Mandarin Chinese language.

### CHI102 Elementary Chinese II

5 Credits (4 Lectures, 1 Recitation)

**Typically Offered:** Spring

A continuation of CHI101 emphasizing modern spoken and written Mandarin Chinese for non-native speakers. Continued development of proper pronunciation, grammar, conversation and reading and writing skills. Survey of cultural norms, beliefs and traditions from areas where Mandarin Chinese is spoken. *Prerequisite: CHI101.*

## CIVIL TECHNOLOGY (CET)

### CET101 Introduction to Surveying for Heavy Equipment Operators

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Theory and application of plane surveying, including horizontal and vertical measurements, differential leveling, topographic mapping and ground safety.

### CET125 Introduction to Earthmoving Methods and Operations

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Introduction to the process of earthmoving, including capabilities, limitations, uses and maintenance of heavy equipment employed in heavy construction and mining. Use mathematical formulas and calculations as well as computer software to determine owner costs and equipment requirements.

### CET221 Basic Surveying and Grade Staking



4 Credits (2 Lectures, 6 Labs)

**Typically Offered:** Fall and Spring

Theory and application of plane surveying, including horizontal and vertical measurements, differential leveling, topographic mapping and construction staking. Grade staking skills including percent, ratio, stake reading, hubs and lath, grade transfers, offsets, laser use and ground safety.

## COMMUNICATIONS (COM)



### COM100 Fundamentals of Human Communication

3 Credits (3 Lectures)   *COM 1100*

**Typically Offered:** Fall, Spring and Summer

Concepts of the human communication process. Basic theory and practical skills in small group, interpersonal and public contexts. *Prerequisites: ENG100, RDG094.*



### COM101 Interpersonal Communication

3 Credits (3 Lectures)  

**Typically Offered:** Fall and Spring

Theoretical and practical examination of communication skills in interpersonal settings. Emphasis on the factors and skills necessary for the development of interpersonal communication competence. *Prerequisite: RDG094.*



### COM202 Introduction to Group Communication

3 Credits (3 Lectures)  


**Typically Offered:** Fall and Spring

Principles and practices of effective communication in the small group setting, including problem solving and decision making processes, skill development for participation, leadership and teamwork. *Prerequisite: RDG094.*

### COM206 Public Speaking

3 Credits (3 Lectures)  

**Typically Offered:** Fall and Spring

Principles and practice of public speaking, with special attention given to the selection, organization, and presentation of material based upon audience analysis as well as acquisition of confidence and speaking poise. *Prerequisites: ENG101 , RDG094.*



### COM259 Professional Communication

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Interpersonal group and public communication in business and professional organizations. Oral communication in business settings with emphasis on utilizing electronic and social media effectively in a business environment; speaking and listening skills; communication theory; and critical analysis of appropriate communication in various business contexts.

*Prerequisites:* ENG101

### COM263 Intercultural Communication

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Basic concepts, principles, and skills for improving communication between persons from different minority, racial, ethnic and cultural backgrounds. *Prerequisite:* RDG094.

## COMPUTER BUSINESS APPLICATIONS (CBA)

### CBA102A Workshop for MS Word

.5 Credit (.5 Lecture)

**Typically Offered:** Workshop offered as needed. Consult CAC Class Schedule.

Introduction to MS Office Word using basic skills needed to create, format and edit business documents. *Satisfactory/Unsatisfactory grading option is available. Prerequisites:* Basic Windows and file management knowledge.

### CBA110A Computers for Beginners

1 Credit (1 Lecture)

**Typically Offered:** Workshop offered as needed. Consult CAC Class Schedule.

Introduction to microcomputers, Microsoft Windows operating system, Microsoft programs and accessories and Internet Explorer.

### CBA110C MS Windows Basic

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Introduction to Microsoft Windows operating system, programs, and file management.

### CBA111A Internet Explorer

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

An introduction to the Internet using Internet Explorer. *Prerequisites:* Basic Windows and file management knowledge.

### CBA112A MS Word Basic

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Introduction to Microsoft Word covering the basics of creating business documents. *Recommended:* Basic Windows and file management knowledge.

### CBA112B MS Word Intermediate

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Create multi-paged documents and web pages with enhance styles, charts and lists in MS Word. *Prerequisites:* CBA112A or instructor consent. *Recommended:* Basic Windows and file management knowledge.

### CBA112C MS Word Advanced

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Build advanced business documents that include macros, navigation, hyperlinks and forms in MS Word. *Prerequisites:* CBA112B or instructor consent. *Recommended:* Knowledge of computer basics and file management.

### CBA113A MS Excel Basic

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Introduction to MS Excel covering basic spreadsheets and charts. *Recommended:* Basic Windows and file management knowledge.

### CBA113B MS Excel Intermediate

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Use MS Office Excel financial functions, database tools and enhanced, specialty charts to process and display data. *Prerequisites:* CBA113A or instructor consent.

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **CBA113C MS Excel Advanced**

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Use Data analysis, PivotTables and Macros in MS Excel to solve business problems. *Recommended: File management and Operating system knowledge. Prerequisite: CBA113B or instructor consent.*

## **CBA114A MS Access Basic**

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Introduction to MS Access and database basics.

## **CBA114B MS Access Intermediate**

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Analyze database designs; enhance queries, forms and reports; and create subforms and subreports in MS Access. *Prerequisite: CBA114A.*

## **CBA114C MS Access Advanced**

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Create advanced queries, reports, macros, and modules and manage a database and its objects in MS Access. *Prerequisite: CBA114B.*

## **CBA116A MS PowerPoint Basic**

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Introduction to creating, editing and delivering basic presentations using MS PowerPoint.

## **CBA116B MS PowerPoint Advanced**

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Build and deliver professional MS PowerPoint presentations with advanced graphics, tables, charts and templates. *Prerequisite: CBA116A.*

## **CBA117A MS Publisher Basic**

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Create simple publications using MS Publisher, including use of wizards, templates, images, graphic boxes, and other special enhancements.

## **CBA117B MS Publisher Intermediate**

1 Credit (3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Create customized publications, business forms, tables and web pages using MS Publisher. *Prerequisite: CBA117A.*

## **CBA118 MS Outlook**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Closed Exit

Use Microsoft Outlook to send, receive and organize email, create and organize contacts, and schedule appointments and tasks. *Satisfactory/ Unsatisfactory grading option is available.*

## **CBA122A MS Word Module 1**

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Basic features of Microsoft Word necessary to create business and personal documents. *Prerequisites: Basic Windows and file management knowledge.*

## **CBA122B MS Word Module 2**

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Open Entry/Closed Exit

Advanced features of Microsoft Word for collaboration, productivity, desktop and web publishing and creating forms and macros. *Prerequisite: CBA122A.*

## **CBA133A Spreadsheet Applications in Excel**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Create, format, and print both structured and "what-if" spreadsheets using formulas and functions, charting and analysis. Skills learned will cover the Core Level skills for Microsoft Certified Application Specialist (MCAS): Microsoft Office Excel 2007. *Prerequisites: Basic Windows and file management knowledge; BUS101 OR MAT092.*





### **CBA133B Advanced Spreadsheet Applications in Excel**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

Use of advanced features of MS Excel to import and export data, use templates, generate reports, use macros, audit a worksheet and use analysis tools. *Prerequisite: CBA133A.*

### **CBA134A Database Management in Access**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

Design and create relational databases. Query, report and produce forms on the data and publish to the Web. Skills learned will cover the Core Level skills for Microsoft Certified Application Specialist (MCAS): Microsoft Office Access 2007. *Prerequisites: Basic Windows and file management knowledge.*

### **CBA134B Advanced Database Management in Access**

3 Credits (2.75 Lectures, 1 Lab)

**Typically Offered:** Spring

Use of advanced features of software to customize a database, do advanced queries and reports, automate tasks and prepare supporting documentation. *Prerequisite: CBA134A.*

### **CBA210 Web Development Tools**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

Theory, design and Web construction covering: information architecture, Web project management, scenario development, performance evaluations, third-generation Websites and browser incompatibility. Create and manage Websites using current tools such as Dreamweaver, Flash, Dynamic HTML and various multimedia and standardized CSS. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS120*

### **CBA211 JavaScript Programming**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

Design client-side, platform-independent solutions using the JavaScript language; covering JavaScript programs, JavaScript object model, control program flow, validate forms, animate images, target frames and cookies. *Satisfactory/Unsatisfactory grading option is available. Prerequisites: CIS120* , CBA210.

### **CBA212 Adobe Flash Animation**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

Production of high impact web animation, such as animated logo, navigation controls, long-form animation and web applications. *Satisfactory/Unsatisfactory grading option is available. Prerequisites: CIS120* , CBA210.

## **COMPUTER INFORMATION SYSTEMS (CIS)**

### **CIS110 Fundamentals of Computer Literacy**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Introduction to microcomputer technology, including terminology, software applications, operating systems, tools, basic set up and maintenance. Also includes Internet searches, and evaluation of websites' validity and reliability of information. Use Microsoft (MS) Word, MS Excel, MS Access and MS PowerPoint to analyze data, solve problems, and present solutions. *Not designed for CIS degree or CIS Certificate seekers. Prerequisite RDG091.*

### **CIS111 Introduction to the Internet**

2 Credits (2 Lectures)

**Typically Offered:** Fall and Summer

An introduction to the structure, tools and terminology of the Internet relating to web browsers, email, search engines, communications, security and e-commerce.

### **CIS112 Web Page Design Fundamentals**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

Design and build web pages using HTML/XHTML and cascading style sheets.

### **CIS120 Survey of Computer Information Systems**

3 Credits (2 Lectures, 3 Labs) CIS1120

**Typically Offered:** Fall, Spring and Summer

Survey of computer information systems, fundamental computer concepts, programming techniques, networking and emerging technologies. Hands-on experience with Microsoft Office application software with an emphasis on database and spreadsheets for problem solving. *Prerequisite: RDG094.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **CIS121 Microcomputer Operating System Fundamentals**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Installations, administrations, upgrades, configuration and diagnostics of most recent microcomputer operating systems. Registry and Command-line techniques to optimize and customize a microcomputer operating system. *May lead to Microsoft Certification. Prerequisite: RDG094.*

## **CIS123 Introduction to Programming**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Introduction to structured programming techniques and various logic tools including Flowcharting, pseudocode and other tools that represent algorithms. Problem analysis is based on the input/process/output cycle using appropriate case studies. *Prerequisite: CIS120 .*

## **CIS129 Database Fundamentals**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Workshop offered as needed. Consult CAC Class Schedule.

Fundamentals of relational database design, implementation and management, including referential integrity, concurrency, data validity, entity-relationships, Structured Query Language and database normalization. *Prerequisite: CIS120 .*

## **CIS130 Networking Essentials**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

Introduction to networking principles. Topics include: seven-layered Open Systems Interconnection (OSI) Model of networking, physical and logical network topologies, networking protocols, network services, network fault tolerance and hardware/software devices used in a network. *May lead to Network+ Certification. Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS121.*

## **CIS135 Principles of Telephony and Telecommunications**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

The history of telecommunications and telephony technologies, including the underlying electronics, transmission media, voice, wireless, data communication solution functions and features. This course also covers wide area connectivity, Internet-enabled communications, telephony network management, policies and contracts. *Prerequisite: CIS120 .*

## **CIS150 Windows Server**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

A study of server network operating systems including Active Directory, security policy, group policies, Internet Information Server (IIS), configure Domain Name Services (DNS), file and print services and building trust relationship between servers. Uses the most current version of the software. *May lead to Microsoft Certification. Satisfactory/Unsatisfactory grading option is available. Prerequisites: CIS120 , CIS121.*

## **CIS152 Network Infrastructure**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

Windows 2008 networking, naming services, connectivity and security services, managing IP routing, remote access, IP security, network address translation and virtual private networking. *May lead to Microsoft Certification. Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS150.*

## **CIS153 Network Security**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

Identify security risks and plan and design Windows 2008 security solutions by securing network resources, services, communications, remote access users and designing secure access to the Internet. *May lead to Security+ Certification. Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS152.*

## **CIS157 Computer Forensics and Investigation**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Introduction to the acquisition, authentication, reconstruction, examination and analysis of data stored on electronic media. Topics include: ethics, rules of evidence, hardware and software tools, various operating systems, forensic lab setup and the investigational process. *Satisfactory/Unsatisfactory grading option is available. Prerequisites: CIS120 , CIS121.*



**CIS181 C#.NET**

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall

Object-oriented programming language to create visual applications for Windows, MS Office, the web, controls and more. Created to work within the .NET framework. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS123.*

**CIS210 Cloud Computing**

3 Credits (3 Lectures)

**Typically Offered:** Spring

Cloud Computing theory and application, including Cloud Computing network design and connectivity, server management, best-practices, security and provider service level agreements. Case studies of industry examples are used as applications to reinforce the theories discussed. *Prerequisite: CIS152.*

**CIS213 Linux Server**

3 Credits (2 Lectures, 3 Labs)


**Typically Offered:** Fall

The migration of other networks into Microsoft networks and the basics of networking using Linux operating systems. Focus on connecting different network operating systems and migration of users, data and security policies from one network to another. May lead to Linux Certification. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS150.*

**CIS214 Application Development in Excel**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

Application development in Microsoft Excel focusing on the programming behind developing detailed spreadsheet applications with games. Content includes Visual Basic for Applications (VBA) fundamentals, an enhanced review of Macros, XML and Excel objects. *Satisfactory/Unsatisfactory grading option available. Prerequisites: CIS123 OR (CIS120  and CBA133A). Recommended: CBA133A recommended for programming students.*

**CIS215 CISCO Routers**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

CISCO routers installation, setup and configuration. Various routing protocols such as BGP, EIGRP, OSPF, and IGP will be used to configure and troubleshoot routers. *May lead to CISCO Certified System Administrator Certification. Prerequisite: CIS150.*

**CIS216 Java Programming**

4 Credits (3 Lectures, 3 Labs)



**Typically Offered:** Spring

Thorough coverage of class construction, inheritance, Applets Exception Handling, String Buffer class and Swing objects-oriented techniques. Course is also appropriate for those building on experiences in another programming language. May lead to Sun Program Developer Certification. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS123.*

**CIS217 Application Development in Access**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

Applications development in Microsoft Access focusing on the programming behind developing database applications, including Visual Basic for Applications (VBA) fundamentals, Macros, Structured Query Language (SQL) and data source connectivity using ADO (ActiveX Data Objects). The course also covers an enhanced review of tables, queries, forms and reports. *Satisfactory/Unsatisfactory grading option is available. Prerequisites: (CIS120  AND CIS123) OR (CIS120  AND CBA134A). Recommended: CBA134A recommended for programming students.*

**CIS218 C++ Programming**

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Spring

Comprehensive coverage of C++ programming and data structure topics through a problem-solving approach. May lead to IBM Developer Certification. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS123.*

ICON LEGEND:

AGEC: 

Intensive Writing: *IW*

Reading Required: RDG094: 

SUN Course: 



## **CIS219 Exchange Server**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

Exchange messaging and collaboration platform that provides e-mail, calendaring, instant messaging, chat and conferencing. May lead to Microsoft Certification. Uses the most current version of the software. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS152.*

## **CIS220 Security for Wireless Networks**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

Identify security risks, plan and design wireless security solutions based on security models (transitional, enterprise, personal) and security policies - acceptable use policy, password management policy, public access network use policy and virtual private network (VPN) policy. Discuss authentication, encryption, passive discovery, active attacks, monitoring and maintenance. *Supports preparation for Certification Wireless Service Providers (CWSP) certification. Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS153.*

## **CIS233 Web Application Development Using PHP**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

A cutting edge Web development dedicated to covering the latest in emerging Internet and Web technologies. Design and maintain interactive and dynamic Web applications with the server-based scripting language PHP/MySQL. *Prerequisites: CIS123, CIS150.*

## **CIS235 Oracle Forms and Reports**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Workshop offered as needed. Consult CAC Class Schedule.

The tools and utilities used for information gathering and management, including forms, reports, database mining, data warehousing, database performance monitoring and more. *Prerequisite: CIS129.*

## **CIS237 Oracle Administration**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Workshop offered as needed. Consult CAC Class Schedule.

Internal structures and interactions of an Oracle database with emphasis on managing database capabilities in an effective, efficient manner, including SQL, database tuning, security, backup and recovery. Uses the most current version of the software. *Prerequisite: CIS129.*

## **COMMUNITY PUBLIC HEALTH (CPH)**

### **CPH100 Introduction to Public Health**

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall, Spring and Summer

Introduction to the varied disciplines of public health and applications of public health including analytical methods, biomedical basis, social and behavioral factors, environmental issues, medical care and the future of public health. *Prerequisites: RDG094 and High School Diploma or equivalent.*

### **CPH178 Personal Health and Community Wellness**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule

Analyze basic personal and community health problems as well as long-term benefits and strategies for maintaining a high level of wellness for living in today's world. Use current scientific information to promote individual and community health. *Prerequisites: CPH100.*

### **CPH296 Public Health Internship**

2 Credits (2 Internships - 90 hours)

**Typically Offered:** Fall and Spring

Evaluate real life situations in the community public health sector and the diverse roles and responsibilities of various public health officials and employees. Students will observe public health professionals applying ethics, public policy principles and best practices in daily operations and special case scenarios. *Satisfactory/Unsatisfactory grading option is available. Prerequisites: CPH100 and CPH178. Recommendations: Good communication skills and an interest in Public Health.*

## **COUNSELING/PERSONAL DEVELOPMENT (CPD)**

### **CPD101 Orientation to Student Development**

1 Credit (1 Lecture)

**Typically Offered:** Summer

Exploration of campus, college, academic resources for student success, and development of the characteristics and strategies of lifelong learning. *Satisfactory/Unsatisfactory grading option is available. Recommended for students in the first-semester of college or transferring from another institution.*





**CPD110 Orientation to College**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Exploration of campus, college and academic resources for student success and development of the characteristics and strategies of lifelong learning. Includes career exploration and career planning.

**CPD120 Career Awareness**

2 Credits (2 Lectures) *R*

**Typically Offered:** Consult CAC Class Schedule.

Designed to assist students in career exploration through an awareness of self and educational planning. Includes topics such as current occupational trends, personal/vocational skills and interests and career planning. *Satisfactory/Unsatisfactory grading option is available. Corequisite: RDG094.*

**CPD125 Portfolio of Prior Learning**

2 Credits (2 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

An introduction to the concepts of experiential learning. Assist students with identifying and evaluating documentation of prior training and experiential learning outcomes applicable to degree requirements and to their career goals.

**CPD164 Research Skills in the Digital Age**

1 Credit (1 Lecture) *R*

**Typically Offered:** Consult CAC Class Schedule.

Research strategies and how to incorporate them into the writing process. Students will learn about the types of information resources, the strategies for effectively using them and how to evaluate information for credibility. The course will also focus on the legal and ethical use of information, including guidelines for citing resources. *Prerequisites: RDG094 and basic computer skills.*

**CPD220 Student Success Capstone**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

This course serves as the capstone for CPD110 whereby the coordinated academic, personal and professional development efforts contained in the community college experience are made evident by means of the content within an individual student e-Portfolio. Students, with guidance, create an exemplary e-portfolio demonstrating their skills, knowledge and abilities upon graduation with a credential. *Prerequisite: CPD110.*

**CULINARY ARTS (CUL)**

**CUL105 Food Safety Foundations**

1 Credit (1 Lecture) *R*

**Typically Offered:** Fall, Spring and Summer

Applied course in food safety and sanitation to identify and analyze the factors that cause foodborne illnesses through the study of proper purchasing, preparation, handling and storage. *Prerequisite: RDG094.*

**CUL108 Culinary Boot Camp**

1 Credit (.75 Lecture, 1 Lab)

**Typically Offered:** Fall and Spring

Designed for the home cook or culinary apprentice, Culinary Boot Camp features the basics of cooking, including kitchen terms, knife skills and cooking techniques such as sauté, roast, broil and braise. Learn how to read and follow a recipe, sample and identify an array of spices, herbs, grains, vegetables and meats and plan and cook delicious meals. *May be taken three times for credit.*

**CUL110 Asian Cuisine**

1 Credit (1 Lecture)

**Typically Offered:** Fall and Spring

Discover the unique flavors, ingredients and culinary traditions of Asian cuisine through this hands-on class. Appreciate the differences between Chinese, Japanese, Thai and Vietnamese cooking ingredients and techniques. Learn to make your favorite Asian appetizers, soups, entrees and desserts.

**CUL112 Italian Cuisine**

1 Credit (1 Lecture)

**Typically Offered:** Fall and Spring

Discover the unique flavors, ingredients and culinary traditions of Italian cuisine through this hands-on class. Learn to make your favorite Italian appetizers, soups, entrees, pasta, bread, salads and desserts.

**CUL114 Mexican and Latin American Cuisine**

1 Credit (1 Lecture)

**Typically Offered:** Fall and Spring

Discover the unique flavors, ingredients and culinary traditions of Mexico and other Latin American countries through this hands-on class. Learn to make some of your favorite appetizers, soups, entrees, salads, breads and desserts.

**ICON LEGEND:** AGEC: Intensive Writing: *IW* Reading Required: RDG094: *R* SUN Course:



## **CUL116 French Cuisine**

1 Credit (.75 Lecture, 1 Lab)

**Typically Offered:** Fall, Spring and Summer

Discover the unique flavors, ingredients and culinary traditions of France through this hands-on class. Learn to make some of your favorite appetizers, soups, entrees, salads, breads and desserts. *May be taken three times for credit.*

## **CUL121 Culinary Concepts**

1 Credit (.75 Lecture, 1 Lab)

**Typically Offered:** Fall, Spring and Summer

Development of knife skills and the principles and techniques of various cooking methods applied to a range of cuisines, from basic cooking to ethnic and specialty foods. Specialty topics will vary: presentation will be a combination of discussion, demonstration, and hands-on food preparation. *May be taken four times for credit.*

## **CUL125 Sustainable Food Practices**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Overview of the issues currently impacting the U.S. and Global food supply. Discussions on such topics as: local, seasonal, factory farms, artisan and native foods; environmental impact of farming; sustainability on a personal and industry level.

## **CUL130 Culinary Principles and Applications I**

3 Credits (1 Lecture, 6 Labs) *R*

**Typically Offered:** Fall and Spring

Introduction to small and large quantity cooking, including principles, techniques and preparation with an emphasis on basic skills, food products, equipment and sanitation practices. *Requires 16 hours of supervised experience catering events outside of class. Prerequisites: MAT082 or higher, RDG094.*

## **CUL142 Applied Food Science**

4 Credits (3 Lectures, 3 Labs) *R*

**Typically Offered:** Consult CAC Class Schedule

An introduction to the science of food and cooking, this course focuses on the theory of food science as applied in the lab using the scientific method. *Prerequisites: RDG094 and MAT082.*

## **CUL160 Baking and Pastry I**

3 Credits (1 Lecture, 6 Labs) *R*

**Typically Offered:** Fall and Spring

Basic principles and techniques required for the commercial preparation of bakery products, including yeast-leavened breads, pies, tarts, quick breads, cookies and cakes. *Requires 16 hours of supervised experience catering events outside of class. Prerequisites: MAT082 and RDG094.*

## **CUL161 Cake Decorating**

1 Credit (.75 Lecture, 1 Lab)

**Typically Offered:** Fall and Spring

Introduction to the art of cake decorating and how to design and create beautiful cakes using buttercream frosting. Instruction through demonstration and hands-on practice includes baking, leveling and preparing cakes for frosting; proper use of the pastry bag; designing flowers, leaves and borders utilizing a variety of pastry tips; and tinting butter cream frosting. *May be taken three times for credit.*

## **CUL162 Cakes, Fillings, and Frostings**

1 Credit (.75 Lecture, 1 Lab)

**Typically Offered:** Fall and Spring

Learn the fundamentals of preparing a great cake as a foundation for beautiful cake decorating. Prepare a variety of cakes; pair the cake with an appropriate filling, such as ganache, flavored syrup, fruit or custard. Prepare a variety of frostings, including royal icing and buttercream. Construct a special cake utilizing the various components learned in class. *May be taken three times for credit.*

## **CUL170 Dining and Beverage Operations**


2 Credits (2 Lectures) *R*

**Typically Offered:** Fall and Spring

Theory and practice of food and beverage service; “front of the house” topics such as table and buffet service, customer relations, menu development, management of wait staff, sanitation and safety concerns, and financial considerations of dining operations. *Prerequisite: RDG094.*



### CUL185 Catering Operations

2 Credits (2 Lectures) 

**Typically Offered:** Fall and Spring

The theory and practice of planning and executing catering functions with emphasis on sales, marketing, menu development, pricing and controls, equipment, banquet and buffet service and different catering styles. *Prerequisites:* RDG094 and MAT082. *Recommended:* Complete CUL130 or CUL160 prior to taking CUL185. There is a strong emphasis on culinary math skills.

### CUL205 HACCP Principles

1 Credit (1 Lecture)

**Typically Offered:** Fall and Spring

Practical application steps for the implementation of an HACCP food safety and sanitation program. *May be taken once for degree or certificate and up to four times for recertification. Prerequisite:* CUL105.

### CUL230 Culinary Principles and Applications II

3 Credits (1 Lecture, 6 Labs)

**Typically Offered:** Fall and Spring

Build on principles learned in Culinary Principles and Applications I and advance skills in preparing a variety of stocks, sauces, soups, fresh vegetables, herbs, meat, poultry and fish. Techniques and speed are refined and improved. *Requires 16 hours of supervised experience catering events outside of class. Prerequisite:* CUL130.

### CUL260 Baking and Pastry II

3 Credits (1 Lecture, 6 Labs)

**Typically Offered:** Fall and Spring

Build on principles and techniques introduced in Baking and Pastry I and learn advanced skills to produce a variety of bakery, pastry, savory and dessert items. *Requires 16 hours of supervised experience catering events outside of class. Prerequisite:* CUL160 OR HRM250.

### CUL261 Advanced Cake Decorating

1 Credit (.75 Lecture, 1 Lab)

**Typically Offered:** Fall and Spring

Decoration of cakes focusing on the preparation and use of fondant, royal icing and gum paste flowers. Create a variety of flowers and bows that can be used for special occasion and wedding cakes. *May be taken three times for credit. Prerequisite:* CUL161 or instructor consent.

### CUL262 Wedding Cakes

1 Credit (.75 Lecture, 1 Lab)

**Typically Offered:** Fall and Spring

Assemble a simple wedding cake using a basic cake, filling, buttercream frosting, fondant and gum paste flowers. Design a special occasion cake considering factors such as flavor, texture, color, number of portions, advance preparation, transportation and pricing. *May be taken three times for credit. Prerequisites:* (CUL160, CUL161, CUL162 and CUL261) or instructor consent.

### CUL263 Everything Chocolate

1 Credit (1 Lecture)

**Typically Offered:** Fall and Spring

Comprehensive hands-on chocolate course emphasizing the techniques necessary to make unique molded chocolate pieces and gourmet chocolate confections. Introduction to chocolate decorating techniques including tempering, coloring, cutting and using transfer sheets and working with modeling chocolate. Students will prepare products using different types of chocolate.

### CUL264 Confectionary Show Pieces

1 Credit (.75 Lecture, 1 Lab)

**Typically Offered:** Fall and Spring

Create confectionary showpieces to demonstrate culinary artistry and advanced skills. Learn advanced techniques to prepare popular, edible confectionery decorations/showpieces, such as chocolate, marzipan, nougatine and simple sugar work. *May be taken three times for credit. Prerequisites:* (CUL160 and CUL263) or instructor consent. *Recommended:* CUL260.

ICON LEGEND:

AGEC: 

Intensive Writing: *IW*

Reading Required: RDG094: 

SUN Course: 



## **CUL265 Artisan and Specialty Breads**

1 Credit (.75 Lecture, 1 Lab)

**Typically Offered:** Fall and Spring

Basic production procedures for producing lean yeast doughs, working with pre-ferments and shaping techniques for forming artisan and specialty breads. *May be taken two times for credit. Prerequisites: CUL160 or instructor consent.*

## **CUL266 Advanced Pastry**

1 Credit (.75 Lecture, 1 Lab)

**Typically Offered:** Fall and Spring

Advanced pastry baking skills focusing on enriched yeast dough and laminated dough. Learn to mix, laminate and form a variety of products using puff pastry and sweet dough, such as croissants, Danish and brioche. *May be taken two times for credit. Prerequisites: (CUL160 and CUL260) or instructor consent.*

## **CUL268 Nutrition and Special Needs Baking**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Introduction to the concepts of basic human nutrition, including the nutrients and their function, sources and requirements, digestion, absorption and metabolism. Apply this knowledge to baking and pastry production, manipulating and substituting ingredients to meet the goals of dietary restrictions such as lactose and glucose intolerance, food allergies, decreased sugar and fats for diabetic, cardiac and weight loss diets, and preparing delicious products for vegans. Explain the nutritional function of a food or ingredient as well as its functional role in the structure, taste, texture and visual appeal of baked goods. *Prerequisite: CUL160.*

## **CUL290 Commercial Cooking Practicum**

2 Credits (2 Practica – 90 Hours)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Closed Exit

This culinary arts practicum requires 90 hours of practical, professional work experience in a restaurant or food service establishment selected by the student and program coordinator. *Prerequisites: (CUL105 OR NTR105); CUL130; CUL160.*

## **CUL292 Study Abroad: Italian Cuisine and Culture**

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Summer

Study Italian cuisine and culture in three distinct regions of Italy with the Marco Polo Foundation for Mediterranean Culture and Tourism. Participate in hands-on cooking classes featuring the local produce, meats, cheeses and seafood of each region. Site visits and tours guided by experts in the Italian tourism industry enhance the cultural and culinary experience. *Prerequisite: Instructor consent.*

## **DANCE (DAN)**

### **DAN121 Ballet Dance I**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring and Summer

Introduction to positions, gestures, patterns, moves, and performance of ballet dance. *May be taken four times for credit.*

### **DAN122 Ballet Dance II**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring and Summer

Intermediate ballet techniques, movement, vocabulary and performance of ballet dance. Topics include advanced positions, gestures, patterns and movements to create and perform original pieces. Students must attend two college or professional level ballet performances. *May be taken four times for credit.*

### **DAN130 Introduction to Ballroom, Latin and Swing Dance**

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

Introduction to counts, patterns and positions of Ballroom, Latin and Swing dances, with dance floor etiquette and appropriate music selection included. *May be taken more than four times for credit.*





### DAN194 Introduction to Country and Swing Dance

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

Introduction to counts, patterns and positions of Country and Swing dances, with dance floor etiquette and appropriate music selection included. *May be taken more than four times for credit.*

### DAN195 Jazz Dance


1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

Introduction to positions, gestures, patterns, moves and performance of Jazz dance. *May be taken more than four times for credit.*

## DIESEL/HEAVY EQUIPMENT (DIE)

### DIE110 Introduction to Diesel Engines and Fuel Systems

3 Credits (3 Lectures) 

**Typically Offered:** Fall and Spring

An introduction to diesel engines focusing on the theory of operation of the four main subsystems: basic engine, lubrication, cooling and fuel systems. *Prerequisite: Current and valid driver license. Corequisite: RDG094.*

### DIE111 Introduction to Electricity and Electronics

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Theory, operation and components of electrical and electronic circuits. *Prerequisite: Current and valid driver license.*


### DIE112 Introduction to Mobile Hydraulics

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Theory of operation of hydraulic and hydrostatic systems used in heavy equipment and truck applications, emphasizing the use of electrical and hydraulic schematics and service manuals. *Prerequisite: Current and valid driver license.*

### DIE113 Introduction to Power Trains

3 Credits (3 Lectures) 

**Typically Offered:** Fall and Spring

An introduction to power train systems used in heavy equipment focusing on the theory of operation and application of manual, power shift and hydrostatic transmissions. *Prerequisite: Current and valid driver license. Corequisite: RDG094.*

### DIE114 Introduction to Power Train Repair and Diagnostics

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

An introduction to diagnosis and repair of heavy equipment manual, power shift and hydrostatic transmission systems. *Prerequisites: DIE113 and current and valid driver license.*


### DIE115 Introduction to Diesel Engine Repair and Diagnostics

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

An introduction to troubleshooting, diagnosing and performing repairs on Diesel engines and engine subsystems. *Prerequisites: DIE110 and current and valid driver license.*

### DIE116 Introduction to Diesel Technology

3 Credits (2 Lectures, 3 Labs) 

**Typically Offered:** Fall and Spring

Diesel technology knowledge and skills to prepare students for other heavy equipment technician courses, including fundamental concepts, standard safety procedures, tool use, identification and maintenance of equipment, precision measurement and electrical theory. *Prerequisites: RDG094 and current and valid driver license.*

### DIE117 Workplace Success Principles, Practices and Strategies

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

An exploration of employer expectations, economic factors related to the success of a business and ethical workplace behavior for an employee that leads to productivity, success of the business and long term employment. *Prerequisite: Current and valid driver license.*

ICON LEGEND:

AGEC: 

Intensive Writing: *IW*

Reading Required: RDG094: 

SUN Course: 



## **DIE118 Computer Systems for Equipment Technicians**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Basic fundamentals and applications of Caterpillar, Cummins, and Detroit technical mobile computer systems, including onboard computers, sensors, actuators and software. Use of Internet resources and manufacturer software emphasizing the correct use of technical information to develop troubleshooting skills. *Prerequisites: DIE110, DIE111, DIE113 or instructor consent.*

## **DIE132 Diesel Engines**

12 Credits (10 Lectures, 6 Labs)

**Typically Offered:** Fall and Spring

The theory of operation, diagnostic procedures and service and repair techniques related to diesel engine systems used in heavy equipment and truck applications, emphasizing the use of technical service literature and an array of special engine tools. Safety is stressed. *Prerequisite: Current and valid driver license.*

## **DIE133 Heavy Equipment Chassis and Drives**

12 Credits (10 Lectures, 6 Labs) 

**Typically Offered:** Fall and Spring

Theory of operation, diagnostic procedures, service and repair techniques, related to chassis and drive trains used in heavy equipment and truck applications, emphasizing safety use of technical service literature, diagnostic software and reconditioning procedures. *Prerequisite: Current and valid driver license. Corequisite: RDG094.*

## **DIE196 Diesel Equipment Technology and HEO Internship I**

3 Credits (Internship)

**Typically Offered:** Fall, Spring and Summer

Career advancement study that allow students to obtain college credit for hands-on work experience. *Prerequisite: Enrolled in DIE, CFE, or HEO program.*

## **DIE210 Advanced Diesel Engines and Fuel Systems**

5 Credits (4 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

An in-depth study of modern diesel engines used in off and on-highway application, emphasizing computer controlled fuel systems and new emission standards. *Prerequisite: DIE115.*

## **DIE211 Advanced Electrical/Electronic Systems**

3 Credits (1 Lecture, 6 Labs)

**Typically Offered:** Fall and Spring

An application of electrical/electronic principles and theories emphasizing electrical system anomaly diagnostics and repair/replacement of components. *Prerequisite: DIE111.*

## **DIE212 Advanced Mobile Hydraulics**

3 Credits (1 Lectures, 6 Labs)

**Typically Offered:** Fall, Spring and Summer

Application of the theoretical concepts, diagnostic procedures, service and repair techniques related to hydraulic and hydrostatic systems used in heavy equipment and truck applications, emphasizing the use of hydraulic schematics, test equipment and service manuals to diagnose and repair. *Prerequisites: DIE211 or instructor consent.*

## **DIE214 Advanced Power Train Repair and Diagnostics**

5 Credits (4 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Modern power train systems used in on and off-highway equipment, emphasizing diagnostic and repair procedures applied to computer controlled power shift and hydrostatic transmission systems. *Prerequisites: DIE113, DIE114.*

## **DIE222 Mobile Refrigeration**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Principles of operation for the various types of mobile air conditioning systems utilized in diagnosing, testing and reconditioning these systems. *Prerequisite: Current and valid driver license.*

## **DIE225 Preventive Maintenance**

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Fall and Spring

The development of skills necessary to identify, prevent and repair mechanical problems as related to the maintenance of heavy earth-moving equipment. *Prerequisite: Current and valid driver license.*



**DIE234 Diesel and Heavy Equipment Electricity/Electronics and Hydraulics**

12 Credits (10 Lectures, 6 Labs)

**Typically Offered:** Spring

The theory of operation, diagnostic procedures, service and repair techniques related to electrical and hydraulics systems used in heavy equipment and truck applications, emphasizing the use of electrical and hydraulic schematics, test equipment, and service manuals. *Prerequisite: Current and valid driver license.*

**DIE235 Heavy Equipment Reconditioning and Operations**

8 Credits (4 Lectures, 12 Labs)

**Typically Offered:** Fall

The operation, maintenance and servicing of heavy equipment, emphasizing the use of technical service literature and an array of special tools. *Prerequisite: Current and valid driver license.*

**DIE296 Diesel Equipment Technology and HEO Internship II**

3 Credits (Internship)

**Typically Offered:** Fall and Spring

Career advancement study that allows students to obtain college credit for advanced level hands-on work experience. *Prerequisite: DIE196.*

**DRAFTING (DFT)**

**DFT127 Autocad I**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Introductory course in Computer-Aided Drafting and Design (CADD) computer technology for creation and documentation of 2D drawings. Includes operation and capabilities of computers in CADD, drafting fundamentals, dimensioning, annotating, management of CADD files, printing and plotting.

**DFT128 Autocad II**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Advanced Autocad two-dimensional applications and techniques. *Prerequisite: DFT127 or instructor consent.*

**DFT130 Advanced Computer Aided Drafting Applications**

1 Credit (1 Lecture)

**Typically Offered:** Fall and Spring

Advanced work in an area of individual interest within the scope of computer-aided drafting. May be taken three times for credit to fulfill a requirement choice for the CADD Certificate, one credit per enrollment. *Prerequisite: DFT127.*

**DFT131 Autocad III**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Basic Commands and Techniques including: wireframe, Surface and Solid Modeling using AutoCAD required to create, shade, render and print 3-Dimensional (3D) drawings. *Prerequisite: DFT127.*

**EARLY CHILDHOOD EDUCATION (ECE)**

**ECE101 Introduction to the Child Care Profession**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule

An introduction to the Child Care Profession, focusing on child development and appropriate learning environments for children from birth through age five. Content includes child care licensing and developmentally appropriate curriculum in early childhood settings.

**ECE116 Guiding and Observing Children**

3 Credits (3 Lectures)

**Typically Offered:** Fall

Positive guidance and discipline techniques to encourage self-discipline and enhance a positive self-image. Techniques to effectively observe and record child characteristics and behavior, with emphasis on appropriate use of observations.

**ECE117 Guidance for Family Childcare**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule

Positive guidance and discipline techniques for family childcare providers that encourage self-discipline and enhance a positive self-image of children ages 0 to 12. *This course has a bilingual component as an option and supplement.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **ECE120B Providing a Healthy Environment**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring, Summer

Procedures and practices designed to protect the health of young children in early childhood programs, with emphasis on the development of lifelong healthy habits and attitudes.

## **ECE120D Ensuring a Safe Environment for Children**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Practices and procedures to use when providing for the safety of children in early childhood programs.

## **ECE121 Health for Family Childcare**

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule

Procedures and practices designed to protect the health of children in family childcare settings with emphasis on the development of lifelong health habits and attitudes. *This course has a bilingual component as an option and supplement.*

## **ECE122 Safety for Family Childcare**

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule

Practices and procedures to use when providing for the safety of children in family childcare programs. *This course has a bilingual component as an option and supplement.*

## **ECE123 Nutrition for Family Childcare**

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule

Introduction to nutrition with emphasis on methods of planning and implementing nutrition education and experiences in family childcare programs. *This course has a bilingual component as an option and supplement.*

## **ECE124 Active Learning in Math and Science**

3 Credits (3 Lectures)

**Typically Offered:** Spring

Techniques for helping children to develop cognitive thinking skills, including mathematical concepts, and to develop an awareness and appreciation of the natural environment. Explore math and science problem solving processes used by young children.

## **ECE125A Nutrition**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring, Summer

Introduction to nutrition, emphasizing methods of planning and implementing nutrition education and experiences in early childhood settings.

## **ECE128A Environments for Infants and Toddlers**

1 Credit (1 Lecture)

**Typically Offered:** Spring

Practical theories and principles for the arrangement of a safe, healthy environment for infants and toddlers, emphasizing indoor/outdoor environments, material selection and usage based on observation and participation in an infant/toddler care setting. Observations required.

## **ECE129B Observation Skills in the Infant and Toddler Program**

1 Credit (1 Lecture)

**Typically Offered:** Spring

Techniques and skills to effectively observe and record characteristics and developmental stages of infants and toddlers, including record keeping procedures, an overview of a variety of caregiving settings and an observation in an infant/toddler program. Observations required.

## **ECE129C Recordkeeping Skills: Infant and Toddler Programs**

1 Credit (1 Lecture)

**Typically Offered:** Spring

Recordkeeping procedures for the daily operations of an infant/toddler program are explored, including an overview of caregiving settings and observations.

## **ECE130A Learning Environment for School-Agers**

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule

This course studies the school-age child's total learning environment, incorporating indoor, outdoor and community aspects, stressing the importance of well-organized learning centers, age-appropriate equipment and materials with consideration to the spaces where school-age programs are located.





### **ECE176 Early Childhood Development and Theories**

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall and Spring

Theories, trends and research in human development from prenatal to age five with emphasis on the principles, characteristics and behaviors of physical, social, emotional and intellectual growth of children. *Prerequisite: RDG094.*

### **ECE177 Ages and Stages of Children 0-12**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule

Ages and stages of children ages 0 to 12, emphasizing the principles of physical, social, emotional and intellectual growth. *This course has a bilingual component as an option and supplement.*

### **ECE183 Curriculum and Learning Materials for Infants**

1 Credit (1 Lecture)

**Typically Offered:** Summer

Practical theories and principles for designing infant curriculum with an emphasis on responsive relationships, developmental stages, applied observation and providing developmentally appropriate, safe learning materials for infant exploration.

### **ECE184 Curriculum and Learning Materials for Toddlers**

1 Credit (1 Lecture)

**Typically Offered:** Summer

This course explores practical theories and principles for designing toddler curriculum emphasizing responsive relationships, developmental stages, applied observation and providing developmentally appropriate, safe learning materials for toddler exploration.

### **ECE212 Creative Expressions for Young Children**

3 Credits (3 Lectures)

**Typically Offered:** Fall

Practical methods for developing a creative environment for young children that encourages creativity and skill building for selecting materials, designing environments and planning activities.

### **ECE220 Managing Food, Health and Safety in Childcare Programs**

3 Credits (3 Lectures)

**Typically Offered:** Spring

Plan, develop, implement and evaluate health, safety and food services for early childhood programs.

### **ECE221 ECE Program Financial Management**

3 Credits (3 Lectures)

**Typically Offered:** Spring

Plan, develop and implement an accounting and financial system for an early childhood program.

### **ECE222 Managing and Evaluating ECE Programs**

3 Credits (3 Lectures)

**Typically Offered:** Fall

Management and evaluation skills necessary to effectively operate a quality early childhood program.

### **ECE223 Planning and Promoting an ECE Program**

3 Credits (3 Lectures)

**Typically Offered:** Fall

Design, plan and market an early childhood program to parents and the community, based upon a specific program philosophy.

### **ECE224 Supervision in Early Childhood Programs**

3 Credits (3 Lectures)

**Typically Offered:** Summer

Personnel management in an early childhood program, including staffing, supervision and evaluation.

### **ECE225A Encouraging Self-Discipline in School-Age Children**

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule

Positive guidance and discipline techniques that encourage children and youth to develop self-discipline and take responsibility for their actions.

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094: *R*

SUN Course:



## **ECE226A Cognitive Development of Infants and Toddlers**

1 Credit (1 Lecture)

**Typically Offered:** Fall

Theories, trends and principles of cognitive growth and development of infants and toddlers, and examination of the developmental stages and norms through observation and participation in an infant/toddler care program.

## **ECE226C Language Development of Infants and Toddlers**

1 Credit (1 Lecture)

**Typically Offered:** Fall

Theories, trends and principles of cognitive growth and language development in infants and toddlers and the examination of developmental stages and norms through observation and participation in an infant/toddler program.

## **ECE227B Guidance and Discipline of Infants and Toddlers**

1 Credit (1 Lecture)

**Typically Offered:** Fall

Social and emotional development of infants and toddlers, including positive guidance and discipline techniques through observation and participation in an infant/toddler program.

## **ECE227C Enhancing Social Competency of Infants and Toddlers**

1 Credit (1 Lecture)

**Typically Offered:** Fall

This course explores the social and emotional development of infants/toddlers, including appropriate experiences and environments to enhance development of social competency within a group through observation and participation in an infant/toddler program.

## **ECE228B Physical Development in Infancy/Toddlerhood**

1 Credit (1 Lecture)

**Typically Offered:** Spring

Study the physical development of infants/toddlers, including observing and participating in infant/toddler activities and customizing a program to meet specific children's needs. Observations required.

## **ECE229 Professional Portfolio Preparation**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Preparation and compilation of a professional portfolio to be used for assessment (CDA credential), employment and educational opportunities. This course is intended to be the last course taken toward certificate completion. *Prerequisite: Instructor consent.*

## **ECE248 Early Childhood Program Philosophies**

1 Credit (1 Lecture)

**Typically Offered:** Fall and Spring

Examination of a variety of Early Childhood Program philosophies culminating in the development of a personal program philosophy.

## **ECE250 Professionalism**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Professionalism in the early childhood field, including a history of the profession, advocacy of ethical behavior and commitment to professional growth.

## **ECE254 Emergent Language and Literacy**

3 Credits (3 Lectures)

**Typically Offered:** Fall

Understanding, assessing and enhancing language and literacy development for the young child.

## **ECE255 Communications for Family Childcare**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule

Methods of developing effective communication with parents in the family childcare program. Building an awareness of diverse family values and implementing a diverse curriculum. Skills to help parents and providers work together to understand the child's needs. *This course has a bilingual component as an option and supplement.*

## **ECE256 Math for School-Agers**

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule

Theories, research and concrete experiences related to mathematical reasoning and skills of the school-age child.



**ECE257 The Business of Family Childcare**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule

The multifaceted business aspects of providing family childcare. Fundamentals of a recordkeeping system and the principles of achieving a balance in work and family life while operating a family childcare business. *This course has a bilingual component as an option and supplement.*

**ECE271 Creating Early Childhood Environments**

3 Credits (3 Lectures)

**Typically Offered:** Spring

Methods to establish age-appropriate learning environments, incorporating indoor, outdoor and community aspects. Design and implement schedules, lesson plans and transitions to meet the needs of young children in a variety of early childhood settings. *Prerequisite: ECE176.*

**ECE272 Family Child Care Environments**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule

Create age-appropriate learning environments which incorporate indoor, outdoor and community aspects for family child care. Design and implement schedules, lesson plans and transitions to meet the needs of all children in a family child care setting. *This course has a bilingual component as an option and supplement.*

**ECE276 Child Development**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Theories, trends and research in human development from prenatal through adolescence with emphasis on the principles, general characteristics and behaviors of physical, social, emotional and intellectual growth of children and adolescents. *Prerequisite: RDG094.*

**ECE278 Effective Curriculum Design for Teachers of Young Children**

3 Credits (3 Lectures)

**Typically Offered:** Spring

Methods of collecting and organizing resources to provide a play based early childhood curriculum. Planning and implementing a developmentally appropriate curriculum using observation and assessment tools. *Prerequisite: ECE176.*

**ECE279 Curriculum for Family Childcare**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule

Plan and implement a developmentally appropriate curriculum for all children in family child care, including methods to collect and organize curriculum resources. *This course has a bilingual component as an option and supplement.*

**ECE280 Inclusion of Children with Special Needs**

3 Credits (3 Lectures)

**Typically Offered:** Spring

Study the concepts of quality inclusion of children with special needs, including laws governing services to children with disabilities, individualized plans, typical and atypical child development, developmentally appropriate activities for children, and working collaboratively with families, service providers and multi-disciplinary teams. *Prerequisite: ECE176.*

**ECE283 Valuing Families and Diversity**

3 Credits (3 Lectures)

**Typically Offered:** Fall

This course focuses on methods for developing effective communication skills to involve parents in the early childhood program, including building an awareness of diverse family values and implementing a diverse curriculum. Students build skills to help parents and staff work together to understand the child's needs.

**ECONOMICS (ECN)**

**ECN200 Contemporary Economic Issues**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Investigates the basic concepts and principles of economics, and how they operate within the American economic system. Highlights both Macroeconomics and Microeconomics in simplified terms; intended for those who will only take one course in economics. *Prerequisite: RDG094.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **ECN201 Principles of Macroeconomics**

3 Credits (3 Lectures) ECN 2201

**Typically Offered:** Fall, Spring and Summer

A descriptive analysis of the structure and functioning of the American economy. Emphasis on basic economic institutions and factors that determine general levels of output, employment, income and prices. *Prerequisite: RDG094.*

## **ECN202 Principles of Microeconomics**

3 Credits (3 Lectures) ECN 2202

**Typically Offered:** Fall, Spring and Summer

A descriptive analysis of 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. *Prerequisite: RDG094.*

## **EDUCATION (EDU)**

### **EDU101 Tutor Certification I**

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Preparation for students to become certified tutors while addressing the fundamental responsibilities of tutoring, the tutoring cycle, learning theories and orientations, critical thinking and tutoring ethics. *Prerequisite: Minimum 3.0 CGPA. Corequisite: 25 hours of face-to-face or online tutoring.*

### **EDU102 Tutor Certification II**

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Preparation for students to become professional tutors in the application of educational and assisted technologies, including the discoveries of neuroscience related to human learning in one-to-one and group tutoring sessions. *Satisfactory/Unsatisfactory grading option available. Prerequisites: EDU101 and minimum 3.0 CGPA. Corequisite: 25 hours of face-to-face or online tutoring.*

### **EDU103 Substitute Teacher Survival Strategies**

2 Credits (2 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Academic and behavioral strategies and other pertinent information needed to be a successful substitute teacher in today's K-12 schools. *Satisfactory/Unsatisfactory grading option available.*

## **EDU221 Introduction to Education**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

A survey of the profession of teaching, with emphasis on current trends and diversity, historical and legal perspectives, and societal influences. *Course includes observation and participation in preK-12 school environments. Prerequisite: RDG094.*

## **EDU222 Introduction to Special Education**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Overview of Special Education theory and practice in the United States today, including the characteristics of students with specific disabilities and the effects on the individuals and their families. *Prerequisite: RDG094.*

## **EDU225 Relationships in the Classroom**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

An introduction to pre-K-12 classroom settings and the relationships between teachers and their students. Focus is on class management and developing positive and appropriate individual relationships with students. *Prerequisite: RDG094.*

## **EDU228 Behavior Management**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Individual student and group management in K-12 classrooms using proactive strategies. *Prerequisite: RDG094.*

## **EDU230 Cultural Values in Education**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Closed Exit

Examine the effects of culture on the formation of the child's self-concept and learning styles, including the role of prejudice, stereotyping and cultural incompatibilities in education. *Prerequisite: RDG094.*

## **EDU233 Global Issues in Education**

3 Credits (3 Lectures)


**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

A study of education from an international perspective, including the culturally-based formation of the child's self-concept and learning style. A educational system comparison with another country or countries and an analysis of prejudice, stereotyping and cultural incompatibilities in specific educational systems. *Prerequisite: RDG094.*






### EDU240 Provisional Structured English Immersion

3 Credits (3 Lectures) 

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Provisional endorsement course in Introduction to Structured English Immersion for teachers and administrators who are working in the K-12 school setting, or for students in the AAEE program. *Prerequisite: RDG094.*

### EDU250 Structured English Immersion II

3 Credits (3 Lectures) 

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Structured English Immersion for teachers and administrators working in the K-12 school system: "the completion 45 hours." *Prerequisites: (EDU240 or equivalent) or (RDG094 and 15-hour Arizona Department of Education Approved Structured English Immersion Workshop).*

### EDU270 Education through Drama in the Elementary Classroom

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Hands-on opportunity to learn and teach drama based classroom activities that support learning in the elementary classroom. Develop an understanding of the research supporting the use of drama in the classroom. *Cross Listed: THE270.*

## ELECTRICITY (ELC)

### ELC122 Direct Current and Alternating Current Circuit Analysis

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Basic electricity theory as applied to circuits containing capacitance, inductance and resistance with either direct current or sinusoidal voltages applied.

### ELC126 Residential Wiring

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Residential wiring according to the National Electrical Code, with emphasis on proper use of materials and techniques for safe electrical installation or extensions in single- and multi-family dwellings. *Prerequisite: MAT092 or MAT111 with a grade of "C" or higher or placement into MAT121.*

### ELC128 Introduction to Programmable Logic Controllers

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Principles and applications of programmable logic controls (PLCs) including numbering systems, control strategies and ladder logic. *Prerequisite: ELC122. Corequisite: ELT223.*

### ELC200 Radio Frequency RF/High Vacuum HV

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

High vacuum and plasma systems to manufacture semiconductor devices, process foods, surface hardening, compact disk production and film deposition. *Prerequisite: Sophomore and instructor consent.*

### ELC201 Solar Photo Voltaic I

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Basic principles of photovoltaic (PV) or solar energy, including PV fundamentals, components, system sizing, troubleshooting strategies and safety hazards.

### ELC202 Solar Photo Voltaic II

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Advanced principles of Solar Photo Voltaic (PV), including site surveys, SolarPV component size, analysis and creation of a customized system. *Prerequisite: ELC201 and (MAT092 or MAT111 with a grade of "C" or higher or placement into MAT121).*

### ELC220 Active Circuits

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Basic semiconductor devices (transistors, diodes and Op-Amps) and circuit simulation software. *Prerequisite: ELC124.*

### ELC221 Control Devices

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Electrical controls, instruments and devices for industrial equipment such as motor starting and speed control, voltage regulation and automatic controls for AC and DC machines. *Prerequisite: ELC220.*

ICON LEGEND:

AGEC: 

Intensive Writing: *IW*

Reading Required: RDG094: 

SUN Course: 



## **ELC222 Active Circuits and Systems**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Theory and design of active circuits and systems used in electronic and electro-mechanical equipment, integration of active circuits into subsystems and complete electro-mechanical systems, analog-to-digital and digital-to-analog systems with reference to data acquisition and control.

*Prerequisite: ELC220.*

## **ELC223 Integrated Circuit Devices**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Introduction to timers, counters, linear and digital circuits, operational amplifier circuits and systems, voltage regulators, digital number code systems, integrated circuit logic devices, multi-vibrators memory systems, analog-to-digital and digital-to-analog devices. *Prerequisites: ELT128 and ELC220.*

## **ELC228 Advanced Programmable Logic Controllers**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Advanced principles and applications of programmable logic controls (PLCs), including advanced programming using math function blocks, bit manipulation blocks and subroutines. Course includes an introduction to networking of PLCs and HMI devices. *Prerequisite: ELC128.*

## **ELC251 Instrumentation**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Alternative energy fields equipment usage, measurements and calculations.

## **ELECTRONICS (ELT)**

### **ELT128 FPGA Fundamentals**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Theory and application of inverters, AND, OR, NAND and NOR gates, flip-flops, counters, timers and registers using Field Programmable Gate Arrays (FPGAs).

### **ELT130 Computer Upgrades and Operating Systems I**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Apply previous A+ and Networking experience to actually upgrade computers and configure operating systems by doing hands-on projects in a lab-situated class. *May be taken two times for credit.*

### **ELT223 Microcontroller Fundamentals**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Microcontroller theory and operation, assembly and high level programming and interfacing. *Prerequisite: ELT128. Recommended: Interest in programming.*

### **ELT260 Advanced FPGA Concepts**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Advanced topics in Field Programmable Gate Array (FPGA) to include memory circuits, VHDL and coding methods for synchronous circuits, design of synchronous circuits and state machines and FPGA architectures. *Prerequisite: ELT128.*

### **ELT265 MicroBlaze1**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

MicroBlaze programming applications including hardware design components, Embedded Development Kit (EDK), and creating, programming and troubleshooting the MicroBlaze processor. *Prerequisite: ELT260.*

### **ELT270 MicroBlaze2**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Advanced MicroBlaze programming applications which include creating a multicore MicroBlaze system and interfacing peripherals. *Prerequisite: ELT265.*

### **ELT275 Embedded Fundamentals**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Application of interfacing a microcontroller to FPGA and the programming languages C, VHDL and LabVIEW. *Prerequisite: ELT270.*



## EMERGENCY MEDICAL SERVICES (EMS)

### EMS100 CPR for Professionals

.5 Credit (.5 Lecture)

**Typically Offered:** Fall, Spring and Summer

CPR skills needed to assist victims of all ages, including ventilation with a barrier device, a bag-mask device and oxygen. Use of an automated external defibrillator (AED). Relief of foreign-body airway obstruction (FBAO). Intended for participants who provide health care to patients in a wide variety of settings, including in-hospital and out-of-hospital. Designed for certified or non-certified, licensed or non-licensed healthcare professionals. *Satisfactory/Unsatisfactory grading option is available. May be taken more than four times for credit. Recommended: Students should recertify in CPR every two years to maintain certification/license as an EMT, Paramedic, Nurse or MD.*

### EMS101 First Care

.5 Credit (.5 Lecture)

**Typically Offered:** Fall, Spring and Summer

A course to train a lay person to provide care for patients suffering sudden illness or injury. Focus is on providing immediate care until EMS personnel arrive. Successful students fulfill OSHA, specific business or industry job requirements. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

### EMS123 First Responder

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

A comprehensive course to train a lay person to provide first response care for patients suffering sudden illness or injury. *Designed for members of law enforcement agencies, industry and the private sector.*

### EMS125 Emergency Medical Technician

9 Credits (9 Lectures)

**Typically Offered:** Fall, Spring and Summer

This course follows the current EMT-Basic National Standard Curriculum and Arizona State Department of Health Services-EMS Division State statutes. The curriculum emphasizes cognitive, affective and psychomotor objectives. This is a State-approved program with a medical director and is updated to State standards as required by the ADHS. *Prerequisites: EMS100 or current proof of AHA Health Care Provider Card or ASHI Professional Rescuer Card, RDG091, Vaccination record: TB Skin Test within last 6 months, MMR, Tetanus and Diphtheria within the last 5 years.*

**ICON LEGEND:**

**AGEC:**

**Intensive Writing:** *IW*

**Reading Required:** RDG094:

**SUN Course:**

### EMS190 Pediatric Education for Pre-Hospital Providers

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

An interactive, scenario-based course designed for certified Emergency Medical Technicians (EMTs) who practice in the field. Trains providers to perform a rapid assessment of sick and injured children in a variety of circumstances and in accordance with recommendations by the American Academy of Pediatrics (AAP). *Prerequisite: Advanced Life Support Provider (ALS)-IEMT, Paramedic, Nurse, or MD.*

### EMS191 Neonatal Resuscitation Program

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Closed Exit

Didactic and psychomotor skill education and training in techniques of newborn resuscitation. Discussion in causes, prevention and management of mild to severe neonatal asphyxia are carefully explained. Prior to course completion, students must present the instructor with a Neonatal Resuscitation course completion certificate from the American Academy of Pediatrics. *Students pay testing fee online/directly to American Academy of Pediatrics. URL: www.aap.org/nrp. May be taken two times for credit. Prerequisite: EMS125 or equivalent.*

### EMS200 Basic EMT Refresher

2 Credits (2 Lectures)

**Typically Offered:** Fall, Spring and Summer

The EMT Refresher course incorporates the standards as adopted by the State of Arizona, DHS-BEMS Division and the U.S. Department of Transportation's National Highway Traffic Safety Administration 1994 and 1996 revisions. Prepares students for State recertification and NREMT re-registration. *May be taken two times for credit. Prerequisites: Current basic EMT and CPR certifications.*

### EMS201 Basic EMT Renewal Challenge

.5 Credit (.5 Lecture)

**Typically Offered:** Fall, Spring and Summer

Designed to support the Arizona Department of Health Services (A-DHS) Bureau of Emergency Medical Services (B-EMS) recertification requirements for Emergency Medical Technician Basic (EMTB) according to the U.S. Department of Transportation (DOT) EMT-Basic National Curriculum and the Arizona EMT Basic Refresher Curriculum Guidelines. *Does not meet National Registry of EMT (NREMT) refresher requirements for EMTs. Satisfactory/Unsatisfactory grading option is available. Course may be repeated for recertification. Prerequisites: Basic EMT and CPR certifications.*



## **EMS208 Intermediate Emergency Medical Technician**

11 Credits (7 Lectures, 12 Labs – 285 Hours)

**Typically Offered:** Fall, Spring and Summer

Designed to meet the U.S. Department of Transportation AZ Department of Health Services Office of Emergency Medical Services requirements for EMT-Intermediate. Provides advanced knowledge and skills related to hypoperfusion states, respiratory arrest or insufficiency, seizure states, cardiovascular emergencies, unconscious states of undetermined etiology, head injury with altered levels of consciousness and chest trauma. *Current EMT certification for one year required. Comprehensive written, oral and practical evaluation on basic EMT skills. Prerequisites: Valid EMT certification; HCP CPR; DHS requirements.*

## **EMS235 Emergency Cardiac Care**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Designed to acquaint all levels of emergency care providers with basic electrocardiographic (ECG) rhythm analysis and interpretation and related care in a clinical and pre-hospital setting. *Prerequisite: EMS125 or Division Chair consent.*

## **EMS236 Pharmacology in an Emergency Setting**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Designed for the Emergency Medical Technician dealing with the administration of emergency medications in the field as outlined in current paramedic legislation. In depth coverage of medications enumerated in the algorithms of patient care as defined by the American Heart Association (AHA), Advanced Cardiac Life Support (ACLS). Coverage of medications that interact or interfere with the AHA ACLS algorithms. *Prerequisite: EMS125.*

## **EMS240 Advanced Cardiac Life Support**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Didactic and psychomotor skills training and validation in techniques of Advanced Cardiac Life Support (ACLS) according to the Current Standards and Guidelines of the American Heart Association (AHA). Includes endotracheal intubation, ECG arrhythmia recognition, synchronized, unsynchronized and automated defibrillation, cardiovascular pharmacology and electronic pacemaker. *Designed for all health-care related professionals, clinical and pre-hospital. Course may be repeated for recertification. Prerequisite: Current American Red Cross or American Heart Association (AHA) Basic Life Support Healthcare Provider validation, or National Safety Council Green Cross Professional Rescuer, or Division Chair consent.*

## **EMS241 Advanced Cardiac Life Support (ACLS) Refresher**

.5 Credit (.5 Lecture)

**Typically Offered:** Fall, Spring and Summer

Designed for all levels of emergency medical technicians, nurses, physicians and physicians' assistants to assure maintenance of didactic and psychomotor skill training in techniques of Advanced Cardiac Life Support (ACLS) according to the 2005 Standards and Guidelines of the American Heart Association. Course includes endotracheal intubation, ECG arrhythmia recognition, synchronized and unsynchronized and automated defibrillation, cardiovascular pharmacology and electronic pacemaker. *Prerequisites: Current CPR provider level and ACLS provider level.*

## **EMS242 Advanced Life Support Refresher Course**

3.5 Credits (3.5 Lectures)

**Typically Offered:** Fall, Spring and Summer

Advanced life support, including initial, focused and continuing processes of assessment; identification and treatment of hypoperfusion states; field interventions; and drug analysis within the scope of the intermediate and advanced EMT and paramedic. Designed to meet requirements for EMT-Intermediate and EMT-Paramedic under guidelines of the US Department of Transportation (US DOT), National Registry of EMTs (NREMT) as recognized by the Arizona Department of Health Services (A-DHS) Bureau of Emergency Services (B-EMS) for recertification. *Prerequisite: Paramedic or IEMT Certification.*

## **EMS245 Pre-Hospital Trauma Management/ PHTLS**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Designed to instruct pre-hospital 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 including victim assessment, initial treatment, resuscitative techniques, victim stabilization, transportation of the victim to an emergency care facility and documentation. *Prerequisite: EMS125 or Basic EMT.*





### EMS255 Instructional Strategies for EMT Instructors

2 Credits (2 Lectures)

**Typically Offered:** Fall, Spring and Summer

Participative course to prepare all levels of EMT and/or nurses as instructors in EMT programs; includes writing objectives, preparing class and course schedules, reviewing AZDHS Rules and Regulations. *Prerequisite: AZ-DHS EMT, IEMT, CEP Certification or RN with two years of experience in ER nursing.*

### EMS272A Advanced Emergency Medical Technology/Paramedic, Module I

17.5 Credits (17.5 Lectures – 262.5 Hours)

**Typically Offered:** Fall, Spring and Summer

The first advanced course in the series for Emergency Medical Technicians explores the acute critical differences in physiology, pathophysiology and clinical symptoms as they pertain to pre-hospital emergency care. Course emphasizes developing diagnostic and advanced emergency treatment skills necessary to care for the acutely ill and seriously injured. *Prerequisites: Certified EMT with one year of experience; FSC129; and entrance assessment.*

### EMS272B Advanced Emergency Medical Technology/Paramedic, Module II

8.5 Credits (8 Lectures, 2 Labs – 150 Hours)

**Typically Offered:** Fall, Spring and Summer

The second advanced course in the series for Emergency Medical Technicians explores acute critical differences in physiology, pathophysiology and clinical symptoms as they pertain to pre-hospital emergency care. Course emphasizes developing diagnostic and advanced emergency treatment skills necessary to care for the acutely ill and seriously injured. Topics include: drawing and recording blood, intubation, parenteral medications, dosage and side effects, injury prevention, standards of care and effective communication techniques. *Prerequisite: EMS272A. Corequisite: EMS272D.*

### EMS272C Advanced Emergency Medical Technology/Paramedic, Module III

8.5 Credits (8 Lectures, 2 Labs – 150 Hours)

**Typically Offered:** Fall, Spring and Summer

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 pre-hospital emergency care. Course emphasizes developing diagnostic and advanced emergency treatment skills necessary to care for the acutely ill and seriously injured. *Prerequisite: EMS272B. Corequisite: EMS272E.*

### EMS272D Advanced Emergency Medical Technology/Paramedic, Practicum I

6 Credits (6 Practica - 270 Hours clinical/vehicular)

**Typically Offered:** Fall, Spring and Summer

This emergency medical technician practicum provides hands-on application of EMS skills and knowledge in a supervised, pre-hospital emergency setting, with an emphasis on demonstrating diagnostic and advanced emergency treatment skills to care for acutely ill and seriously injured patients. Students further develop diagnostic and advanced emergency treatment skills, professional communications with patients, their families, hospital and fire personnel and improve speed and accuracy of delivery of lifesaving patient analysis and intervention care procedures. *Prerequisite: EMS272A. Corequisite: EMS272B.*

### EMS272E Advanced Emergency Medical Technology/Paramedic, Practicum II

6 Credits (6 Practica - 270 Hours)

**Typically Offered:** Fall, Spring and Summer

This emergency medical technician practicum provides hands-on application of EMS skills and knowledge within a supervised, pre-hospital emergency setting, including patients with diverse physiology, pathophysiology and clinical symptoms. Course emphasizes demonstrating diagnostic and advanced emergency treatment skills to care for acutely ill and seriously injured patients. *Prerequisite: EMS272B. Corequisite: EMS272C.*

### EMS275 Critical Care for Paramedics (CCEMTP)

5.25 Credits (5 Lectures, 1 Lab)

**Typically Offered:** Fall, Spring and Summer

Critical Care Emergency Medical Transport Program (CCEMTP) is designed to prepare paramedics and nurses to function as members of a critical care transport team. Students will gain an understanding of the special needs of critical patients during transport, become familiar with the purpose and mechanisms of hospital procedures and equipment and develop skills to maintain the stability of hospital equipment and procedures during transport. *Prerequisites: (Paramedic or Nurse), CPR, (BTLS or PHTLS), (PALS or PEP) and ACLS.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## ENGINEERING (EGR)

### EGR090 STEM Learning Success

1 Credit (1 Lecture)

**Typically Offered:** Fall

How to learn through effective time and stress management, and the application of study skills to basic presentations from various STEM (Science-Technology-Engineering-Mathematics) career fields and Learning Theory.

### EGR092 Survey of Engineering and Science Professions

1 Credit (1 Lecture)

**Typically Offered:** Fall

A survey of the major science and engineering disciplines and the features of each profession, including basic project work, industry presentations and career development.

### EGR102 Introduction to Engineering

3 Credits (2 Lectures, 3 Labs) EGR 1102

**Typically Offered:** Fall and Spring

Comprehensive engineering problem solving, incorporating the design process; its scientific basis, hands-on teamwork, effective communication, ethical implications and the profession itself. *Prerequisite:* MAT182 OR MAT187.

### EGR105 Beginning MATLAB Programming

2 Credits (2 Lectures)

**Typically Offered:** Fall and Spring

Use MATLAB to solve real-world science and engineering problems. Topics include an introduction to programming, strings, arrays, data structures, control flow, file management, data analysis, basic numerical analysis and graphing. *Prerequisite:* MAT151 .

### EGR110 Intermediate MATLAB Programming

2 Credits (2 Lectures)

**Typically Offered:** Fall and Spring

A continuation of EGR105 covering the design of problem-solving algorithms and their application to scientific and engineering solutions. *Prerequisites:* EGR105 and MAT187.

### EGR116 Introduction to Python Programming

2 Credits (2 Lectures)

**Typically Offered:** Fall and Spring

Basic Python programming language covering string manipulation, user input, calculations, graphing, variables, loops, conditional logic, variables, lists, text files, objects, methods, classes, Graphical User Interface (GUI) development and animation. *Prerequisite:* MAT151 .

### EGR121 STEM Simulation Programming

2 Credits (2 Lectures)

**Typically Offered:** Fall and Spring

Use Visual Python to create simulations of physical systems. Topics include simulation programming, graphing and introductory numerical analysis; data acquisition, organization, analysis and visualization. *Prerequisites:* (MAT182 or MAT187) and (PHY111 or PHY121 .

### EGR201 Statics

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Introduction to engineering statics, including force systems, resultants, equilibrium of particles and rigid bodies. Course includes an introduction to centroids and centers of mass, area moments of inertia, distributed loading and friction. *Prerequisites:* EGR105, PHY121 . *Corequisite:* MAT262 .

### EGR202 Dynamics

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Introduction to the kinematics of particles, systems of particles and rigid bodies; moving reference frames; dynamics of particles, systems of particles and rigid bodies; equilibrium, energy, linear momentum and angular momentum. *Prerequisite:* EGR201.

## ENGLISH (ENG)

### ENG090 English Composition I

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

An introduction to the writing process, emphasizing idea development, organization, and revision in sentences, paragraphs and short essays, as well as development of grammatical and mechanical skills.



**ENG090A English Composition I for English Language Learners**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

An introduction to the writing process emphasizing idea development, organization and revision for English Language Learner (ELL) students. Proper use of standard American English grammar and mechanics in sentences and paragraphs is emphasized. *Students may only take one: ENG090 or ENG090A.*

**ENG100 English Composition II**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

An introduction to academic writing with an emphasis on generating ideas, expressing those ideas in essay form and using one's writings to organize content, identify punctuation, grammar and spelling errors and to create effective strategies for their correction. *Prerequisite: ENG090 or appropriate writing placement test score.*

**ENG100A English Composition II for English Language Learners**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

An introduction to academic writing for English Language Learner (ELL) students. Course emphasizes generating ideas, expressing those ideas in essay form and using written work to identify and correct punctuation, grammar and spelling errors in standard American English. *Prerequisite: ENG090 or ENG090A.*

**ENG101 English Composition III**

3 Credits (3 Lectures) ENG 1101

**Typically Offered:** Fall, Spring and Summer

Advancement of ability to analyze and write academic, college-level essays with an emphasis on developing ideas and using a process of writing, revising and editing to create organized, coherent, fully articulated essays that reflect the conventions of English grammar, mechanics and usage. *Prerequisites: ENG100 and RDG094.*

**ENG102 English Composition IV**

3 Credits (3 Lectures) ENG 1102

**Typically Offered:** Fall, Spring and Summer

Emphasis on critical thinking, close reading, analysis and advanced research skills through the development, writing and revision of complex arguments. *Prerequisite: ENG101* .

**ENG121 Applied Technical Writing**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Business, professional and technical writing styles including syntax and document design necessary in the production of letters, reports, resumes and other forms of business communication. *Prerequisites: ENG090 and RDG091.*

**ENG200 Introduction to Creative Writing**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

An introduction to the craft of various literary forms (creative non-fiction, poetry and fiction) emphasizing readings, composing practice and revising various creative pieces for an audience. *Prerequisite: RDG094.*

**ENG203 Advanced Composition**

3 Credits (3 Lectures)

**Typically Offered:** Spring

Designed to help transfer students further develop their critical reading, writing and research abilities. Emphasis is placed on the methods of discourse students will need to know in their own disciplines and areas of interest. *Prerequisite: ENG102* .

**ENG205 Introduction to the Study of Language**

3 Credits (3 Lectures)

**Typically Offered:** Fall

Learn how language works by focusing on grammatical, social and biological aspects of language. Learn about speech sounds and sound patterns (phonetics and phonology), how words are formed (morphology), and how sentences are organized (syntax). Also, learn how language is acquired (psycholinguistics), how words and phrases are understood (pragmatics and semantics), how language changes (historical linguistics), and how language impacts our society (sociolinguistics). *Prerequisite: RDG094.*

ICON LEGEND:

AGEC:

Intensive Writing:

Reading Required: RDG094:

SUN Course:



## ENG210 Introduction to Fiction Writing

3 Credit (3 Lectures)

**Typically Offered:** Spring, Even Years

An introduction to the craft of fiction writing taught through writing exercises and the writing of original short fiction, emphasizing readings in literary/contemporary fiction.

*Prerequisite:* ENG101

## ENG250 English for Chinese Graduate Students and Educators

1 Credit (1 Lecture)

**Typically Offered:** Fall

Improvement of oral and written English proficiency via Distance Learning/Blackboard to graduate students and faculty in China. *May be taken more than four times for credit.*

## ENGLISH AS A SECOND LANGUAGE (ESL)

See ENG and RDG for additional English Language Learner course options.

## ESL089 ESL Multi-level Studies

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

English language listening, speaking, reading and writing skill development, levels of Beginning Literacy - ELAA V. Learners are assessed upon entry to determine English skill levels and placed in the appropriate learning level. The course content varies according to skills that align to the six levels and standards of the Arizona Department of Education Adult Education Standards for English Language Acquisition for Adults (ELAA). Learners progress at their own pace and may repeat the course to continue in the next level as they progress toward completion of all six ELAA levels. *Course may be taken multiple times for credit as long as students demonstrate an appropriate level of improvement based on assessment scores. If a student does not improve and maintain that level of improvement after six sessions, he/she will not be permitted to continue to register for ESL classes. Prerequisite: Pretest to determine existing skill level.*

## ENTERTAINMENT INDUSTRY TECHNOLOGY (EIT)

### EIT100 History of Rock n' Roll

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

A survey of the history and development of rock music noting how cultural, social, political and economic conditions have affected its evolution. *Prerequisite: RDG094.*

### EIT101 Introduction to Entertainment

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

An introduction to the live entertainment event industry, including survey of industry, job descriptions and employment opportunities, technical requirements and basic operation of various live performance and other venues. *Prerequisite: RDG094.*

### EIT120 Entertainment Law

3 Credits (3 Lectures)

**Typically Offered:** Spring

An introduction to legal aspects of the entertainment industry, including performance rights, songwriting and personal appearance contracts, copyright law and trademarks. *Prerequisite: EIT101.*

### EIT130 Live Audio Production I

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

An introduction to concepts and technical skills required for live event sound reinforcement. Topics include the operation of basic sound systems, including consoles, amplifiers, speakers, processors and microphones. *Prerequisite: EIT101.*

### EIT140 Introduction to Lighting

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

Introduction to the technical aspects of concert and theatrical lighting, including basic design, color theory, instrument types, power distribution, control, safety, and the proper hanging, connection, focus and control of instruments and accessories such as gobos, color scrollers, mirrored fixtures and moving lights. *Prerequisite: EIT101.*





### EIT151 Digital Audio Workstation

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Use of Pro Tools mixing and automation software in conjunction with editing and recording, including computer operation, troubleshooting and file management.

### EIT153 Recording Engineering I

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

Introduction to basic topics in the operation of a 24-track audio recording studio, including audio theory, recording console signal flow, microphone placement, multi-track recording and mixing techniques. At the completion of the course, students will record and mix simple recording sessions. *Prerequisite: EIT151.*

### EIT170 Performance Skills

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

Private coaching and practice for pop genre soloist or ensemble that concentrates on proper tone production, technique, style, stage presence and communication skills, incorporating live sound reinforcement and lighting design in the development of a live audience performance. *May be taken four or more times for credit.*

### EIT171 Songwriting I

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Fall

Introduction to the basics of songwriting; including lyrics, rhythmic, melodic and harmonic development, form and emotional content. *Prerequisite: MTC100.*

### EIT203 Entertainment Capstone Project

2 Credits (6 Labs)

**Typically Offered:** Spring

A capstone experience for the entertainment professional, including planning, preparing and developing a specific entertainment project by selecting materials, setting up and monitoring a budget, and overseeing a complete compact disk, project portfolio, or a full concert performance. *May be taken four times for credit, once per each of the four EIT tracks. Prerequisite: Completion of first three semesters of EIT tracks with a grade of "C" or better in each course.*

### EIT221 Entertainment Marketing and Promotion

3 Credits (3 Lectures)

**Typically Offered:** Fall

Entertainment business marketing and promotion elements, specifically the creation of publicity materials, designing the process for developing media relations, a press kit and creating a publicity campaign. *Prerequisite: EIT120.*

### EIT222 Artist Management

3 Credits (3 Lectures)

**Typically Offered:** Fall

The responsibilities and relationships with performers and managers, as well as third party business associates in the music industry will be explored. Topics include managing independent and contracted artists and the manager's role in touring, personal appearances, concert performances/recording, arranging bookings, maintaining contracts, setting up and monitoring budgets. Students will learn to locate, initiate and then manage performers. *Prerequisite: EIT120.*

### EIT223 Events/Venue Management

3 Credits (3 Lectures)

**Typically Offered:** Spring

Hands on and theoretical knowledge needed to work in the events and management arena. The course provides practical training in the organization and management of special music events and venue management. *Prerequisite: EIT120.*

### EIT231 Live Audio Production II

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

A continuation in concepts and technical skills required for live event audio reinforcement. Topics include advanced sound system setup and operation, in-depth operation of program and monitor consoles, system equalization, flown speaker arrays and musical production considerations. *Prerequisite: EIT130.*

### EIT232 Equipment Maintenance

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

Introduction to basic concepts and techniques for maintaining and repairing sound and lighting equipment. Topics include basic maintenance, preventative maintenance, troubleshooting, soldering, wiring standards, calibration and testing of a wide variety of sound, lighting and performance-related equipment.

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## EIT241 Concert Lighting

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

An in-depth study of concert lighting to include full lighting design and lighting instrument hanging and focus for numerous concert arrangements, specifically choir concert, band/orchestra and dance lighting. Topics include using computer lighting effects, color scrollers, mirrored fixtures and moving lights. Fieldtrips required to off-campus area theatres to examine and evaluate an array of lighting venues.

*Prerequisite: EIT140. Corequisite: EIT242.*

## EIT242 Rigging

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

Introduction to the technical aspects of rigging for theater and concerts, including single and double purchase counterweight systems, block and tackle, cable and chain rigging, powered hoist systems and portable scenic and lighting trusses.

*Prerequisite: EIT140. Corequisite: EIT241.*

## EIT254 Recording Engineering II

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

A continuation in concepts and technical skills required in recording engineering in a 48-track audio recording studio. Topics include advanced audio theory, signal-processing equipment, advanced musical recording session procedures, production and engineering. At the completion of the course, students should be able to record and mix advanced multi-track recording sessions. *Prerequisite: EIT153.*

## EIT255 Recording Engineering III

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

A continuation in the study of recording studio procedures learned in EIT254. Topics include mixing techniques, time code synchronization of various machines, album sequencing and editing, and commercial production. Upon completion, students should be able to conduct any type of recording session and understand the working procedures in a professional recording studio. *Prerequisite: EIT254*

## EIT261 Acting for the Camera

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Develop an actor's approach to the special demands of acting in front of a camera. Emphasis is placed on the development of specific performance skills used for television and film acting.

A capstone portfolio includes a variety of audition shorts. *Prerequisite: THE101 or instructor consent. Cross Listed: THE261.*

## EIT272 Songwriting II

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Spring

Advanced songwriting techniques as a continuation of Songwriting I, including poetic and lyrical rhythm and meter, counterpoint, harmonic development, form and total song development to maximize emotional content. *Prerequisite: EIT171.*

## EIT296 Entertainment Internship

3 Credits (Internship – 135 Hours)



**Typically Offered:** Fall

Students work in entertainment industry internships designed to fit the students' selected track, interests and skills. The student may take only one internship for each of the four tracks of the Entertainment Industry Technology program. May be taken four times for credit, once per each of the four EIT tracks.

*Prerequisite: Complete all year one EIT courses in appropriate EIT track with a grade of "C" or better in each course.*

## ENVIRONMENTAL SCIENCE (ENV)

### ENV101 Environmental Science

4 Credits (3 Lectures, 3 Labs)  

**Typically Offered:** Fall, Spring and Summer

The systematic, scientific study of the environment and the effects of human activities on the environment. Field trips may be required at student's expense. *Prerequisite: RDG094.*



## FIRE SCIENCE TECHNOLOGY (FSC)

### FSC106 Introduction to Emergency Services

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

An overview of fire protection and emergency services delivery at the local and national levels, including: career opportunities in fire protection and related fields; philosophy and history of fire protection/service; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; fire service laws and regulations; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; and an introduction to The National Incident Management Systems (NIMS).

### FSC108 Fundamentals of Fire Prevention

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Organization and function of a fire prevention bureau including familiarization with state and local laws and ordinances, codes and principles of fire prevention, the inspector's job and public relations. Fundamentals of fire prevention, including techniques, procedures, regulations and enforcement. Course includes discussion of hazards in ordinary and special occupancies, field trips, and lectures from industry.

### FSC111 Emergency Driver Operator

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Emergency vehicle operator training including; the problems facing operators, the personal qualities of emergency vehicle operator candidates, legal responsibilities of operators, and physical forces involved in driving an emergency vehicle. Students must be employed/a member of public safety.

*Prerequisites: FSC117, FSC118 and Program Director consent.*

### FSC117 Fire Apparatus and Equipment

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Principles of care, maintenance and operation of fire apparatus and pumps. Course includes pump construction and accessories, pumping techniques, power development and transmission. Driving, troubleshooting and producing effective fire streams are emphasized.

### FSC118 Fire Hydraulics

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Review of basic mathematics, hydraulic laws and formulas as applied to the fire service. Application of formulas and calculations to hydraulic problems, water supply variables and discharge requirements for pumps. *Recommended: FSC117.*

### FSC119 Fire Service Ethics

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Explore the ethical and moral obligations of fire service professionals who deal with the quality of internal and external customer service.

### FSC126 Urban Technical Rescue: Rope Rescue I

2 Credits (2 Lectures)

**Typically Offered:** Fall, Spring and Summer

The basic uses of rope rescue equipment according to the standards of the State of Arizona for Rope 1. *Students must be employed/a member of public safety. Students sponsored by agencies are required to provide their own equipment. Prerequisite: Program Director consent.*

### FSC129 Hazardous Materials Awareness/Operations

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Closed Exit

Hazardous Materials First Responder Operations and Confined Space Operations basic skills in accordance with the National Fire Protection Agency Association, including: 1) basic methods of recognition and identification based on the chemical and physical properties of hazardous materials; 2) basic safety procedures when utilizing specific types of protective clothing and equipment; and 3) basic tactical information relating to scene management. Students who wish to test for International Certification must pass the Awareness Level Exam prior to taking the Operations Level Exam.

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094: *R*

SUN Course:



## **FSC130 Fitness for Firefighters/CPAT**

1.5 Credits (1.5 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

Skills and abilities required for entry level position in the fire service including physical ability and stamina. Students have the opportunity to take the International Association of Fire Fighters (IAFF) Candidate Physical Ability Test (CPAT) at the end of the course. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

## **FSC134 Fitness & Conditioning for Firefighters**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Overview of all aspects of fitness for current and prospective firefighters, including physical fitness and workout techniques as they apply to performing specific firefighting tasks.

*Prerequisite: Students must sign and submit CAC Liability Waiver to Fire Science Program Director (located on CAC FSC website). Recommendations: Students should be in good physical condition and have no existing health conditions which may preclude them from fully participating in the course.*

## **FSC140 Firefighter I and II**

13 Credits (12 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Introductory fire science course primarily designed for the fire department recruit. Course includes firefighting skills, equipment and administrative policies; fire department operations; personnel policies; and International Fire Service Accreditation Congress Practical Skills Testing. *Prerequisites: EMS100, EMS125, FSC129, FSC134; Students must sign and submit CAC Liability Waiver to Fire Science Program Director (located on CAC FSC website). Recommendations: Students should be in good physical condition and have no existing health conditions which may preclude them from fully participating in the course.*

## **FSC180 Wildland Fire, Module 1**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Wildland Fire Module 1 is designed for individuals with little or no experience in the wildland environment and provides preparation for performing as a beginning-level wildland firefighter on an engine or hand crew. This course of instruction will provide an introduction to wildland fire prevention, fire behavior, suppression methods, equipment considerations, safety and incident command. This course encompasses the National Wildfire Coordinating Group content: S-110, S130/S190, S133, S134 and L-180. NWCG Certificate will be awarded after successful completion of the course and examination.

*General Information:*

1. Student is responsible for obtaining text book package from the SPC-CAC book store.
  2. On the first day of class, CAC provides the course tools and equipment.
  3. Students are required to complete instructor-facilitated homework assignments that include the successful completion of online independent study courses.
- FEMA Website: <http://training.fema.gov/IS/NIMS.asp>  
Courses: National Incident Management System NIMS:  
IS-100.b - (ICS 100) Introduction to Incident Command Systems.  
IS-700.a - National Incident Management Systems (NIMS), an Introduction.  
IS-200.b - (ISC 200) ICS for Single Resource and Initial Action Incidents.  
URL NWCG Website: <http://training.nwcg.gov/courses/s110.html>  
S-110, Basic Wildland Fire Orientation.*

## **FSC181 NWCG Advanced Firefighter Training, S-131**

.5 Credit (.5 Lecture)

**Typically Offered:** Fall, Spring and Summer

Advanced firefighter training. National Wildfire Coordinating Group standardized course. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: FSC180.*

## **FSC182 NWCG Portable Pumps and Water Use, S-211**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Combined self-paced/field exercise format providing training for a portable water pump operator, per National Wildfire Coordinating Group (NWCG standardized course). *Satisfactory/Unsatisfactory grading options available.*

## **FSC183 NWCG Wildland Power Saws, S-212**

1.5 Credits (1.5 Lectures)

**Typically Offered:** Fall, Spring and Summer

Skill course designed to instruct prospective chain saw operators in the requirements of the wildfire power saw operator position, per National Wildfire Coordinating Group (NWCG standardized course). *Satisfactory/Unsatisfactory grading option is available.*





### **FSC185 NWCG Basic Incident Command System, I-200**

1 Credit (1 Lecture)

**Typically Offered:** Fall and Spring

Designed to introduce Wildland Firefighters to the principles of the Incident Command System (ICS) associated with incident-related performance in wildfires. This course is part one in a series of seven to meet the requirements to obtain NWCG certification for Engine Boss, per National Wildfire Coordinating Group (NWCG standardized course).

*Satisfactory/Unsatisfactory grading option is available.*

*Prerequisite: FSC180.*

### **FSC186 NWCG Crew Boss (Single Resource), S-230**

1.5 Credits (1.5 Lectures)

**Typically Offered:** Fall, Spring and Summer

Instruction to produce student proficiency in the performance of all duties associated with the single resource crew boss, which includes preparation, mobilization, assignment, tactics and safety, and demobilization at wildfires. This course is required to obtain the NWCG Engine Boss qualification, per National Wildfire Coordinating Group (NWCG standardized course). *Satisfactory/Unsatisfactory grading option is available. Prerequisite: NWCG S-131 OR FSC181.*

### **FSC187 NWCG Engine Boss (Single Resource), S-231**

.5 Credit (.5 Lecture)

**Typically Offered:** Fall, Spring and Summer

Skill course required for Engine Boss, to produce student proficiency associated with the single resource engine boss. This course is one part of seven for the requirements to obtain NWCG certification for Engine Boss, per National Wildfire Coordinating Group (NWCG standardized course).

*Satisfactory/Unsatisfactory grading option is available.*

*Prerequisite: NWCG S-131 OR FSC181.*

### **FSC188 NWCG Ignition Operations, S-234**

2 Credits (2 Lectures)

**Typically Offered:** Fall, Spring and Summer

Combined classroom/field exercise providing an entry-level training in the functional roles and responsibilities connected with firing operations at wildfire situations. This course is one part of seven for the requirements to obtain NWCG certification for Engine Boss, per National Wildfire Coordinating Group (NWCG standardized course).

*Satisfactory/Unsatisfactory grading option is available.*

*Prerequisite: NWCG S-290 OR FSC191.*

### **FSC189 NWCG Interagency Incident Business Management, S-260/S-261**

2 Credit (2 Lectures)

**Typically Offered:** Fall and Spring

Interagency incident business management skills to meet general training needs of all firefighter positions and required to obtain National Wildfire Coordinating Group (NWCG) Certification for Engine Boss. This Course is also a requirement for the completion of the CAC Wildland Firefighter I Certificate. *Satisfactory/Unsatisfactory grading option is available.*

### **FSC190 NWCG Basic Air Operations, S-270**

1.5 Credits (1.5 Lectures)

**Typically Offered:** Fall and Spring

Basic firefighter air operations, including aircraft types and capabilities. Aviation management and safety for flying in and working with agency aircraft, tactical and logistical uses of aircraft and requirements for helicopter take-off and landing areas. This course is required to obtain National Wildfire Coordinating Group (NWCG) certification for Engine Boss and required for Wildland Firefighter I Certificate completion.

*Satisfactory/Unsatisfactory grading option is available.*

*Prerequisite: FSC181 or NWCG S-131.*

### **FSC191 NWCG Intermediate Wildland Fire Behavior, S-290**

2 Credits (2 Lectures)

**Typically Offered:** Fall and Spring

Prepares prospective supervisors to undertake safe and effective fire management operations. This course is required to obtain National Wildfire Coordinating Group (NWCG) Certification for Engine Boss and required for the CAC Wildland Firefighter I Certificate. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: FSC180 or NWCG 130/190.*

### **FSC192 Initial Attack Incident Commander**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Incident commander focuses on six instructional units: Foundation Skills; Intelligence Gathering and Documentation; Sizing Up the Incident; Developing a Plan of Action; Post-fire Activities; Evaluating Incident Objectives and Managing the Incident. Discussion and exercise format culminate in unit tests and performance based evaluations. *Prerequisite: FSC180.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **FSC193 Followership to Leadership**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

A self-assessment opportunity for individuals preparing to step into a leadership role while working through a series of problem solving events in small teams. Training includes: leadership values and principles, transition challenges for new leaders, situational leadership, team cohesion factors, ethical decision-making and after action review techniques.

*Prerequisite: FSC180.*

## **FSC202 Supervisory Training for Firefighters**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Administrative and personnel methods applied to fire safety, department organization and personnel management. Includes fire service planning and relationships with other city depts.

## **FSC203 Fire Operations in the Wildland/Urban Interface**

2 Credits (2 Lectures)

**Typically Offered:** Fall and Spring

Designed for structural and wildland firefighters who make tactical decisions when confronting wildland fire that threatens life, property and improvements in the wildland/urban interface. This course fulfills the requirements for S215 NWCG. *Prerequisite: FSC181.*

## **FSC204 Firefighting Tactics and Strategy**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

Methodical approaches for coordinating personnel, equipment and apparatus on an emergency incident with emphasis on building construction, firefighter safety and the functions of command. Commander preparation and application of concepts involved in the development and deployment of on-scene strategic or tactical plans, while utilizing simulation exercises. *Prerequisite: FSC140.*

## **FSC204A Regional Incident Command/Mutual Aid Training**

4 Credits (4 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

Methods of coordinating personnel, equipment and apparatus on the fireground. Practical methods of controlling and extinguishing structural and other types of fire utilizing demonstration and simulation. This course also covers the eight functions of Command and is designed for rural Pinal County fire agencies. *Prerequisite: FSC140 or equivalent, or three years of firefighter experience.*

## **FSC205 Command Strategies for Major Emergencies**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Methods of managing major emergency incidents to include major wildland fires, complex hazardous materials incidents and multi-casualty medical incidents. Management of incidents with multi-agency coordination and the incorporation of federal, state and local resources while utilizing simulation exercises. *Students must be employed as a member of public safety. Prerequisites: FSC204 or equivalent course, and Program Director consent.*

## **FSC206 Fire Department Health and Safety Officer**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule

Preparation for Public Safety members to become Health and Safety Officers within their Fire Department or organization, including requirements to manage Fire Agency Occupational Health and Safety Programs, both emergency and non-emergency incidents. *Prerequisites: FSC140 and FSC204.*

## **FSC208 Firefighter Safety and Building Construction**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

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. *Prerequisite: FSC140 or current firefighter.*

## **FSC209 Fire Origin, Cause & Determination**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Methods of determining points of fire origin, path of travel and fire cause. Includes recognizing and preserving evidence, interviewing witnesses, arson laws, types of arson fires, court testimony, reports and records.



### FSC220 Fire Officer Leadership

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Supervisory capabilities which include leadership skills and management styles. Also includes stress management, communication and motivational skills, and roles of the company officer. The course addresses ethics, use and abuse of power at the company officer level, creativity in the fire service environment and management of the multiple roles of the company officer. This course is required for IFSAC certification as a Fire Officer I. *Students must be employed as a member of public safety. Prerequisites: FSC202 and Program Director consent.*

### FSC238 Vehicular Extrication and Victim Stabilization

2 Credits (2 Lectures)

**Typically Offered:** Fall, Spring and Summer

Participative course designed for 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. *Students must be employed as a member of public safety. Prerequisites: Basic EMT certification or equivalent, nurse with emergency department and Program Director consent.*

### FSC250 Ladder Company Officer

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Overview of all aspects of ladder company operations including activities, expectations and responsibilities required of the ladder captain. *Students must be employed as a member of public safety. Prerequisite: Program Director consent.*

### FSC252 Engine Company Officer

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

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. *Students must be employed as a member of public safety. Prerequisites: Firefighter, either volunteer or paid, and Program Director consent.*

### FSC255 Fire Instructor I

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

A course designed to train firefighters and emergency services instructors to teach a fire related class with basic instructional knowledge and from a prepared lesson plan. *Students must be employed as a member of public safety. Prerequisite: FSC140 or Program Director consent.*

### FSC256 Fire and Emergency Services Instructor Level II

1.5 Credits (1.5 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Knowledge for the Student/Instructor to develop, modify and recognize lesson plan types and formats; create lesson plans; develop guidelines for the use of audiovisual equipment. *Students must be employed as a member of public safety. Satisfactory/Unsatisfactory grading option is available. Prerequisite: FSC255.*

### FRENCH (FRE)

#### FRE101 Elementary French I

4 Credits (4 Lectures, 1 Lab) FRE 1101

**Typically Offered:** Fall

The basic skills of listening, understanding, speaking, reading, and writing French, with a survey of cultural aspects of the French language.

#### FRE102 Elementary French II

4 Credits (4 Lectures, 1 Lab) FRE1102

**Typically Offered:** Spring

Refinement of basic communication skills in French, emphasizing reading, writing, speaking and listening exercises. Survey of cultural norms, beliefs and traditions from areas where French is spoken. *Prerequisite: FRE101 or successful completion of 1 year of high school French.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **FRE201 Intermediate French I**

4 Credits (4 Lectures, 1 Lab) 🌀 FRE2201 📖🔗

**Typically Offered:** Fall

Development of reading, writing, speaking and listening skills and proficiency in French at the novice intermediate level. Continuation of understanding, appreciation and sensitivity to cultural norms, values and beliefs in areas where French is spoken. *Prerequisites:* RDG094 and (FRE102 🌀), or 2 years high school French, or instructor consent, or CLEP score 54 or higher).

## **FRE202 Intermediate French II**

4 Credits (4 Lectures, 1 Lab) 🌀 FRE2202 📖

**Typically Offered:** Spring

Continued development of speaking, writing, listening and reading proficiency in French at the intermediate level. Continued study and appreciation of cultures of the French-speaking world. *Prerequisite:* FRE201 🌀 or three years high school French or instructor consent.

## **GENERAL EDUCATION DEVELOPMENT (GED)**

### **GED089 GED Multi-level Studies**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Development of reading, writing, math, science, social studies and other academic knowledge and skills. Students are assessed upon entry to determine readiness for passing the General Educational Development (GED) tests. The course content varies according to the skills needed for test preparation. Levels and standards align with Arizona Department of Education Adult Education ABE/ASE Standards. Course may be taken multiple times for credit as long as students demonstrate an appropriate level of improvement based on assessment scores. *If a student does not improve and maintain that level of improvement after four sessions, he/she will not be permitted to continue to register for GED classes. Prerequisite: Pretest to determine existing skill level.*

## **GEOGRAPHIC INFORMATION SYSTEMS (GIS)**

### **GIS101 Introduction to Geographic Information Technologies**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Introduction to geospatial technologies, including remote sensing, Global Positioning System (GPS), Geographic Information Systems (GIS), statistical analysis, map overviews, map projections and cartography.

### **GIS102 Map and Image Interpretation**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

Reading, analysis and interpretation of maps/remote sensing images used by geoscientists, including topographic, geologic and other geoscience maps for basic air photo interpretation. Students will detect, identify, and analyze objects or features from film and digital aerial photography and other types of high resolution remotely sensed images. The laboratory portion of this course focuses on manual and digital image interpretation for land cover mapping, forestry, agriculture, and geology and planning applications. *May be taken two times for credit. Prerequisite: MAT101 or MAT162.*

### **GIS111 Introduction to GIS**

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Introduction to desktop Geographic Information Systems (GIS) technology using ArcGIS software to produce multidimensional spatial maps.

### **GIS112 Intermediate GIS**

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Spring

Development of intermediate level knowledge and skills in Geographic Information Systems (GIS), including statistical applications, spatial databases, spatial analysis and related technology and an overview of spatial data. *Prerequisites: GIS101, GIS102 and GIS111.*

### **GIS113 Advanced GIS**

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall

Advanced data and spatial analysis techniques in Geographic Information Systems (GIS), using ArcGIS. *Prerequisite: GIS112.*





**GIS150 GIS and Global Positioning Systems (GPS)**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Exploration into the functionality and relationship between Geographic Information Systems (GIS) and Global Positioning Systems (GPS), including how to prepare, manage and retrieve GIS data for mobile devices.

**GIS196 GIS Internship I**

3 Credits (3 Internships – 135 Hours)

**Typically Offered:** Fall, Spring and Summer

Students work in GIS internships to help students select GIS specialty track, refine GIS skills and gain teamwork skills. *Prerequisites: GIS101, GIS102 and GIS111 completed with a grade of “C” or better.*

**GIS210 GIS Programming**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Application of programming languages to GIS data to analyze data, creates user interfaces, create web services and achieve the full potential of ArcGIS software. *Prerequisite: CIS181 or (CIS216 or CIS218 or any computer programming course).*

**GIS230 Applied GIS: The Environment**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Spring

Use Geographic Information Systems (GIS), the leading technique used in ecosystem analysis, to analyze data types, sources and applications; to integrate the physical and topographic information in a landscape with characteristics of the biotic components of the environment; and to address environmental systems and problems. This course focuses on GIS applications to analyze and interpret ecological data. Use GIS to interpret spatial information in relation to land use and to create a decision matrix to plan, manage and restore land for more effective land use and success in environmental restoration efforts. *Prerequisite: GIS113.*

**GIS231 Applied GIS: Transportation Systems**

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Spring

Geographic Information Systems (GIS) applications to transportation includes 1) modeling techniques such as shortest path, location and allocation, vehicle routing and traffic assignment; 2) integration modeling and planning; and 3) exploration of other transportation systems pertaining to utilities such as pipeline networks and electrical transportation and distribution systems. Apply GIS principles to transportation using state-of-the-practice computing technology for transportation planning in a GIS environment. *Prerequisite: GIS113.*

**GIS232 Applied GIS: Communities**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

Explore GIS fundamentals as applied to a range of disciplines focusing on municipalities, including 1) city and county government agency data: crime, election, building, assessment and zoning data; 2) techniques for displaying data in map form; and 3) GIS theory, data collection and input, data management, spatial analysis, visualization, map preparation and presentation. *Prerequisite: GIS113.*

**GIS250 Remote Sensing I**

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Introduction to digital remote sensing and satellite imagery analysis, including: fundamental principles of remote sensing with an emphasis on the theoretical and applied realms of the discipline; physics of electromagnetic radiation, digital photogrammetry, image interpretation, spatial resolution, airborne and space-borne sensors and image classification; and reinforcement of concepts through laboratory exercises and field work. *Prerequisite: GIS102.*

**GIS251 Remote Sensing II**

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Use remote sensing tools to create aerial photography and data for Geographic Information Systems (GIS) based natural resource mapping and monitoring. Explore non-photographic systems used for natural resource management, including satellite-borne sensors, radar, LiDAR, video, digital cameras and various airborne multi-spectral and hyperspectral sensors. Data from these systems and aerial photography provide key inputs to GIS. *Prerequisite: GIS250.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## GIS296 GIS Internship II

3 Credits (3 Internships - 135 Hours)

**Typically Offered:** Fall, Spring and Summer

The GIS Internship II is designed for GIS A.A.S. Degree seeking students as their capstone course in which they apply their GIS knowledge and skill in a real-world setting based on their selected GIS track, interests and skills. This internship requires 135 hours of applied work in a work setting. *Prerequisites:* GIS113, (DFT131 or GIS241), (GIS230 or GIS231 or GIS232), (CIS120 or AGB124), GIS196 and instructor consent. This is the GIS A.A.S. Degree capstone course and all GIS AAS Degree coursework must be completed prior to enrollment in this course.

## GIS299 GIS Research Methods

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Introduction to GIS focused research methods useful for academic and professional investigations of information practices and technologies. By examining the applications, strengths and major criticisms of geospatial methodologies drawn from both the qualitative and quantitative traditions, this course stresses developing skills and knowledge to make various decisions and the steps involved in crafting and executing a research methodology, as well as the ability to create critically assessed GIS-based research. *Prerequisite:* GIS232 or GIS251.

## GEOGRAPHY (GEO)

### GEO101 Introduction to Cultural and Historical Geography

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Historical and contemporary spatial variations among cultural groups and spatial functioning of society. Illustrations from a variety of cultures showing how culture is constructed, contested, and contextualized. *Prerequisite:* RDG094.

## GEOGRAPHY (PHYSICAL) (GPH)

### GPH111 Introduction to Physical Geography

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Spatial and functional relationships among climates, landforms, soils, water and plants. *Prerequisite:* RDG094.

## GEOLOGY (GLG)

### GLG101 Physical Geology

4 Credits (3 Lectures, 3 Labs) GLG 1101

**Typically Offered:** Fall and Spring

Basic principles of geology. Earth materials, external processes, internal processes, mineral and energy resources, and planetary geology. *Prerequisites:* MAT092 and RDG094.

### GLG102 Historical Geology

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Rocks, fossils, organic evolution, geologic time, plate tectonics, earth's origin and the major time periods of earth history. *Prerequisites:* MAT092 and RDG094.

### GLG110 Environmental Geology

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Geological studies as they apply to interactions between humans and the Earth, including geologic processes and hazards, resources and global change. *Prerequisites:* MAT092 and RDG094.

## HEALTH CAREERS CENTER (HCC)

### HCC100 Introduction to Healthcare

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Introduction to healthcare, medical terminology and the human body, personal and workplace safety, behaviors for success, communication and healthcare skills, and securing and maintaining employment. *Prerequisite:* RDG094.

### HCC111 Healthcare Law and Ethics


2 Credits (2 Lectures)

**Typically Offered:** Fall, Spring and Summer

Introduction to the foundations of law and ethics in healthcare, legal issues for healthcare practitioners, and professional, social and interpersonal healthcare issues. *Prerequisite:* RDG094.



## HCC112 Interpersonal Skills

2 Credits (2 Lectures) 

**Typically Offered:** Fall, Spring and Summer

Develop interpersonal communication skills, including study of basic principles of psychology, development stages of the life cycle, hereditary, cultural and environmental influences on behavior and other professional issues.

*Prerequisite: RDG094.*

## HCC113 Math and Dosage Calculations for Health Occupations


1 Credit (1 Lecture) 

**Typically Offered:** Fall, Spring and Summer

Mathematical concepts and medical dosage calculation skills required in a variety of health occupations, including mathematical ratios and proportions, decimals, percentages, fractions, U.S. and metric weights and measurements.

*Prerequisites: MAT082 and RDG094.*

## HCC116 Medical Terminology


3 Credits (3 Lectures) 

**Typically Offered:** Fall, Spring and Summer

The study and application of medical terminology to all body systems and specialties in various healthcare settings, including anatomy, physiology, organs, blood structures, lymphatic and immune system, musculoskeletal, skin, sense organs, endocrine systems and others. Medical terms relevant to oncology, radiology and nuclear medicine, pharmacology and psychiatry will be covered. *Prerequisite: RDG094.*

## HEALTH INFORMATION MANAGEMENT (HIM)

### HIM115 Health Information Technology I

3 Credits (3 Lectures) 

**Typically Offered:** Fall

The fundamental concepts in Health Information, including healthcare system, root foundations of the profession, healthcare data and information systems, structures and information management methodologies as well as classification systems, terminologies and vocabularies. At the end of this course, students will be familiar with the healthcare system, accreditation, certification and licensure standards.

*Prerequisite: RDG094.*

### HIM117 Health Information Technology II

3 Credits (3 Lectures)

**Typically Offered:** Spring

The fundamental concepts on the management and uses of data in Health Information, including healthcare informatics data management and use to include an overview of statistics, research and epidemiology, performance management, patient safety, data analysis, registries and law. *Prerequisite: HIM115.*


### HIM121 Legal Aspects of Health Information

2 Credits (2 Lectures)

**Typically Offered:** Spring

Continued study of law and ethical concepts including the medical legal system, criminal vs. civil law, statutory law, contracts, administrative law, medical malpractice and the lawful principles related to patient care and Health Information Management. *Prerequisites: HCC111, HIM115.*  
*Corequisite: HIM117.*


### HIM131 Introduction to Insurance and Insurance Billing I

3 Credits (3 Lectures) 

**Typically Offered:** Fall and Spring

Introductory course to insurance systems, billing processes, clinical vocabularies, ethical and legal issues and computer applications used to complete these processes. *Prerequisite: RDG094.*

### HIM138 ICD Coding

3 Credits (3 Lectures) 

**Typically Offered:** Fall

Fundamental coding techniques using the current International Classification of Diseases Clinical Modification and provides hands-on practical skills for student learning and skills building. Emphasis is placed on specificity and the application of professional standards in the assignment of codes to diagnoses and procedures using coding rules.

*Prerequisite: RDG094. Corequisite: HCC116.*

ICON LEGEND:

AGEC: 

Intensive Writing: *IW*

Reading Required: RDG094: 

SUN Course: 



## **HIM139 ICD Coding for ICD-10 CM & PCS**

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Fall and Summer

Coding nomenclature using ICD-10-CM and PCS implemented nationwide and effective 2014. Code sets for ICD-10 require higher level anatomy and physiology knowledge and increased levels of specificity. This course is only open to HIM students, graduates and credentialed coders familiar with ICD-9 or HIM Director approval. *Prerequisites:* (HIM138 and HCC116)

## **HIM158 CPT Coding**

3 Credits (3 Lectures)

**Typically Offered:** Spring

Fundamental coding techniques using the Current Procedural Terminology (CPT) and the HCPCS coding system and providing hands-on practical skills for student learning and skills building. Emphasis is placed on specificity and the application of professional standards in the assignment of codes to diagnoses and procedures using coding rules. *Prerequisite:* HIM138.

## **HIM160 Health Information Technology Seminar**

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Summer

Further application of skills learned using AHIMA's Virtual Lab and through project management. In addition, students will be given the opportunity to visit traditional and non-traditional healthcare facilities. Students will keep records of all projects and experiences and discuss them at a weekly one-hour seminar. The final exam constitutes a comprehensive report of the students' experiences. *Prerequisite:* HIM117.

## **HIM161 Introduction to Insurance and Insurance Billing II**

3 Credits (3 Lectures) *R*

**Typically Offered:** Spring

Real world scenarios for student application of knowledge and skills building in data content, insurance systems, billing processes, clinical vocabularies, ethical and legal issues, and computer applications. *Prerequisite:* RDG094.

## **HIM175I Practicum – Coding and Reimbursement**

4 Credits (4 Practica – 180 hours)

**Typically Offered:** Summer

Practical experience of 180 hours, under supervision of an instructor, with an emphasis on applying medical coding principles and procedures to medical records. *Prerequisite:* Instructor consent.

## **HIM200 Healthcare Reimbursement**

2 Credits (2 Lectures)

**Typically Offered:** Fall

Builds on fundamental concepts in reimbursement methodologies, including clinical coding, coding compliance, reimbursement systems and revenue cycle management. At the end of this course students will be familiar with reimbursement reporting requirements. *Prerequisite:* HIM158.

## **HIM205 Healthcare Statistics and Research**

2 Credits (2 Lectures)

**Typically Offered:** Fall

Emphasizes developing student's knowledge and skills with data collection methods, computation, organization and presentation of reported health statistics. Expands on Institutional Review Board (IRB) processes and policies. *Prerequisites:* HIM160 and MAT101 or higher.

## **HIM208 Advanced Coding**

2 Credits (2 Lectures)

**Typically Offered:** Fall

Continued study in intermediate coding concepts and advanced student skill training utilizing all coding methodologies. Students perform coding functions using real medical records and both the manual system and an encoder/grouper. *Prerequisites:* HIM138 and HIM158.

## **HIM210 Supervision and Quality**

2 Credits (2 Lectures)

**Typically Offered:** Spring

Enhances the student's ability to perform qualitative and quantitative analysis of data for peer review, quality assessments, and the development of improvement programs in healthcare facilities and organizations for reporting and accreditation requirements. *Prerequisite:* HIM205.





## HIM215 Health Information Systems

3 Credits (3 Lectures)

**Typically Offered:** Spring

Continued study in the areas of data storage, retrieval and security as well as information systems and communication technologies. This course promotes the application of analysis, design, evaluation, selection, acquisition and utilization of health information systems in healthcare organization settings. *Prerequisites: CBA113A and HIM160. Corequisite: CBA114A.*

## HIM275Q Health Information Technology Practicum


4 Credits (4 Practica – 180 Hours)

**Typically Offered:** Summer

Through a practical externship of at least 180 hours, students apply knowledge and skills learned in the Health Information Technology program in a health care facility setting under the direction of a Registered Health Information Technician (RHIT) or Registered Health Information Administrator (RHIA). *Prerequisites: HIM215, (all program requirements completed prior to enrollment in HIM275Q) and HIT Program Director consent.*

## HEALTH KNOWLEDGE AND SKILLS (HKS)

### HKS155 Introduction to Phlebotomy

3 Credits (2 Lectures, 3 Labs) 

**Typically Offered:** Summer

An introduction to the basic knowledge and practical experience necessary for the safe and successful collection of blood specimens. Students have the opportunity for practical experience in a hospital setting. *Prerequisites: High School Diploma or GED; Immunizations required; and RDG094. Corequisite: HKS255.*

### HKS255 Phlebotomy Practicum

3 Credits (3 Practica – 135 hours)

**Typically Offered:** Summer

An application of basic phlebotomy training to provide safe and successful collection of blood specimens. Students have the opportunity for practical experience in an outpatient blood collection site or hospital setting. *Corequisite: HKS155.*

## HEALTH PATIENT MANAGEMENT (HPM)


### HPM105 Pharmacy Techniques

3 Credits (3 Lectures)

**Typically Offered:** Spring

An overview of pharmacy. History of pharmacy, pharmacy terminology, role and responsibilities of a pharmacy technician in comparison to that of the pharmacist, and ethical and legal information. Theory of procuring, manipulating, calculating and preparing drugs for dispensing.

### HPM136 Business Skills for Massage Therapy

3 Credits (3 Lectures) 

**Typically Offered:** Spring

Career options in the massage field, including entrepreneurial opportunities, medical applications and spa work. Insurance billing and preparation for taking the national certification examination. *Prerequisite: RDG094.*

### HPM140 Medical Assisting Skills I

4 Credits (3 Lectures, 3 Labs) 

**Typically Offered:** Fall and Spring

Medical record, medical asepsis and the OSHA Standard, sterilization and disinfection, vital signs, the physical examination, eye and ear assessment and procedures, physical agents to promote tissue healing, gynecologic, prenatal and pediatric examinations, minor office surgery and administration of medication. *Prerequisites: RDG094 and instructor consent.*

### HPM141 Medical Assisting Skills II

4 Credits (3 Lectures, 3 Labs) 

**Typically Offered:** Fall and Spring

Cardiopulmonary procedures, colon procedures, radiology and diagnostic imaging, introduction to the clinical laboratory, urinalysis, phlebotomy, hematology, blood chemistry and serology, and microbiology. *Prerequisites: RDG094 and instructor consent.*

ICON LEGEND:

AGEC: 

Intensive Writing: *IW*

Reading Required: RDG094: 

SUN Course: 



## **HPM150 Chiropractic Assistant Training**

2 Credits (2 Lectures)

**Typically Offered:** Fall

Introduction to administrative and clinical chiropractic procedures. This course is a requirement in the massage therapy program and is available as continuing education for chiropractic assistants.

## **HPM151 Study of Acupuncture for Healthcare Professionals**

1 Credit (1 Lecture)

**Typically Offered:** Fall

Introduction to acupuncture principles and practices that are part of patient care in a chiropractic medical practice. This course is required in the massage therapy program and is available as continuing education for chiropractic assistants.

## **HPM152 Study of Physiotherapy for Healthcare Professionals**

1 Credit (1 Lecture)

**Typically Offered:** Fall

Introduction to physiotherapy principles and practices that are part of patient care in a chiropractic medical practice. This course is a requirement in the massage therapy programs and is available as continuing education for chiropractic assistants.

## **HPM154 Complementary and Alternative Medicine**

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall, Spring, and Summer

An overview of various types of complementary and alternative modalities (CAMs) including Asian therapies, Naturopathy, herbal medicine, chiropractic and massage treatments, mind-body techniques and spiritual healing. *Prerequisite: RDG094.*

## **HPM160 Applied Anatomy for Massage Therapy**

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall

Study of bones, joints and muscles while developing palpation skills with practical application in concurrent massage class experience. *Prerequisite: RDG094.*

## **HPM162 Basic Pharmacology for Health Occupations**

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall, Spring and Summer

Introduction to drug sources, uses and classifications including purpose, side effects, cautions, interactions and patient education. *Prerequisite: RDG094.*

## **HPM164 Pharmacy Certification Review**

2 Credits (2 Lectures) *R*

**Typically Offered:** Spring

Preparation for taking the national pharmacy certification exam necessary for placement in the field and verification of competency. *Prerequisite: RDG094.*

## **HPM169 Clinical Laboratory Assistant Basics I**

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall

This course defines the role of the clinical laboratory assistant in the healthcare delivery system: infection control principles, safety practices, procedures to collect specimens, methods for preparing blood and body fluid specimens for analysis, and the performance of basic tests at the clinical assistant level will be discussed. An overview of quality control protocols and potential pre-analytical errors will be provided. *Prerequisites: Phlebotomy Certificate and instructor consent.*

## **HPM170 Clinical Laboratory Assistant Basics II**

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Spring

An introduction to the basics of six areas of the clinical laboratory; Immunology, Clinical Chemistry, and Donor Room (collection, screening, and component processing) are discussed as well as a focus on specific Hematology, Urinalysis, and Microbiology testing at the clinical assistant level. *Prerequisite: HPM169.*

## **HPM171 Administrative Medical Procedures**


4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall

Medical business practices, basic practice finances, managed care/insurance and procedural and diagnostic coding.



### HPM173 Pathophysiology

3 Credits (3 Lectures) 

**Typically Offered:** Fall, Spring and Summer

Pathological conditions and terminology, causes, incidence, signs, symptoms, diagnosis, treatment and special considerations associated with the major diseases of the body systems studied. *Prerequisite: RDG094.*

### HPM175C Medical Assistant Degree Practicum

4 Credits (4 Practica – 180 Hours)

**Typically Offered:** Contact CAC Class Schedule

Supervised, unpaid practical experience of 180 hours in an ambulatory health care setting performing both administrative and clinical procedures. This course is required for the Medical Assistant A.A.S. Degree. *Students must receive a grade of C or better to pass this course. Students who fail will not be allowed to repeat this course. Students who withdraw with instructor's consent may retake this course only once with instructor consent. Prerequisites: Mandatory requirements specific to HPM175C must be met before enrollment; all program courses must be successfully completed before enrolling in HPM175C and instructor consent.*

### HPM175E Medical Assistant Certificate Practicum

4 Credits (4 Practica – 180 Hours)

**Typically Offered:** Contact CAC Class Schedule

Practical experience of 180 hours in a medical facility, under the supervision of a physician, where the students apply clinical principles and procedures in a situation with actual patient contact. This course is required for the Medical Assistant Certificate. *Prerequisite: Instructor consent.*

### HPM175H Practicum – Pharmacy Technician

4 Credits (4 Practica - 180 Hours))

**Typically Offered:** Contact CAC Class Schedule

Practical experience of 180 hours under the supervision of a pharmacist performing a variety of technical duties related to preparation and dispensing of drugs according to standard procedures. *Students must receive a grade of "C" or better to pass this course. Students who fail will not be allowed to repeat this course. Students who withdraw with instructor's permission may retake this course only once with instructor permission. Prerequisites: Mandatory requirements specific to HPM175H must be met before enrollment; all program courses must be successfully completed before enrollment and instructor consent.*

### HPM175L Practicum – Massage Therapy – Relaxation Massage

1 Credit (1 Practicum - 45 Hours)

**Typically Offered:** Fall, Spring and Summer

Practicum consisting of 45 hours of hands-on experience with emphasis on relaxation (Swedish) massage under the supervision of an instructor. *Students must receive a grade of "C" or better to pass this course. Students who fail will not be allowed to repeat this course. Students who withdraw with instructor's permission may retake this course only once with instructor permission. Prerequisites: Mandatory requirements specific to HPM175L must be met before enrollment; instructor consent. Corequisite: HPM180.*

### HPM175M Practicum – Massage Therapy – Therapeutic Massage

1 Credit (1 Practicum – 45 Hours)

**Typically Offered:** Fall, Spring and Summer

Practicum consisting of 45 hours of hands-on experience with emphasis on therapeutic massage under supervision of an instructor. *Students must receive a grade of "C" or better to pass this course. Students who fail will not be allowed to repeat this course. Students who withdraw with instructor's permission may retake this course only once with instructor permission. Prerequisites: Mandatory requirements specific to HPM175M must be met before enrollment; instructor consent. Corequisite: HPM181.*

### HPM175N Practicum – Massage Therapy for Special Populations

1 Credit (1 Practicum – 45 Hours)

**Typically Offered:** Fall, Spring and Summer

Practicum consisting of 45 hours of hands-on experience with emphasis on massage for special populations under supervision of an instructor. *Students must earn a grade of "C" or better to pass this course. Students who fail will not be allowed to repeat this course. Students who withdraw with instructor's permission may retake this course only once with instructor permission. Prerequisites: Mandatory requirements specific to HPM175N must be met before enrollment; instructor consent. Corequisite: HPM281*

ICON LEGEND:

AGEC: 

Intensive Writing: *IW*

Reading Required: RDG094: 

SUN Course: 



### **HPM1750 Practicum – Massage Therapy – Spa Treatments and Hydrotherapy**

1 Credit (1 Practicum – 45 Hours)

**Typically Offered:** Fall, Spring and Summer

Practicum consisting of 45 hours of hands-on experience with emphasis on spa treatments and hydrotherapy under supervision of an instructor. *Students must receive a grade of "C" or better to pass this course. Students who fail will not be allowed to repeat this course. Students who withdraw with instructor's permission may retake this course only once with instructor permission. Prerequisites: Mandatory requirements specific to HPM1750 must be met before enrollment; instructor consent. Corequisite: HPM282.*

### **HPM175P Clinical Laboratory Assistant Practicum**

3 Credits (3 Practica - 135 Hours)

**Typically Offered:** Summer

Practical experience of 135 hours under the supervision of a laboratory technologist performing a variety of clinical skills including phlebotomy, waived testing, basic procedures, documentation and the use of information systems. *Students must receive a grade of C or better to pass this course. Students who fail will not be allowed to repeat this course. Students who withdraw with instructor's permission may retake this course only once with instructor permission. Prerequisites: Phlebotomy certificate; all program courses must be successfully completed before enrollment; mandatory requirements specific to HPM175P must be met before enrollment and instructor consent.*

### **HPM180 Therapeutic Massage I**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Introduction to massage history, benefits and contraindications, draping, hygiene and safety, relaxation (Swedish) massage techniques and benefits, and business and ethics.

### **HPM181 Therapeutic Massage II**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Corporate chair massage, sports massage, Trager massage, range of motion and stretching, proper body mechanics, hygiene, safety, draping and professional decorum.

### **HPM210 Review for Registered Medical Assistant Examination**

3 Credits (3 Lectures)

**Typically Offered:** Contact CAC Class Schedule

A comprehensive approach to reviewing both administrative and clinical competencies for the medical assistant A.A.S. degree graduate preparing to take the Registered Medical Assistant (RMA) Medical Assistant Certification Examination offered by the American Medical Technologists (AMT). *Prerequisite: Medical Assistant graduate with an Associate of Applied Science Degree.*

### **HPM280 Therapeutic Massage III**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Muscle-specific and condition-specific massage designed to aid in the rehabilitative process, including relief of carpal tunnel syndrome, thoracic outlet syndrome, sciatic, low back and neck pain. *Prerequisite: Instructor consent.*

### **HPM281 Therapeutic Massage IV**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Special populations massages including pregnant women, lymphatic massage, geriatric massage and foot reflexology along with the proper use of body mechanics, hygiene, safety, draping and professional decorum.

### **HPM282 Therapeutic Massage V**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

This course consists of 30 hours of spa technology (balneotherapy) and 15 hours of hydrotherapy.

## **HEAVY EQUIPMENT OPERATIONS (HEO)**

### **HEO100 Introduction to Heavy Equipment Operations**

5 Credits (1 Lecture, 12 Labs)

**Typically Offered:** Summer

Basic heavy equipment operation knowledge and experience, including theory, safety and operation of various types of equipment used in the industry, as well as workplace ethics, time management and teamwork. *Prerequisites: Current and valid driver license and instructor consent.*





### HEO121 Heavy Equipment Operations I

5 Credits (3 Lectures, 6 Labs)

**Typically Offered:** Fall and Spring Summer

Introduction to the use of heavy equipment with emphasis on safety, preventive maintenance and grade stake interpretation. *Prerequisite: Valid driver license.*

### HEO122 Heavy Equipment Operations II

5 Credits (3 Lectures, 6 Labs)

**Typically Offered:** Spring

Expanded operation of heavy equipment to include interpreting blueprints, staking and estimating costs, using technology to conduct research and construct more complex projects. *Prerequisites: HEO121 and a valid driver license.*

### HEO127 Heavy Equipment Reconditioning

4 Credits (2 Lectures, 6 Labs)

**Typically Offered:** Fall and Spring

Fundamentals of heavy equipment reconditioning procedures. *Prerequisite: Valid driver license.*

### HEO128 Diesel Equipment Service and Repair

4 Credits (2 Lectures, 6 Labs)

**Typically Offered:** Fall, Spring and Summer

Service and repair of diesel and heavy equipment. *Prerequisite: Current and valid driver license.*

### HEO221 Advanced Heavy Equipment Operations III

5 Credits (3 Lectures, 6 Labs)

**Typically Offered:** Fall

Advanced instruction and application of heavy equipment operation comprehensive skills, knowledge and abilities. *Prerequisites: HEO122 and valid driver license.*

### HEO222 Applied Heavy Equipment Construction

5 Credits (3 Lectures, 6 Labs)

**Typically Offered:** Fall, Spring and Summer

Heavy Equipment Operator capstone construction project and introduction to job seeking techniques. *Prerequisites: HEO122 or instructor consent; current and valid driver license.*

### HEO223 Commercial Driver License Preparation



3 Credits (3 Lectures)

**Typically Offered:** Spring

Preparation for taking the Arizona Department of Motor Vehicle's written examination, the pre-trip vehicle inspection procedures, vehicle maneuvering control skills and on-road driving test. *Prerequisite: HEO121 or DIE110.*

## HISTORY (HIS)



### HIS101 United States History I

3 Credits (3 Lectures)  

**Typically Offered:** Fall, Spring and Summer

A survey of the significant phases of the history of the United States from pre-European contact to the Civil War and Reconstruction, stressing the political, military, social and economic development of the new republic. *Field trips may be required. Prerequisite: RDG094.*

### HIS102 United States History II

3 Credits (3 Lectures)  

**Typically Offered:** Fall, Spring and Summer

A survey of United States history after Reconstruction to the present, emphasizing the origins and development of the problems confronting a great industrialized world power and the issues arising from the two world wars. *Field trips may be required. Prerequisite: RDG094.*

### HIS103 History of Western Civilization I

3 Credits (3 Lectures)  

**Typically Offered:** Fall and Spring

Western world development from its beginnings to the early 18th century, centered on the cultural, scientific, religious and political contributions of the great western civilizations. *Field trips may be required. Prerequisite: RDG094.*

### HIS104 History of Western Civilization II

3 Credits (3 Lectures)  

**Typically Offered:** Fall and Spring

Western world development from early 18th century to modern day, stressing its cultural, intellectual, military and political conflicts and contributions. *Prerequisite: RDG094.*

ICON LEGEND:

AGEC: 

Intensive Writing: *IW*

Reading Required: RDG094: 

SUN Course: 



### HIS105 Arizona History

3 Credits (3 Lectures)

**Typically Offered:** Every other spring; consult CAC Class Schedule.

Survey of Arizona history from the Spanish Exploration period through the Mexican Republic, American territorial status and United States statehood to the present. Includes the evolution of state government and politics and the contributions of the cultural, religious and ethnic groups making up Arizona culture. *Field trips may be required. Prerequisite: RDG094.*

### HIS106 Mexican-American History

3 Credits (3 Lectures)

**Typically Offered:** Fall

Examination of the origins and development of Mexican-American peoples and their contributions to the cultural, social, economic and historical development of the United States. Emphasis on social, economic, and political trends from the Mexican American War to the present. *Prerequisite: RDG094.*

### HIS107 African-American History I

3 Credits (3 Lectures)

**Typically Offered:** Fall

A survey of African-American life and history in the United States from 1619-1865. Emphasizes how enslaved Africans lived, worked, socialized and defined themselves in antebellum America, as they developed and sustained a new cultural community that was an amalgamation of African-American community and familial values and traditions. *Prerequisite: RDG094.*

### HIS108 Eastern Civilization – Beginnings to 1850

3 Credits (3 Lectures)

**Typically Offered:** Fall

An examination of the characteristics and development of civilizations, religions and philosophies of the Far East and Southeast Asia from ancient times to the mid-nineteenth century. *Prerequisite: RDG094.*

### HIS201 Women in United States History

3 Credits (3 Lectures)

**Typically Offered:** Spring and Summer

The history of women in American society from colonial times to the present with an emphasis on female leadership, social movements, race, ethnicity, social class, work, religion and the changing definitions of women's roles. Field trips may be required. *Prerequisite: RDG094.*

### HIS208 Eastern Civilization – 1850 to Modern Times

3 Credits (3 Lectures)

**Typically Offered:** Spring

An examination of the characteristics and development of civilizations, religions and philosophies of the Far East and Southeast Asia from the mid-nineteenth century to modern times. *Prerequisite: RDG094. Corequisite: ENG102 .*

## HONORS (HNR)

### HNR201 Honors Seminar I

1 Credit (1 Recitation)

**Typically Offered:** Fall and Spring

Honors students and faculty work closely together on in-depth projects outside of the regular curriculum. The Honors Project is developed and research is shared through in-depth discussion, analysis and presentation of findings. *Required for Honors students in the 18-hour academic transfer program. Must be taken concurrently with each content course taken for Honors credit. Prerequisites: HNR204, ENG101 and Honors cohort student. Corequisites: HNR205, ENG102 and each content course for Honors credit.*

### HNR202 Honors Seminar II

1 Credit (1 Recitation)

**Typically Offered:** Fall and Spring

Honors students and faculty work closely together on in-depth projects outside of the regular curriculum. The Honors Project is developed and research is shared through in-depth discussion, analysis and presentation of findings. *Required for Honors students in the 18-hour academic transfer program. Must be taken concurrently with each content course taken for Honors credit. Prerequisites: HNR204, ENG101 and Honors cohort student. Corequisites: HNR205, ENG102 and each content course for Honors credit.*

### HNR203 Honors Seminar III

1 Credit (1 Recitation)

**Typically Offered:** Fall and Spring

Honors students and faculty work closely together on in-depth projects outside of the regular curriculum. The Honors Project is developed and research is shared through in-depth discussion, analysis and presentation of findings. *Required for Honors students in the 18-hour academic transfer program. Must be taken concurrently with each content course taken for Honors credit. Prerequisites: HNR204, ENG101 and Honors cohort student. Corequisites: HNR205, ENG102 and each content course for Honors credit.*



### HNR204 Honors Colloquium I

3 Credits (3 Lectures, 3 Recitations) *IWR*

**Typically Offered:** Fall and Spring

The Honors Colloquium is required for Honors students in the 18-hour program. Honors Colloquium I is the first course requirement in the honors sequence designed for the academic transfer student. HNR204 may be taken either Fall or Spring semester, but must be taken independently of other Honors courses. The course provides a forum for reading and analyzing Daniel J. Boorstin's *The Discoverers: A History of Man's Search to Know His World and Himself*, an academic text which examines the significance and chronology of major events and movements in Western civilization, as well as the contributions of certain individuals and societies or groups. Application, analysis and synthesis are encouraged in oral and written responses. In addition, the course offers the opportunity for the Honors student to complete a proposal for an in-depth study/research project in an area of interest, monitored by the colloquium professor and a mentor who has uncommon knowledge or ability in the area of the student's interest. Also, the course provides enrichment activities of cultural significance. *Prerequisite: RDG094. Corequisite: ENG101*

### HNR205 Honors Colloquium II

3 Credits (3 Lectures, 3 Recitations) *IWR*

**Typically Offered:** Fall and Spring

The Honors Colloquium is required for Honors students in the 18-hour program. Honors Colloquium II is the second course requirement in the Honors course sequence designed for the academic transfer student. The course provides a forum for reading and analyzing Daniel J. Boorstin's *The Creators: A History of Heroes of the Imagination*, an academic text which examines human accomplishment in the fields of architecture, music, painting, sculpting and writing. Application, analysis and synthesis are encouraged in oral and written responses. In addition, the course offers the opportunity for the Honors student to complete and present an in-depth study/research project in an area of interest, monitored by the colloquium professor and a mentor who has uncommon knowledge or ability in the area of the student's interest. Also, the course provides enrichment activities of cultural significance. *Prerequisites: HNR204 and RDG094. Corequisite: ENG102*

### HNR255 Leadership Development

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall and Spring

A theoretical and applied study of leadership within the context of service. Approaches the study of the humanities as they relate to leadership theory, ethics and management. *Prerequisite: RDG094.*

## HOSPITALITY MANAGEMENT (HRM)

### HRM100 Introduction to Hospitality

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall, Spring and Summer

An introduction to and career exploration of the hotel, restaurant, recreation, tourism and related industries. *Recommended: RDG094.*

### HRM101 Facilities Management

3 Credits (3 Lectures) *R*

**Typically Offered:** Spring

The principles of property/facilities management with focus on lodging and food service operations. Concepts of the physical plant and engineering systems are introduced. Environment and energy conservation issues are discussed. *Prerequisite: RDG094.*

### HRM102 Management of Guest Services

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall

Front office procedures from the reservations process to check-out, including customer service, account settlement, revenue management, interoffice communication and human resource supervision. *Prerequisite: RDG094.*

### HRM103 Managing Food Service Operations

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall and Spring

The principles of commercial food service operations with a systemic concept to operations approach. *Prerequisite: RDG091.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094: *R*

SUN Course:



## HRM145 Convention and Meeting Management

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, and Summer

This course offers an introduction to organizing special convention and meeting events from concept through completion, including planning, coordination, marketing, financing and risk management. Additionally, this course includes an overview of the critical stages and functions involved in staging and managing special events, including conferences, entertainment, expositions, sporting or specialty events. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: RDG094.*

## HRM252 Managing Hospitality Human Resources

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, and Summer

This course provides an overview of U.S. employment and workplace law requirements, including strategies for hiring and training used in restaurant or lodging operations. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: RDG094.*

## HUMANITIES (HMC)

### HMC200 Comparative Cultures and Society

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

A focused study of a given country and its people, involving a survey of significant cultural and societal aspects of that country. The selected country will vary.

### HMC201 International Travel Experience

3 Credits (3 Internships)

**Typically Offered:** Fall and Spring

This course provides CAC students who receive a CAC International Studies Scholarship to earn credit for international exchanges. During their stay at a foreign university, students tailor their foreign study to their particular major and design a study that focuses on a specific aspect of their major which supports firsthand observation. The independent study specific requirements will be negotiated between the student and the instructor. *Prerequisite: ENG100. Only students selected to receive a CAC International Studies scholarship to study at a foreign college or university for one semester may enroll. The independent study will be directed by a CAC instructor and the course syllabus must meet the approval of the CAC International Studies Program Director.*

### HMC250 Humanities in the Western World I

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

The culture, ideas and values of western civilization with an emphasis on the intellectual and artistic achievements in art, architecture, music, literature and/or philosophy up to 1400. *Prerequisites: RDG094 and ENG100. Recommended: Sophomore status*

### HMC251 Humanities in the Western World II

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

The culture, ideas and values of western civilization with an emphasis on the intellectual and artistic achievements in art, architecture, music, literature and/or philosophy from 1400 to 1800. *Prerequisites: RDG094 and ENG100. Recommended: Sophomore status.*

### HMC252 Humanities in the Western World III

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

The culture, ideas and values of western civilization with an emphasis on the intellectual and artistic achievements in art, architecture, music, literature and/or philosophy from 1800 to the present. *Prerequisites: RDG094 and ENG100. Recommended: Sophomore status.*





**INTERDISCIPLINARY STUDIES (IDS)**

**IDS100 Service Learning I**

3 Credits (2 Lectures, 1 Internship)

**Typically Offered:** Fall and Spring

Participation in service to the community that incorporates academic skills and knowledge to produce meaningful, real-world results. *May be taken two times for credit. Prerequisite: ENG101*

**LITERATURE (LIT)**

**LIT101 Introduction to Literature**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Introduction to fiction, poetry, and drama, including literary analysis of various genres, literary devices and production and reception of literature by various audiences. *Prerequisite: RDG094.*

**LIT201 American Literature I**

3 Credits (3 Lectures)

**Typically Offered:** Fall

Students will be introduced to and analyze the chief literary works produced in America from the colonial period through the Civil War. *Prerequisite: RDG094. Corequisite: ENG102.*

**LIT202 American Literature II**

3 Credits (3 Lectures)

**Typically Offered:** Spring

Survey of a diverse range of American literary works from the Civil War to modern times, emphasizing literary history, criticism and socio-cultural and historical contexts. *Prerequisite: ENG101. Corequisite: ENG102.*

**LIT203 English Literature I**

3 Credits (3 Lectures)

**Typically Offered:** Fall

Major English literary works from Old English to 1800. *Prerequisite: ENG101. Corequisite: ENG102.*

**LIT204 English Literature II**

3 Credits (3 Lectures)

**Typically Offered:** Spring

The chief English literary works from the Romantic period to the Modern period. *Prerequisite: ENG101. Corequisite: ENG102.*

**LIT206 World Literatures**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Introduction to literary works from diverse global cultures, focusing on illuminating both the universality and diversity of human experience. *Prerequisite: RDG094.*

**LIT232 African American Literature**

3 Credits (3 Lectures)

**Typically Offered:** Fall

Exploration of major literary works written by African Americans beginning with the 1700s through the present, including textual analysis, socio-cultural, political and/or historical context. *Prerequisite: ENG101. Corequisite: ENG102.*

**LIT233 American Ethnic Literature**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

Exploration of identity through a survey of American ethnic writers. Focus on textual analysis, socio-cultural, political and/or historical context. *Prerequisite: ENG101. Corequisite: ENG102.*

**LIT234 U.S. Latino/a Literature and Culture**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

United States Latino/a authored literature from the sixteenth century to the present day, including fiction, poetry, essays, drama and memoirs. *Prerequisites: RDG094; ENG100 or test into ENG101.*

**ICON LEGEND:**      **AGEC:**      **Intensive Writing:**      **Reading Required: RDG094:**      **SUN Course:**

**LIT254A Literature and Film**

3 Credits (3 Lectures) *IW*

**Typically Offered:** Fall

Narrative mediums of literature and film through the study of select literary works and their film adaptations. Examines film as both an interpretation of literature and as the unique product of artistic, historical and sociocultural forces. *Prerequisite: ENG102.*

**LIT254B Literature and Film**

3 Credits (3 Lectures)

**Typically Offered:** Spring

Narrative mediums of literature and film through the study of select literary works and their film adaptations. Examines film as both an interpretation of literature and as the unique product of artistic, historical and sociocultural forces. To receive credit for this course, the topic must vary significantly from LIT254A. *Prerequisites: LIT254A and instructor or Division Chair consent.*

**LIT255 The Horror Novel**

3 Credits (3 Lectures)

**Typically Offered:** Fall

A survey of the horror novel as a narrative medium for historical, sociological and cultural commentary from the genre's early influences to the modern era. *Prerequisite: ENG101. Corequisite: ENG102.*

**LIT256 Science Fiction Literature and Film**

3 Credits (3 Lectures) *IW*

**Typically Offered:** Spring

A survey of science fiction literature and film as a narrative medium for historical, sociological and cultural commentary from the genre's early influences to the modern era. *Prerequisite: ENG101. Corequisite: ENG102.*

**LIT266 Cultural Narratives in Comics and Graphic Novels**

3 Credits (3 Lectures)

**Typically Offered:** Spring

A survey of comics, comic books, and/or graphic novels as a narrative medium for historical, sociological and cultural commentary from the genre's early influences to the modern era. *Prerequisite: ENG102 or instructor consent.*

**LIT267 Introduction to Shakespeare**

3 Credits (3 Lectures)

**Typically Offered:** Fall

An introduction to Shakespeare's plays, sonnets and the Elizabethan period. *Prerequisite: ENG102 or instructor consent.*

**LIT278 Native American Literatures**

3 Credits (3 Lectures) *R*

**Typically Offered:** Consult CAC Class Schedule.

An introduction to literature written by and about Native peoples of the Americas, including myths, legends, the oral tradition, fiction, memoir, drama and poetry. *Prerequisites: RDG094 and (ENG100 with grade of "C" or better or test into ENG101).*

**LIT291 Children's Literature for Educators**

3 Credits (3 Lectures) *IW*

**Typically Offered:** Fall and Spring

A survey and analysis of classic and contemporary children's literature and an examination of criteria for selecting children's books in educational contexts. *Prerequisite: ENG101. Corequisite: ENG102.*

**MANUFACTURING ENGINEERING TECHNOLOGY (MET)****MET110 Introduction to Quality Assurance**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

An introduction to quality assurance, quality improvement and quality improvement tools including: Statistical Process Control (SPC) software and hardware applications. Related topics include: International Standards Organization Quality Standards (ISO 9000) and Theory of Constraints (TOC). Writing technical papers with an oral presentation is included.

**MET125 Principles of Fabrication**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Principles and applications of common metal removal processes and sheet metal fabrication including drilling, turning, milling, shearing, and bending. *Recommended: Experience using hand tools.*



### **MET127 Manufacturing Process and Materials**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Production processes, materials, techniques, systems and applications used in industry. Resources and systems of production management from manual, mechanized, automated and integrated stages are presented.

### **MET132 Fluid Power Hydraulics - Pneumatics**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Fluid theory, production, consumption, control and application of the transmission of energy through hydraulic and pneumatic components, including valves, actuators, pumps and circuits.

*Prerequisite: MAT092.*

### **MET150 VB.NET for Engineering**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Object Oriented Programming techniques in Visual Basic (VB.NET) used to control external peripherals such as motors, lights and electromechanical equipment through the Universal Serial Bus (USB) port, including flowcharting, pseudocoding, coding, testing and documenting programs in accordance with specifications. *Recommended: Computer programming experience.*

### **MET221 Electro-Mechanical Technology**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Mechanical concepts and basic electro-mechanical systems, including electronic circuits incorporating electro-mechanical and electro-optical transducers and auxiliary devices.

*Prerequisites: ELC122 and MAT092.*

### **MET226 Electro-Mechanical Systems**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Diagnostics, troubleshooting, design, maintenance, schematic reading and preventive maintenance of electric, hydraulic, pneumatic and vacuum systems of industrial machines.

*Prerequisites: ELC220 and MET221.*

### **MET230 Semiconductor I Seminar**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Semi-conductor Manufacturing Technician Fabrication Cleanroom employment seminar. *Corequisite: CHM130 or higher.*

### **MET232 Solids Modeling – SolidWorks**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

CAD modeling, solid part generation, assembly of parts and working drawing creation. Applications of CAD/CAM in Computer Integrated Manufacturing.

### **MET261 LabVIEW I Programming**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

LabVIEW I focuses on using LabVIEW programming concepts, techniques, features, VIs and functions to create test and measurement analysis and report generation applications.

### **MET262 LabVIEW 2 Programming**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

LabVIEW 2 focuses on programming concepts, techniques, features, VIs and functions used to create tests and measurements, data acquisition, instrument control, data logging, measurement analysis and report generation applications. *Prerequisite: MET261.*

### **MET263 LabVIEW 3 Programming**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Develop professional user interfaces, applications and document VIs effectively using LabVIEW software. Use the four fundamental areas of LabView software development, specifically design, implement, test and deploy. *Prerequisite: MET262.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **MET264 LabVIEW FPGA Applications**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Learn LabVIEW field-programmable gate array (FPGA) applications to extend LabVIEW to other user interfaces. Emphasis on design and compiling processes. *Prerequisite: MET263.*

## **MET265 LabVIEW Overview**

4 Credits (2 Lectures, 6 Labs)

**Typically Offered:** Fall, Spring and Summer

The LabVIEW Overview prepares students for the Certified LabVIEW Associate Developer (CLAD) Certification Exam by reviewing key skills, knowledge and abilities embedded in the LabVIEW course series. *Prerequisite: MET264.*

## **MET290 Material, Safety and Equipment Overview for Nanotechnology**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

An overview of the materials, safety and equipment issues encountered in the practice of "top down" and "bottom up" nanofabrication. The course focuses on safety, environmental and health issues related to equipment operation and materials handling as well as cleanroom protocol. *Prerequisites: CHM130 and MAT151.*

## **MET291 Basic Nanotechnology Processes**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

A hands-on introduction to the processing involved in "top down," "bottom up" and hybrid nanofabrication. The course details a step-by-step description of the equipment, facilities processes and process flow needed to fabricate devices and structures. *Prerequisite: MET290.*

## **MET292 Materials in Nanotechnology**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

An in-depth, hands-on exploration of nanofabrication materials including chemical bonding, crystal structure and identification and prevention of defects. The relationship between material structure, properties and processing is emphasized. *Prerequisite: MET291.*

## **MET293 Patterning for Nanotechnology**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Hands-on treatment of all aspects of advanced pattern transfer and pattern transfer equipment, including probe techniques, stamping and embossing, electron beam and optical contact and stepper systems. *Prerequisite: MET292.*

## **MET294 Materials Modification in Nanotechnology**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Examine the contribution of nanomaterials to a wide range of industries. Specific material properties and processes will be examined for their contribution to the field of composites, biotechnology and energy applications. *Prerequisite: MET293.*

## **MET295 Characterization, Testing of Nanotechnology Structures and Materials**


3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Examine a variety of techniques and measurements essential for testing and controlling material fabrication and final device performance. Characterization includes optical, physical and electrical approaches. *Prerequisite: MET294.*

## **MASS COMMUNICATIONS (MSC)**

### **MSC101 Media and Society**

3 Credits (3 Lectures)  

**Typically Offered:** Fall and Spring

An introduction to mass communications and the importance media play in shaping the societal and cultural experiences of humans. Demonstrates how communication changes with technology, from the printing press to electronic books. *Prerequisite: RDG094.*

### **MSC102 Writing for the Print Media I**

3 Credits (3 Lectures)   *JRN 2201* 

**Typically Offered:** Fall and Spring

Beginning reporting with practice in organizing and writing basic news stories, culminating in producing stories for the college newspaper. *Prerequisite: RDG094.*





**MSC107 Basic Script Writing**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Script theory and application in preparing a final, full-length script, emphasizing techniques for visual and oral media production. *Prerequisites: ENG102 and MSC101.*

**MSC109 TV/Video Production**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Review of basic video and television broadcasting equipment. *Prerequisite: Enrollment in a CAC course with an MSC prefix or instructor consent.*

**MSC110 Publications**

3 Credits (2 Lectures, 3 Labs) *R*

**Typically Offered:** Fall and Spring

Preparing copy and photographs for campus publications. *May be taken four times for credit. Prerequisite: RDG094.*

**MSC120 Graphic Design and Adobe InDesign**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Aesthetics and composition for graphic design. Use Adobe InDesign software and design guidelines to create ten design projects: logos, business cards, greeting cards, postcards, CD covers, brochures, posters, advertisements, newsletters and magazines. Each student will end the course with a complete electronic portfolio.

**MSC122 Introduction to Web Design**

3 Credits (2 Lectures, 3 Labs) *R*

**Typically Offered:** Fall and Spring

Create professional quality web designs with Adobe Dreamweaver or comparable software and other tools. *Prerequisite: RDG094.*

**MSC125 Introduction to Illustrator**

3 Credits (2 Lectures, 3 Labs) *R*

**Typically Offered:** Fall and Spring

An introduction to the use of Adobe Illustrator design tool and placing of illustration in a web or print design. *Prerequisite: RDG094.*

**MSC130 Digital Photography and Photoshop**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Multiple elements of digital cameras and the software program Adobe Photoshop. Learn new computer skills, how to use a digital camera, the aesthetic principles of photo composition, and the fundamentals of manipulating photos by computer.

**MSC150 History of Still Photography**

3 Credits (3 Lectures) *R*

**Typically Offered:** Spring

A survey of the prominent figures and movements in photography as well as advancements in photographic technology and processes from 1827 to present. *Prerequisites: ENG100 and RDG094.*

**MSC180 Basic Photojournalism**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

An introduction to visual storytelling, emphasizing composition, lighting, photo editing skills and legal and ethical issues. Fully adjustable Digital Single Lens Reflex (DSLR) camera required. *Prerequisite: MSC130.*

**MSC202 Writing for the Print Media II**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Advanced reporting of feature stories, interviews, reviews, columns and editorials. *Prerequisite: MSC102.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094: *R*

SUN Course:



## MSC205 Portfolio Preparation

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall

Use digital photography and graphic design to prepare a professional portfolio of original artwork for use in job interviews and applications to upper division university coursework. Topics include using professional tools and techniques to develop an artistic theme, incorporating the rules of design and composition, developing and implementing selection criteria, identifying and implementing refinements to selected digital images, original artwork and design work.

*Satisfactory/Unsatisfactory grading option is available.*

*Prerequisite: ART101*

## MSC220 Advanced Graphic Design

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Advanced Graphic Design expands experience with computer software, presents more complex design guidelines and type face rules and offers complex design assignments. Students will pursue more individualized advanced projects.

*Prerequisite: MSC120.*

## MSC230 Advanced Digital Photography and Adobe Photoshop

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Advanced Digital Photography expands experience with computer software, presents more complex photographic instruction and offers complex assignments. Students will pursue individualized projects. *Prerequisite: MSC130.*

## MSC240 Mass Media and the Public Mind

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Examine the influence of mass media images on the public mind, including analysis and interpretation of content from technical, ethical, historical, psychological and cultural perspectives. Analyze news, advertising and entertainment media content for messages on values, choices and perceptions presented through photography, cinema, TV and the Internet.

*Prerequisites: ENG101 and MSC101.*

## MATHEMATICS (MAT)

### MAT082 Basic Arithmetic

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Development of arithmetic skills as a foundation for other mathematics courses, stressing number awareness and arithmetic processes.

### MAT086 Pre-Algebra

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

A review of the fundamental concepts of algebra. This course provides a strong base for success in future algebra courses.

*Prerequisite: MAT082. Recommended: RDG091.*

### MAT090 Math Help 911

1 Credit (1 Lecture)

**Typically Offered:** Fall and Spring

Instructional assistance to strengthen students' math concepts and study skills for their 082, 086 or 092 math course(s). *May be taken six (6) times for credit. Note: Students typically take two 8-week sessions per semester.*

### MAT092 Introductory Algebra

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

A review of the basic skills of arithmetic and algebra, with the emphasis on developing sound algebraic and problem solving skills. *Prerequisite: MAT086. Recommended: RDG091.*

### MAT099 Math Help 411

1 Credit (1 Lecture)

**Typically Offered:** Fall and Spring

This course offers customized practice of math concepts and study skills to support current and future math courses; complements MAT121, 141, and/or 151. Skills that are reviewed in this course include, but are not limited to, general note taking, math skills that include processes for solving multi-step problems, solving equations, decoding, modeling and solving word problems and proficiency with mathematical logic. *This course may be repeated more than five times. For elective credit only. Prerequisite: MAT092.*



### **MAT101 Essential Mathematics**

4 Credits (4 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

A review of the basic skills of mathematics with emphasis on developing sound mathematical skills in arithmetic, algebra, geometry and problem-solving. *Prerequisites: MAT092 and RDG091.*

### **MAT111 Math for Electricians**

2 Credits (1.5 Lectures, 2 Labs)

**Typically Offered:** Fall, Spring and Summer

Introduction to math principles for electricians including basic arithmetic, algebra and fundamental trigonometry with an emphasis on real world scenarios and problem solving skills. Apply key mathematical concepts while developing an awareness of basic electrical terms and practices. *Prerequisites: ELC126; ELC202; Alternative Energy/Electrical cohort member.*

### **MAT121 Intermediate Algebra, Standard**

4 Credits (4 Lectures)

**Typically Offered:** Fall, Spring and Summer

Operations/properties of real numbers, exponents and complex numbers; factoring, solution/application of linear and quadratic equations; operations on rational and radical expressions. *Prerequisite: MAT092. Recommended: RDG091.*

### **MAT122 Intermediate Algebra, Accelerated**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Operations/properties of real numbers, exponents and complex numbers; factoring, solution/application of linear and quadratic equations; operations on rational and radical expressions. *Prerequisite: MAT092. Recommended: RDG091.*




### **MAT141 College Mathematics, Standard**

4 Credits (4 Lectures)  

**Typically Offered:** Fall, Spring and Summer

General mathematics including personal finance, set theory, linear programming, exponential growth and decay, probability and statistics. *Prerequisites: RDG094; MAT121 or higher.*

### **MAT151 College Algebra, Standard**

4 Credits (4 Lectures)   

**Typically Offered:** Fall, Spring and Summer

Accelerated algebra that includes the topics: equations, functions, transformations, linear and quadratic functions and inequalities, systems of linear equations and inequalities, exponential and logarithmic functions, polynomials, rational functions, sequences and series. *Prerequisites: MAT121 and RDG094.*

### **MAT162 Applied Statistics**

3 Credits (3 Lectures)  

**Typically Offered:** Fall and Spring

Graphical and quantitative description of data; binomial, normal and t distributions; one and two sample hypothesis tests and confidence intervals; simple linear regression and correlation. *Prerequisites: RDG094; MAT121 or higher.*




### **MAT182 Trigonometry with Algebra Review**

4 Credits (4 Lectures)  

**Typically Offered:** Fall, Spring and Summer

A comprehensive coverage of trigonometry and selected topics from college algebra, including measurements of angles, trigonometric functions and inverse trigonometric functions, trigonometric equations and identities, graphing of trigonometric functions, solutions of triangles, applications, complex numbers, polar coordinates, DeMoivre's theorem, logarithms, exponential functions, partial fraction decomposition, conic sections, sequences and series. *Prerequisites: RDG094 and MAT151.*

### **MAT187 Pre-Calculus**

5 Credits (5 Lectures)   

**Typically Offered:** Fall and Spring

Pre-Calculus topics include: angles and their measures, properties and graphs of trigonometric functions, trigonometric equations and identities, solutions of triangles, applications, polar coordinates, quadratic equations, logarithmic and exponential functions, systems of equations, partial fractions, conic sections, sequences and series. *Prerequisites: RDG094, MAT121 with a grade of "B" or higher.*

ICON LEGEND:

AGEC: 

Intensive Writing: *IW*

Reading Required: RDG094: 

SUN Course: 

**MAT201 Math for Elementary Teachers I**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Numbers and operations, including algebraic reasoning and problem solving. *Prerequisite: MAT141 or MAT151.*

**MAT202 Math for Elementary Teachers II**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Measurement, geometry, probability, and data analysis using appropriate technologies; problem solving, reasoning, and proofs are integrated throughout the course. *Prerequisite: MAT141 or MAT151.*

**MAT211 Brief Calculus, Standard**

4 Credits (4 Lectures)

**Typically Offered:** Fall and Spring

Foundations of differential and integral calculus, including applications to business and economics. *Not open to students with credit in MAT221 or MAT231. Prerequisite: MAT151.*

**MAT212 Brief Calculus, Accelerated**

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

Foundations of differential and integral calculus including applications to business and economics. *Not open to students with credit in MAT221 or MAT231. Prerequisite: MAT151.*

**MAT215 Math for Business Analysis**

4 Credits (4 Lectures)

**Typically Offered:** Fall and Spring

A study of mathematics focused on solving business-related problems by applying the concepts of linear programming, optimization, statistics, probability and multivariable calculus. *Prerequisite: MAT211 or MAT212.*

**MAT221 Analytical Geometry and Calculus I**

4 Credits (4 Lectures)

**Typically Offered:** Fall, Spring and Summer

An introduction to analytic geometry, limits, continuity, differential and integral calculus of single variable functions and related applications. *Prerequisites: MAT187 or (MAT151 and MAT182).*

**MAT231 Analytical Geometry and Calculus II**

4 Credits (4 Lectures)

**Typically Offered:** Fall and Spring

Techniques of integration for both proper and improper integrals with applications of physics and social science, elements of analytic geometry and the analysis sequences and series. *Prerequisites: MAT221.*

**MAT241 Analytical Geometry and Calculus III**

4 Credits (4 Lectures)

**Typically Offered:** Fall

Multivariable calculus including vectors, vector-valued functions, partial differentiation, multiple integration and an introduction to vector fields. *Prerequisite: MAT231.*

**MAT262 Ordinary Differential Equations**

3 Credits (3 Lectures)

**Typically Offered:** Spring

An introduction to first and higher order ordinary differential equations with applications. *Prerequisite: MAT231.*

**MAT275 Modern Differential Equations**

4 Credits (4 Lectures)

**Typically Offered:** Spring

Designed for engineering students this introduction to first and higher order ordinary differential equations with applications focuses on problem solving using MATLAB. *Students may not receive credit for both MAT262 and MAT275. Prerequisite: MAT231.*

**MUSIC HISTORY AND LITERATURE (MHL)****MHL100 Music Appreciation**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Music history and literature with emphasis on listening to and evaluating all types of music, noting the influence of the major composers and the media through which music is produced. Attendance at live musical events in a variety of venues will be encouraged. *Prerequisite: RDG094.*





**MHL207 Survey of Jazz/Popular Music**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Survey of popular music, noting unique musical styles of the associated composers and performers. Impact of popular music on social and historic events of the past century. *Prerequisite: RDG094.*

**MHL209 Visual Art, Music and Learning**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

An introduction to the effects of the arts on learning, student learning styles, visual culture and visual arts, and music theory and culture. *Prerequisite: RDG094. Cross Listed: ART209.*

**MUSIC PERFORMANCE (MUP)**

**MUP104 Concert Choir**

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

Concert Choir, a major performance ensemble, is dedicated to the performance of varied choral literature from all historical periods, styles and ethnic origins which perform for community concerts, graduations and at least one major CAC concert each semester. *May be taken more than four times for credit. Prerequisite: Ability to match pitch.*

**MUP105 Voice Class**

2 Credits (2 Recitations)

**Typically Offered:** Fall and Spring

An introduction to the basics of proper vocal technique, including breath management, tone production, tone quality, resonance, vocal physiology, vocal registration, vocal health and management, and how to practice. These principles will be practiced by singing in class, both in group and solo situations. *May be taken two times for credit.*

**MUP107 Band**

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

A performing organization open to Central Arizona College students and Pinal County residents. The ensemble performs a wide range of standard concert band literature as well as lighter works. Experience is gained by performing concerts on campus. *May be taken four times for credit. Prerequisite: Instructor consent.*

**MUP109B Private Instruction: Brass**

1 Credit (1 Recitation)

**Typically Offered:** Fall and Spring

Private instruction on a brass instrument that concentrates on proper tone production, articulation, technique and performance of a variety of repertoire. *May be taken four times for credit. Prerequisite: Instructor consent. Recommended: MUP107 and/or MUP112.*

**MUP109D Private Instruction: Percussion**

1 Credit (1 Recitation)

**Typically Offered:** Fall and Spring

Private instruction on percussion instruments that concentrates on appropriate mallet selection, tone production, technique and performance of a varied repertoire. *May be taken four times for credit. Prerequisite: Instructor consent. Recommended: MUP107 and/or MUP112.*

**MUP109G Private Instruction: Guitar/Bass Guitar**

1 Credit (1 Recitation)

**Typically Offered:** Fall and Spring

Private instruction on guitar/bass guitar that concentrates on learning to play and read music, chords and a varied repertoire. Student must supply instrument and perform in a public recital. *May be taken four times for credit.*

**MUP109P Private Instruction: Piano Keyboard**

1 Credit (1 Recitation)

**Typically Offered:** Fall and Spring

Performance of piano keyboard repertoire, technical skills, and keyboard theory including scales, progressions, transposition, improvisation and harmonization commensurate with student's level of achievement. *May be taken four times for credit.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **MUP109V Private Instruction: Voice**

1 Credit (1 Recitation)

**Typically Offered:** Fall and Spring

An opportunity for creative self-expression and for the creativity of other human efforts as reflected through art songs and other music studied. Private instruction on consonants and vowels, correct posture, diaphragmatic breathing and music theory skills to produce proper vocal production in the performance of a variety of styles and vocal repertoire. *May be taken more than four times for credit. Prerequisite: MUP105.*

## **MUP109W Private Instruction: Woodwind**

1 Credit (1 Recitation)

**Typically Offered:** Fall and Spring

Private instruction on a woodwind instrument that concentrates on proper tone production, articulation, technique and performance of a varied repertoire. *May be taken four times for credit. Prerequisite: Instructor consent. Recommended: MUP107 and/or MUP112.*

## **MUP110 Piano Class**

2 Credits (.5 Lecture, 2 Labs, 1 Recitation)

**Typically Offered:** Fall and Spring

Class instruction of piano keyboard repertoire, technical skills and keyboard theory commensurate with student's level of achievement. *May be taken four times for credit.*

## **MUP112 Jazz Ensemble**

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

A performing organization open to Central Arizona College students. The jazz styles of swing, rock and Latin are studied and performed. An emphasis is placed on learning and developing improvisational skills. Experience is gained by performing for the college, schools and community. *May be taken four times for credit. Prerequisite: Instructor consent.*

## **MUP116 Introduction to Handbells**

1 Credit (1 Lecture)

**Typically Offered:** Fall and Spring

An introduction to concepts and technical skills required to ring handbells. Topics include basics of reading music, handbell history, ringing stop techniques and rhythms.

## **MUP117 Jazz Choir**

2 Credits (6 Labs)

**Typically Offered:** Fall and Spring

Jazz Choir, a major performance ensemble, is an auditioned group of musicians who perform vocal jazz literature for CAC and community organizations. The concerts are varied and represent a broad perspective of the American vocal jazz genre. Singers represent the college as performers in public functions throughout Arizona and at vocal jazz festivals throughout the United States, in addition to an annual spring recruitment tour. *May be taken more than four times for credit. Corequisite: MUP104.*

## **MUP118 Bell Choir Ringers**

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

An ensemble designed for the intermediate to advanced musician seeking to learn new instruments and to study great music specifically composed and arranged for handbells. Repertoire performed at public functions as well as college concerts. *May be taken four times for credit. Prerequisite: Instructor consent.*

## **MUSIC THEORY AND COMPOSITION (MTC)**

### **MTC100 Music Fundamentals**

3 Credits (3 Lectures)

**Typically Offered:** Fall

Music fundamentals, including melody, harmony and rhythm, and development of basic music skills, including accurate performance, development of music literacy and acquisition of basic musical understanding, basic theory and structure of music. *Corequisite: MTC101.*

### **MTC101 Aural Fundamentals**

.5 Credit (2 Labs)

**Typically Offered:** Fall

An introduction to the fundamentals of tonal aural problems and rhythms taught through sight singing and ear training. *Corequisite: MTC100.*



### MTC102 Theory of Music I

3 Credits (3 Lectures)

**Typically Offered:** Spring

Concepts of music theory taught through ear training and written work to include structure of tonality through Roman numeral analysis. *Prerequisite: MTC100. Corequisite: MTC103. Recommended: MUP109P or MUP110.*

### MTC103 Aural Skills I

.5 Credit (2 Labs)

**Typically Offered:** Spring

A study of tonal aural problems and rhythms taught through sight singing and ear training. This is a continuation of Aural Fundamentals. *Prerequisite: MTC101. Corequisite: MTC102.*

### MTC204 Theory of Music II

3 Credits (3 Lectures)

**Typically Offered:** Spring

Concepts of music theory taught through ear training and written work to include non-dominant seven chords and to conclude with ninth, eleventh and thirteenth chords. *Prerequisite: MTC102. Corequisite: MTC205. Recommended: MUP109P or MUP110.*

### MTC205 Aural Skills II

.5 Credit (2 Labs)

**Typically Offered:** Fall and Spring

An advanced study of tonal and aural problems and rhythms taught through sightsinging and ear training. This is a continuation of Aural Skills I. *Prerequisite: MTC103. Corequisite: MTC204.*

## NURSING (NUR)

### NUR121 Introduction to Nursing Transitions

8 Credits (4 Lectures, 12 Labs)

**Typically Offered:** Fall and Spring

Within the framework of transitions theory, the focus is on individuals and families in defined practice settings. Included is the situational transition of the individual to the nursing student role, and the patient's admission to and movement within the healthcare system as it relates to health-illness and developmental transitions. This course provides the opportunity for the practice of nursing in real and simulated structured situations. *Prerequisites: Nursing cohort student; BIO201; BIO202; eligible for ENG101 and MAT121; C.N.A. or L.P.N. licensure from the Arizona State Board of Nursing. Corequisite: NUR126.*

### NUR122 Nursing in Health Illness Transitions

8 Credits (4 Lectures, 12 Labs)

**Typically Offered:** Fall and Spring

Focus on individuals and families with commonly occurring health concerns as they transition across the lifespan. Identification and application of nursing therapeutics in defined practice settings to assist patients making health-illness and situational transitions. *Prerequisites: ENG101, NUR121, NUR126, PSY101.*

### NUR126 Principles of Pharmacology and Drug Dosages

2 Credits (2 Lectures)

**Typically Offered:** Fall and Spring

Introduction to the principles of pharmacology as applied to health-related disciplines with a nursing focus. Discussion of pharmacological principles, lifespan considerations, legal, ethical and cultural considerations. Introduction to patient education and drug therapy, including over-the-counter and herbal remedies. Medication administration concepts and intensive study and practice in calculating dosages and concentrations of solutions used in health occupations. *Prerequisites: Nursing cohort student; BIO201; BIO202; eligible for ENG101 and MAT121; C.N.A. or L.P.N. licensure from the Arizona State Board of Nursing. Corequisite: NUR121.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **NUR145 Pharmacology**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Introduction and foundational study of drugs and therapeutic substances applied to nursing. Includes classifications, prototypes, therapeutic actions, side effects, interactions and ethical-legal aspects of drug therapy. Medication administration concepts and dosage calculations are included. *Prerequisites: NUR121, NUR126.*

## **NUR150 Nursing Professional Transitions**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

This optional course provides leadership, professional development and specialized course content to prepare first year nursing students to transition into the LPN role. Upon the successful completion of this course, the first year nursing student is eligible to take the NCLEX-PN exam. *Prerequisites: Admitted Nursing Cohort student; NUR121, NUR122, NUR126 and NUR145.*

## **NUR221 Nursing in Developmental Transitions**

8 Credits (4 Lectures, 12 Labs)

**Typically Offered:** Fall and Spring

Nursing care of the patient across developmental stages in the lifespan. Gordon's functional health patterns and Meleis transitions theory are used as the framework to examine healthy and unhealthy transitions and nursing therapeutics, which promote healthy developmental transitions. *Prerequisites: ENG102, NUR122, NUR145 and PSY203.*

## **NUR222 Nursing in Organizational Transitions**

8 Credits (4 Lectures, 12 Labs)

**Typically Offered:** Fall and Spring

Focus on the patient with complex health problems and their family/caregiver(s) and perform higher-level nursing skills. Application of evidence-based clinical practice and Meleis transitions theory within organizational settings. *Prerequisites: BIO205, NTR200, NUR221 and SOC100. Corequisites: (MAT121 or higher), Humanities (3) and PAC or DAN course (1 credit).*

## **NUTRITION/DIETETICS (NTR)**

### **NTR100 Contemporary Issues**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

The identification and application of current nutrition information and its impact on health and wellness. *May be taken four times for credit.*

### **NTR104 Nutrition**

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall, Spring and Summer

An introductory study of the optimal diet for health and fitness, principles of basic nutrition and nutritional needs throughout the life cycle. *Prerequisite: RDG094.*

### **NTR104L Personal Wellness Lab**

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

A scientific investigation into one's own personal health and wellness status

### **NTR105 ServSafe Certification**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Applied course in food safety and sanitation to identify and analyze the factors which cause foodborne illnesses through the study of proper purchasing, preparation, handling and storage.

### **NTR123 Nutrition Throughout the Life Cycle**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Examines the role of nutrition during every stage of life; common problems and concerns and nutritional adequacy with an emphasis on birth through age eighteen. *Prerequisite: NTR104 or NTR141 or NTR200.*






### **NTR127 Breastfeeding and Human Lactation**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

An introduction to breastfeeding principles for the healthcare professional including the decision to breastfeed, basic anatomy and physiology of milk production and consumption, normal breastfeeding, feeding behaviors, growth patterns, nutritional needs and breastfeeding concerns.

### **NTR129 Introduction to Healthcare for Nutrition Professionals**

3 Credits (3 Lectures) 

**Typically Offered:** Fall, Spring and Summer

Fundamentals common to all healthcare occupations with an emphasis on nutrition. *Prerequisite: RDG094.*

### **NTR130 Diabetes Overview**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

An introduction to diabetes, risk factors for developing diabetes, detection methods and management techniques.

### **NTR131 Introduction to Diabetes**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

An introduction to diabetes, types of diabetes tools for management, complications, recommended therapies and lifestyle modifications.

### **NTR134 Healthy Weight for Kids**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Overviews the challenges and strategies that can help children achieve and maintain a healthy weight as a means to reduce the incidence of chronic health conditions, including diabetes, heart disease and others.

### **NTR135 Healthy Weight for Adults**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

An overview of the behavior management and treatment strategies that can help adults achieve and maintain a healthy weight as a means to reduce the incidence of chronic health conditions, including diabetes, heart disease and others.

### **NTR136 Management of Gestational Diabetes**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

An overview of gestational diabetes; management techniques, potential complications, nutritional management and strategies for monitoring.

### **NTR137 Carbohydrate Counting**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

A-Z guide to carbohydrate counting for people with diabetes. Addresses the basic concepts as well as more advanced issues related to tight blood glucose control.


### **NTR141 Nutrition and Wellness**

4 Credits (3 Lectures, 3 Labs)  

**Typically Offered:** Fall, Spring and Summer

Concepts, procedures and techniques to achieve the optimal diet for health and fitness, principles of basic nutrition, nutritional needs throughout the life cycle and a scientific investigation into one's own personal health and wellness status. *Prerequisite: RDG094.*

### **NTR142 Applied Food Science**

3 Credits (3 Lectures) 

**Typically Offered:** Fall, Spring and Summer

Applied scientific principles of food preparation and production. Students must purchase ingredients for assignments. *Prerequisite: RDG094.*

ICON LEGEND:

AGEC: 

Intensive Writing: *IW*

Reading Required: RDG094: 

SUN Course: 



## **NTR150 Overview of Nutrition Professions**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Overview of the career opportunities in the fields of nutrition, dietetics, foodservice management, wellness and nutrition communication.

## **NTR156 Foundations of Dietary Manager Internship**

2 Credits (2 Lectures)

**Typically Offered:** Fall and Spring

Identify rotation facilities and Registered Dietitian preceptor to successfully complete a dietary manager's internship. The course emphasizes the legal and ethical aspects specific to internships for nutrition professionals. *Satisfactory/Unsatisfactory grading option is available. Corequisites: NTR104 and CUL105.*

## **NTR157 Foundations of Dietetic Technician Internship**

2 Credits (2 Lectures)

**Typically Offered:** Fall and Spring

Identify rotation facilities and Registered Dietitian preceptor required to successfully complete a dietetic technician internship. The course emphasizes the legal and ethical aspects specific to dietetic technicians. *Satisfactory/Unsatisfactory grading option is available. Students must receive a grade of "A" to proceed to NTR296. Prerequisites: Complete all Dietetic Technician A.A.S. degree general education requirements and instructor consent.*

## **NTR191 Nutrition Counseling Skill Development**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Comprehensive skill development of step-by-step nutrition counseling. *Prerequisites: NTR141 or (NTR104 and NTR104L) or NTR200.*

## **NTR196 Dietary Manager Internship**

3 Credits (3 Internships – 150 Hours)

**Typically Offered:** Fall, Spring and Summer

Supervised application of food production, food service management and nutritional care principles in clinical and community environments. *Prerequisites: NTR156, NTR223 and NTR240.*

## **NTR200 Human Nutrition**

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall, Spring and Summer

The scientific principles of human nutrition emphasize nutrient metabolism, the relationships between diet and disease, and the importance of nutrition in health promotion and disease prevention. *Prerequisite: RDG094.*

## **NTR201 Nutrition Literacy**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Develop the skills and knowledge to assess Nutrition Literacy; defined as the ability to access, explain and use health-related information and services to make sound, thoughtful health decisions and to tailor counseling and education materials to maximize client understanding. *Prerequisites: NTR141 or (NTR104 and NTR104L) or NTR200.*

## **NTR222 Nutrition Assessment**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

The anthropometric, biochemical, clinical, dietary and behavioral evaluation and assessment of nutritional status throughout the life cycle. *Prerequisites: NTR123, NTR129 and (CHM130 or CHM138 or higher CHM course).*

## **NTR223 Food Service Management**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Current management theories related to institutional food service emphasizing quality improvement and evaluation of service, meal planning, recipe development, safe and sanitary food procurement and production methods, facility layout and design, staffing, marketing and financial management. *Prerequisite: CUL105 OR NTR105.*

## **NTR232A Food and Culture**

1 Credit (1 Lecture) *R*

**Typically Offered:** Fall, Spring and Summer

Customs and cultures as they relate to food as well as to knowledge, attitudes and behaviors in promoting wellness. *Prerequisite: RDG094.*



### **NTR240 Clinical Nutrition**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

In-depth study of the role of nutrition in the prevention and treatment of diseases. *Prerequisites: NTR141 or NTR104 or NTR200.*

### **NTR247 Weight Management Theory**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Comprehensive analysis of physiological, psychological and environmental influences on body weight. Researching various weight management theories, discerning between behavioral and non-behavioral methods. Assessing appropriate weight management strategies. *Prerequisites: NTR141 or (NTR104 and NTR104L) or NTR200.*

### **NTR272 Certified Breastfeeding Counselor**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Provides the necessary skills to educate and support the breastfeeding mother with greater details about breastfeeding issues and special challenges/situations.

### **NTR290 LIFESTEPS® Leader Training**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Provides hands-on skill development in the application of behavioral techniques and the delivery of behavioral feedback that can be used in a variety of nutrition education settings. Also, basic information on nutrition, physical activity and group facilitation and dynamics as they relate to obesity and weight management as well as a detailed overview of the LIFESTEPS® Weight Management Program.

### **NTR295 Dietetic Technician Professional Practice Internship**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Competencies required for the Dietetic Technician A.A.S. specifically in the areas of ethics, scope of practice, professional development, public policy legislation and communication. *Prerequisites: All 22 credits of general education requirements for Dietetic Technician A.A.S. Degree completed and instructor consent.*

### **NTR296 Dietetic Technician Internship**

6 Credits (6 Internships – 450 Hours)

**Typically Offered:** Fall and Spring

The application of life cycle nutrition, assessment, disease prevention and medical nutrition therapy in clinical, community and food service management settings. *Prerequisites: All 58 credits of Dietetic Technician A.A.S. Degree requirements completed with a grade of "C" or better. Program Director or instructor consent.*

## **OFFICE AUTOMATION SYSTEMS (OAS)**

### **OAS101 Keyboard – Alphabetic**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Closed Exit

Mastery of essential microcomputer keyboard skills. Emphasis on alphabetic material using the touch technique.

### **OAS103 Keyboard – Speed/Accuracy**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Closed Exit

Improve keyboard speed and accuracy. Emphasis on alphabetic, numeric and symbol material using the touch technique.

### **OAS104 Ten-Key Pad**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Closed Exit

Key numeric data using touch technique on the computer numeric ten-key pad.

### **OAS125 Proofreading and Editing**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Closed Exit

Analyze and correct communication, forms, reports and other documents by applying proofreading methods and markings, checking for consistency of facts, correcting data and following standard practices. *Prerequisite: ENG100.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## PHILOSOPHY (PHI)

### PHI101 Introduction to Philosophy

3 Credits (3 Lectures) PHI 1101

**Typically Offered:** Fall and Spring

Representative problems and theories regarding the nature of reality and the acquisition of knowledge including examination and development of personal philosophical positions.

*Prerequisite:* RDG094.

### PHI103 Introduction to Logic

3 Credits (3 Lectures) PHI 1103

**Typically Offered:** Every other spring; consult CAC Class Schedule.

Introduction to Logic includes techniques for reasoning deductively and inductively, avoiding fallacies and using language accurately. Application of formal and informal techniques to the development, analysis and evaluation of arguments. *Prerequisites:* MAT101 or higher, RDG094.

### PHI105 Introduction to Ethics

3 Credits (3 Lectures) PHI 1105

**Typically Offered:** Fall

Major philosophical theories of conduct with an emphasis on the application of normative ethical theory to contemporary topics. *Prerequisite:* RDG094. *Corequisite:* ENG102.

### PHI112 World Religions

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

A survey of the major world religions focusing on the founders, history, system of beliefs, concepts of God/gods, private and public worship and sacred scriptures. *Prerequisite:* RDG094.

## PHYSICAL EDUCATION (PED)

### PED100 History and Philosophical Foundations of Sport and Physical Education

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

The historical and philosophical foundations of sport and physical education, current and future directions of instruction, administration and research.

### PED101 History of Intercollegiate Athletics

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Examination of the origins and development of intercollegiate athletics and the relationship with the academic institutions that house these programs. Emphasis on amateurism, academics, finance and commercialism from the 1920's to the present. *Prerequisite:* RDG094.

### PED102 The Management of Sport

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

A comprehensive overview of sport management: fundamentals and history; structure, policy and the governance of sport; sport economics and finance; sport marketing; and professional relations in sport. *Corequisite:* RDG094.

### PED103 Foundations of Exercise

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Fundamentals of basic biomechanics, motor learning/control/development, exercise physiology, exercise metabolism, physiology of training, nutrition and sports psychology.

### PED104 Anatomical Kinesiology

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Muscles, bones, joints and nerves and how they produce movement. Applying kinesiology to improve and maintain the muscular strength, endurance, flexibility and overall health of individuals. *Corequisite:* RDG094.





**PED105 Women and Sport in the U.S.**

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall, Spring and Summer

The history of women in sports from the early 1900s to present with an emphasis on Olympic, intercollegiate and professional competition and the role gender has played in determining access to participation and leadership roles. *Prerequisite: RDG094.*

**PED108 Introduction to Athletic Training**

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall and Spring

Basic concepts of the prevention and treatment of athletic injuries and the primary importance of appropriate rehabilitation. *Corequisite: RDG094.*

**PED109A Athletic Training Practicum I**

2 Credits (6 Labs)

**Typically Offered:** Fall and Spring

An introduction to practical work experience in the athletic training setting. This practicum requires 90 hours. *Prerequisite OR corequisite: PED108.*

**PED109B Athletic Training Practicum II**

2 Credits (2 Practica – 90 Hours)

**Typically Offered:** Fall and Spring

Clinical application of practical work experience in the athletic training setting. *Prerequisite: PED109A.*

**PED109C Athletic Training Practicum III**

2 Credits (2 Practica – 90 Hours)

**Typically Offered:** Fall and Spring

Clinical application of practical work experience in the athletic training setting. *Prerequisite: PED109B.*

**PED109D Athletic Training Practicum IV**

2 Credits (2 Practica – 90 Hours)

**Typically Offered:** Fall and Spring

Clinical application of practical work experience in the athletic training setting. *Prerequisite: PED109C.*

**PED112 Introduction to Strength Training**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

A comprehensive guide to the design and implementation of strength and conditioning programs.

**PED114 Introduction to Coaching**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

An introduction to philosophies of coaching youth, high school and collegiate athletics, emphasizing both competitive and recreational settings.

**PED115 Coaching Methods I**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

An overview of coaching methods, emphasizing both competitive and recreational settings and practical applications of concepts. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: PED114.*

**PED202A Team Sports Officiating – Baseball**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Fundamentals of baseball officiating techniques and mechanics. Techniques and mechanics are based on National Federation High School Rules. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

**PED202B Team Sports Officiating – Basketball**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Fundamentals of basketball officiating techniques and mechanics. Techniques and mechanics are based on National Federation High School Rules. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094: *R*

SUN Course:



## **PED202C Team Sports Officiating – Football**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Fundamentals of football officiating techniques and mechanics. Techniques and mechanics are based on National Federation High School Rules. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

## **PED202D Team Sports Officiating – Soccer**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Fundamentals of soccer officiating techniques and mechanics. Techniques and mechanics are based on National Federation High School Rules. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

## **PED202E Team Sports Officiating – Softball**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Fundamentals of softball officiating techniques and mechanics. Techniques and mechanics are based on National Federation High School Rules. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

## **PED202F Team Sports Officiating – Volleyball**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Fundamentals of volleyball sport officiating techniques and mechanics. Techniques and mechanics are based on National Federation High School Rules. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

## **PED209 Introduction to Rehabilitation Techniques**

3 -Credits (3 Lectures)

**Typically Offered:** Fall and Spring

A comprehensive guide to the design, implementation and supervision of rehabilitation programs for the individual who is preparing for a career in treating sports-related injuries. *Prerequisite: PED104, PED108.*

## **PED215 Coaching Methods II**

3 Credits (1 Lecture, 6 Labs)

**Typically Offered:** Fall, Spring and Summer

In-depth examination of coaching, emphasizing methods and concepts in both competitive and recreational settings. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: PED115.*

## **PHYSICAL EDUCATION ACTIVITY (PAC)**

### **PAC100 Strength and Conditioning for Varsity Sports**

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

Activity course focusing on the pre-season, in-season and off-season strength and conditioning programs for the varsity athlete. Programs will vary by sport. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit. Prerequisite: Varsity athlete.*

### **PAC100B Introduction to Yoga Techniques**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

An in-depth study into the eight limbs of yoga, including the physical poses, breathing and meditation techniques, along with yoga's history and philosophy. Different yoga styles will be introduced. *Satisfactory/Unsatisfactory grading option is available. May be taken more than four times for credit.*

### **PAC101A Basic and Beginning Techniques of Golf**

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

The basic elements of the game of golf, the rules of golf, golf course etiquette and basic golf play. Requires students to travel to off-campus golf course. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*



### **PAC101J Basic and Beginning Techniques of Weight Training**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring and Summer

The basic lifts and explanation of muscle groups affected. Satisfactory/Unsatisfactory grading option is available. *May be taken two times for credit.*

### **PAC101K Basic and Beginning Techniques of Yoga**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring and Summer

A slow and relaxed form of stretching where breathing (pranayama) and positions (asanas) are performed. Satisfactory/Unsatisfactory grading option is available. *May be taken two times for credit.*

### **PAC101L Basic and Beginning Techniques of Karate**

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

The art of Chinese karate emphasizing defense techniques against basic kicks, punches and grab attacks. Satisfactory/Unsatisfactory grading option is available. *May be taken two times for credit.*

### **PAC101M Basic and Beginning Techniques of Basketball**

1 Credit (3 Labs)

**Typically Offered:** Spring

The basic skills of the game of basketball, the rules and techniques for basketball as well as general basketball play. Satisfactory/Unsatisfactory grading option is available. *May be taken two times for credit.*

### **PAC101R Aerobic Weight Training I**

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

Basic circuit weight training in conjunction with an aerobic exercise such as running in place, rope jumping or using exercise bikes. Satisfactory/Unsatisfactory grading option is available. *May be taken four times for credit.*

### **PAC101V Basic and Beginning Techniques of Volleyball**

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

Basic volleyball skills, including the rules and techniques for volleyball players in various positions as well as general volleyball play. Satisfactory/Unsatisfactory grading option is available. *May be taken two times for credit.*

### **PAC102A Intermediate Golf**

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

A concentrated approach to golf skills with emphasis on individual skill level. Satisfactory/Unsatisfactory grading option is available. *May be taken two times for credit. Prerequisite: PAC101A or appropriate experience.*

### **PAC102J Intermediate Weight Training**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring and Summer

Weight training techniques for use throughout the life cycle. Satisfactory/Unsatisfactory grading option is available. *May be taken two times for credit.*

### **PAC102K Intermediate Yoga and Fitness**

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

Learn intermediate yoga poses, breathing techniques and meditation exercises. Satisfactory/Unsatisfactory grading option is available. *May be taken more than four times for credit.*

### **PAC102L Intermediate Karate**

1 Credit (3 Labs)

**Typically Offered:** Fall and Spring

Intermediate martial art forms and techniques; the study of anatomy, physiology and physics as related to karate. Satisfactory/Unsatisfactory grading option is available. *May be taken four times for credit. Prerequisite: PAC101L.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **PAC103 Special Activity (Adaptive)**

1 Credit (3 Labs)

**Typically Offered:** Consult CAC Class Schedule.

A special physical education activity class for the student who is unable to participate in the regular physical education program. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

## **PAC104 Police Officer Physical Training**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Consult CAC Class Schedule.

Advanced principles of aerobic exercise, strength development and flexibility, emphasizing methods for stress reduction, value of nutrition awareness and development of individual exercise programs.

## **PAC105 Physical Fitness: Core Emphasis**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring and Open Entry/Closed Exit

Activity course focused on a balanced development of physical fitness. This course utilizes fitballs, tubing and/or other non-weight equipment to strengthen the core, upper and lower body. *Satisfactory/Unsatisfactory grading option is available. May be taken four times for credit.*

## **PAC106 Aerobics and Weight Training**

2 Credits (6 Labs)

**Typically Offered:** Fall and Spring

Fundamental skills and principles of weight training and aerobics. *Satisfactory/Unsatisfactory grading option is available. May be taken more than four times for credit.*

## **PAC107 Zumba® Toning**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring and Summer

Zumba® Toning is a high-energy, aerobic, calorie-crunching workout for those who love Zumba® Fitness and want to tone and sculpt the body to the next level. With an invigorating blend of Latin and International music, this fitness-dance class targets strengthening the core while improving cardiovascular endurance. *Satisfactory/Unsatisfactory grading option is available. May be taken more than four times for credit. Recommended: Any pre-existing health condition needs to be acknowledged and signed off by a physician, thus clearing the student to perform an high-intensity exercise routine.*

## **PAC108 Zumba®**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring and Summer

Zumba® is a calorie-crunching workout. With a high-energy blend of Latin and International music, this fitness-dance class strengthens the core while improving cardiovascular endurance. *Satisfactory/Unsatisfactory grading option available. May be taken more than four times for credit.*

## **PAC109 Central Boot Camp**

1 Credit (3 Labs)

**Typically Offered:** Fall

Total body workout through fitness inspired boot camp regimen, including upper and lower body workouts infused with abdominal conditioning and stretching techniques. Course utilizes outdoor areas of campus. *Satisfactory/Unsatisfactory grading option is available. May be taken more than four times for credit.*

## **PAC110 Aqua Zumba®**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring and Summer

Aqua Zumba® is a high-intensity, calorie-crunching workout performed in the water to a blend of Latin and International music. This fitness-dance class is designed to strengthen the body core while improving cardio vascular endurance. *Satisfactory/Unsatisfactory grading option is available. May be taken more than four times for credit. Recommended: Any pre-existing health condition needs to be acknowledged and signed off by a physician, thus clearing the student to perform an high-intensity exercise routine.*

## **PAC111 Water Aerobics**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring and Summer

Aquatic exercise emphasizing stretching techniques, endurance, flexibility, and toning for swimmers and non-swimmers. *Satisfactory/Unsatisfactory grading option is available. May be taken four times for credit.*



### **PAC112 Introduction to Scuba Diving**

1 Credit (.5 Lecture, 2 Labs)

**Typically Offered:** Fall, Spring and Summer

Scuba knowledge and skills to safely gain experience in the diving environment and, ultimately, to dive independently. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit. Prerequisites: Age 15 (minors require signature of parent/guardian), Assumptions of Risk statement, meet medical fitness standards, demonstrate swimming competency.*

### **PAC113 Total Body Conditioning**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring and Summer

Total body workout through aerobic exercise. This course covers upper body conditioning and abdominal conditioning, stretching techniques, safety, diet and nutrition. *Satisfactory/Unsatisfactory grading option is available. May be taken four times for credit.*

### **PAC114 Aerobic Martial Arts**

1 Credit (3 Labs)

**Typically Offered:** Consult CAC Class Schedule.

Aerobic workout using martial arts techniques. This course covers upper and lower body conditioning, stretching techniques, safety and nutrition. *Satisfactory/Unsatisfactory grading option available. May be taken four times for credit.*

### **PAC115 Spinners**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring and Summer

Aerobic workout using stationary bicycles. This course covers core, upper and lower body conditioning, stretching techniques and safety. *Satisfactory/Unsatisfactory grading option is available. May be taken four times for credit.*

### **PAC121 Theory and Practice of Basketball I**

2 Credits (6 Labs)

**Typically Offered:** Fall

Fundamental techniques of team play and strategy in the sport of basketball. Includes mechanics of basketball, rules and total body conditioning. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

### **PAC122 Theory and Practice of Baseball I**

2 Credits (6 Labs)

**Typically Offered:** Fall

Fundamentals of baseball, including techniques of team play, rules, conditioning and mechanics of baseball. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

### **PAC123 Theory & Practice of Track & Field I**

2 Credits (6 Labs)

**Typically Offered:** Fall

Fundamentals and techniques of track and field events, including psychological aspects, training and styles used in track and field events. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

### **PAC125 Theory and Practice of Softball I**

2 Credits (6 Labs)

**Typically Offered:** Fall

Fundamentals of softball, including techniques of team play, rules, conditioning and mechanics of softball. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

### **PAC126 Theory and Practice of Cross-Country I**

2 Credits (6 Labs)

**Typically Offered:** Fall

Fundamentals of racing strategies, mechanics of cross country, rules, conditioning and cross training are emphasized. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

### **PAC127 Theory and Practice of Volleyball I**

2 Credits (6 Labs)

**Typically Offered:** Fall

Fundamentals of volleyball including techniques of team play, rules, theory, conditioning and mechanics of volleyball. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:





## **PAC200 Advanced Competition/Fitness Swimming**

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

This class is designed to improve/master rhythmic breathing along with stroke coordination, speed- and flip-turns, distance swimming and endurance training, water entries, diving starts and/or other skills as desired by students to further enhance skills for competition or fitness swimming. *Satisfactory/Unsatisfactory grading option is available. May be taken four times for credit. Prerequisite: Ability to swim freestyle (or other stroke).*

## **PAC201J Advanced Weight Training**

2 Credits (6 Labs)

**Typically Offered:** Fall, Spring and Summer

Development and implementation of individualized weight training programs based on the student's activities and/or interests. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

## **PAC201N Aerobics**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring and Summer

A variety of exercises that stimulate lung activity such as running, swimming, cycling and jogging. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit.*

## **PAC207 Lifeguard Training**

1 Credit (3 Labs)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Preparation of non-surf lifeguards to meet American Red Cross Lifeguard Training Certification program requirements. A pre-course water proficiency exam is administered at the beginning of the course. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit. Prerequisites: Students must be fifteen (15) years of age by the first day of class and pass a water proficiency exam on first day of class.*

## **PAC209 Water Safety Instructor**

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Training for Water Safety Instructor (WSI) candidates to teach American Red Cross (ARC) Water Safety Courses, the ARC Infant and Preschool Aquatics Program and the ARC Learn to Swim Program. *Satisfactory/Unsatisfactory grading option is available. May be taken three times for credit. Prerequisites: Lifeguard Training, current Adult CPR & Standard First Aid*

*Certificates; successfully complete pre-course written exam and water proficiency exam; student must be at least seventeen (17) years of age by the end of the course.*

## **PAC221 Theory and Practice of Basketball II**

2 Credits (6 Labs)

**Typically Offered:** Spring

Advanced techniques of team play and strategy in the sport of basketball. Includes advanced mechanics of basketball and total body conditioning. *Satisfactory/Unsatisfactory grading option is available. May be taken four times for credit. Prerequisite: PAC121 or instructor consent.*

## **PAC222 Theory and Practice of Baseball II**

2 Credits (6 Labs)

**Typically Offered:** Spring

Advanced techniques of baseball including techniques of team play, rules, conditioning, and mechanics of baseball. *Satisfactory/Unsatisfactory grading option is available. May be taken four times for credit. Prerequisite: PAC122 or instructor consent.*

## **PAC223 Theory and Practice of Track and Field II**

2 Credits (6 Labs)

**Typically Offered:** Spring

Advanced techniques of track and field events including psychological aspects, training and styles used in track and field events. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit. Prerequisite: PAC123 or instructor consent.*

## **PAC225 Theory and Practice of Softball II**

2 Credits (6 Labs)

**Typically Offered:** Spring

Advanced techniques of softball, including techniques of team play, rules, conditioning and mechanics of softball. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit. Prerequisite: PAC125 or instructor consent.*



**PAC226 Theory and Practice of Cross Country II**

2 Credits (6 Labs)

**Typically Offered:** Spring

Advanced techniques of racing strategies, mechanics of cross country, rules, conditioning and cross training for cross country racing. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit. Prerequisite: PAC126 or instructor consent.*

**PAC227 Theory and Practice of Volleyball II**

1 Credit (3 Labs)

**Typically Offered:** Spring

Advanced techniques of volleyball, including techniques of team play, rules, conditioning and mechanics of volleyball. *Satisfactory/Unsatisfactory grading option is available. May be taken four times for credit. Prerequisite: PAC127 or instructor consent.*

**PAC230 Arizona Seals Swimming Academy I**

2 Credits (6 Labs)

**Typically Offered:** Fall and Spring

The Arizona Seals is a USA Swimming-sanctioned swim team and maintains membership with USA Swimming, the National Governing Body for swimming in the U.S. This course emphasizes the fundamentals of swimming focusing on comfort in the water. Structured practice sessions include stroke development, stroke proficiency, endurance training, resistance exercise and flexibility. Seminars on the importance of a healthy lifestyle will be incorporated. Modeled after the USA Swimming Age-Group Swim Program. Short-course program I. *Satisfactory/Unsatisfactory grading option is available. May be taken four times for credit. Prerequisite: Student must meet minimum water proficiency eligibility criteria.*

**PAC231 Arizona Seals Swimming Academy II**

2 Credits (6 Labs)

**Typically Offered:** Fall and Spring

The Arizona Seals is a USA Swimming-sanctioned swim team and maintains membership with USA Swimming, the National Governing Body for swimming in the U.S. The course emphasizes the fundamentals of swimming focusing on comfort in the water. Structured practice sessions include stroke development & proficiency, endurance training, resistance exercise and flexibility. Seminars on the importance of a healthy lifestyle will be incorporated. Modeled after the USA Swimming Age-Group

Swim Program. Short-course program II. *Satisfactory/Unsatisfactory grading option is available. May be taken four times for credit. Prerequisite: Student must meet minimum water proficiency eligibility criteria.*

**PAC232 Arizona Seals Swimming Academy III**

2 Credits (6 Labs)

**Typically Offered:** Fall and Spring

The Arizona Seals is a USA Swimming-sanctioned swim team and maintains membership with USA Swimming, the National Governing Body for swimming in the U.S. This course emphasizes the fundamentals of swimming focusing on comfort in the water. Structured practice sessions include stroke development & proficiency, endurance training, resistance exercise and flexibility. Seminars on the importance of a healthy lifestyle will be incorporated. Modeled after the USA Swimming Age-Group Swim Program. Long-course program. *Satisfactory/Unsatisfactory grading option is available. May be taken four times for credit. Prerequisite: Student must meet minimum water proficiency eligibility criteria.*

**PHYSICAL EDUCATION HEALTH (PEH)**

**PEH101 Personal Health**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

The significance of physical, mental, emotional and social health to the individual and society, community health programs and national health indicators. Special emphasis on health problems of the individual. *Prerequisite: RDG094.*

**PEH102 First Aid/CPR**

2 Credits (2 Lectures)

**Typically Offered:** Fall and Spring

A study of first aid dealing with fractures, dislocations, wounds, hemorrhages, poisoning, drowning and cardiopulmonary respiration. Students can receive Standard First Aid and Adult CPR Red Cross certification. *Satisfactory/Unsatisfactory grading option is available. May be taken more than four times for credit. Corequisite: RDG094.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **PEH110 Lifetime Fitness and Wellness**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

An introduction to a complete and personalized lifetime fitness and wellness program with thorough discussion on lifestyle management, wellness and components of physical fitness and mental health.

## **PEH111 Nutrition for Health, Fitness and Sport**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Nutrition, exercise, health related and sports related fitness including: the essential nutrients and the recommended nutrient intake for fitness and sport, weight maintenance through proper nutrition and exercise for health and sport.

## **PEH200 Sports Safety Training**

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall and Spring

Sports Safety Training, CPR and AED for the Professional Rescuer including soft tissue and skeletal injury prevention, first aid and emergency steps for breathing and cardiac care. May be taken four times for credit. *Corequisite: RDG094.*

## **PEH203 Group Fitness Instructor Methods**

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall and Spring

American Council on Exercise (ACE) preparation course for the Group Fitness Instructor Certification exam. *Prerequisite: RDG094.*

## **PHYSICAL EDUCATION VARSITY SPORTS (PEV)**

### **PEV110 Rodeo Sports Events I**

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Fall and Spring

Development of skills in one or more of the following rodeo events: steer wrestling, calf roping, team roping, bull riding, bareback riding, saddle bronco riding, barrel racing, goat tying or breakaway roping. *May be taken four times for credit. Prerequisite: Intercollegiate Rodeo team member.*

### **PEV201 Varsity Basketball I**

1 Credit (3 Labs)

**Typically Offered:** Fall

Hone basketball skills, knowledge and strategies. Explain and adhere to NJCAA regulations, basketball etiquette and team rules. *May be taken two times for credit. Prerequisite: Intercollegiate Basketball team member.*

### **PEV202 Varsity Baseball I**

1 Credit (3 Labs)

**Typically Offered:** Fall

For members of the intercollegiate varsity baseball team. *May be taken three times for credit. Prerequisite: Intercollegiate Baseball team member.*

### **PEV203 Varsity Track and Field I**

1 Credit (3 Labs)

**Typically Offered:** Fall

Hone track and field skills, knowledge and strategies. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit. Prerequisite: Intercollegiate Track and Field team member.*

### **PEV205 Varsity Softball I**

1 Credit (3 Labs)

**Typically Offered:** Fall

For members of the intercollegiate varsity softball team. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit. Prerequisite: Intercollegiate Softball team member.*

### **PEV206 Varsity Cross Country I**

1 Credit (3 Labs)

**Typically Offered:** Fall

Varsity level Cross-Country I includes rules and athlete code of conduct, training and competition strategies, teamwork and sports etiquette. *May be taken two times for credit. Prerequisite: Intercollegiate Varsity Cross-Country team member.*

### **PEV207 Varsity Volleyball I**

1 Credit (3 Labs)

**Typically Offered:** Fall

Hone volleyball skills, knowledge and strategies. *May be taken two times for credit. Prerequisite: Intercollegiate Varsity Volleyball Team member.*



### PEV211 Varsity Basketball II

1 Credit (3 Labs)

**Typically Offered:** Spring

Intercollegiate varsity basketball with application of theory in NJCAA events. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit. Prerequisite: PEV201 or instructor consent.*

### PEV212 Varsity Baseball II

1 Credit (3 Labs)

**Typically Offered:** Spring

Intercollegiate Varsity Baseball with application of theory in NJCAA events. *May be taken two times for credit. Prerequisite: PEV202 or instructor consent.*

### PEV213 Varsity Track and Field II

1 Credit (3 Labs)

**Typically Offered:** Spring

Intercollegiate Varsity Track and Field with application of theory in NJCAA events. *Satisfactory/Unsatisfactory grading option is available. May be taken two times for credit. Prerequisite: PEV203 or instructor consent.*

### PEV215 Varsity Softball II

1 Credit (3 Labs)

**Typically Offered:** Spring

Intercollegiate Varsity Softball with application of theory in NJCAA events. *May be taken two times for credit. Prerequisite: PEV205 or instructor consent.*

### PEV216 Varsity Cross Country II

1 Credit (3 Labs)

**Typically Offered:** Spring

Intercollegiate Varsity Cross Country with application of theory in NJCAA events. *May be taken two times for credit. Prerequisite: PEV206 or instructor consent.*

### PEV217 Varsity Volleyball II

1 Credit (3 Labs)

**Typically Offered:** Spring

Intercollegiate Varsity Volleyball with application of theory in NJCAA events. *Satisfactory/unsatisfactory grading option is available. May be taken two times for credit. Prerequisite: PEV207 or instructor consent.*

**For Physical Geography, see Geography.**

## PHYSICS (PHY)

### PHY100 Physical Universe

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

The basic principles of physics and chemistry and their application in science, technology and everyday life. Emphasis is on the fundamental behavior of matter and energy in physical systems with concepts presented and applied at the mathematical level of elementary algebra. *Prerequisites: RDG094; MAT092 or higher.*

### PHY111 College Physics I

4 Credits (3 Lectures, 3 Labs) PHY111

**Typically Offered:** Fall

Non-calculus treatment of the principles of physics for non-physics majors, covering the motion of particles in one and two dimensions, Newton's laws, energy, momentum, angular momentum, conservation laws, gravitation, fluids, mechanical waves, sound, temperature, heat, heat engines, the laws of thermodynamics and special relativity. *Prerequisites: RDG094; MAT182 or MAT187.*

### PHY112 College Physics II

4 Credits (3 Lectures, 3 Labs) PHY112

**Typically Offered:** Spring

Non-calculus treatment of the principles of physics for non-physics majors, covering electricity, magnetism, circuits, electromagnetic waves, light, optics and modern physics. *Prerequisites: PHY111; MAT182 or MAT187.*

### PHY121 University Physics I: Mechanics

4 Credits (3 Lectures, 3 Labs) PHY121

**Typically Offered:** Fall

First course in the three-semester, calculus-based University Physics sequence covering kinematics, Newton's laws, work, energy, momentum, angular momentum, conservation laws, Statics and dynamics of particles, solids, fluids, mechanical waves and sound. *Prerequisite: MAT221.*

**ICON LEGEND:**

**AGEC:**

**Intensive Writing:** *IW*

**Reading Required:** RDG094:

**SUN Course:**



## PHY122 University Physics II: Electricity and Magnetism

4 Credits (3 Lectures, 3 Labs) PHY1131

**Typically Offered:** Spring

Second course in the three-semester, calculus-based University Physics sequence covering electric charge and current, electric and magnetic fields in vacuum and materials, elementary AC and DC circuit analysis with resistive, capacitive and inductive elements, displacement current, electromagnetic waves and Maxwell's equations. *Prerequisite:* PHY121. *Corequisite:* MAT231.

## PHY223 University Physics III: Vibrations and Waves

4 Credits (3 Lectures, 3 Labs)

**Typically Offered:** Fall

Final course in the three-semester, calculus-based University Physics sequence, covering thermodynamics, kinetic theory, physical and wave optics, matter waves, relativity, photons and atomic physics. *Prerequisites:* MAT231 and PHY122.

## POLITICAL SCIENCE (POS)

### POS101 American Politics

3 Credits (3 Lectures) POS 1110

**Typically Offered:** Fall and Spring

The theory, organization, politics, function and problems of the federal system of government in the United States; the growth of self-government to the adoption of the federal form; the powers, functions and related activities of national government and institutions. Meets the national government requirement for teacher certification. *Field trips may be required. Prerequisite:* RDG094.

### POS103 Arizona Constitutional Government

1 Credit (1 Lecture)

**Typically Offered:** Fall and Summer

Constitution and government of the state of Arizona. Meets the Arizona government requirement for teacher certification. *Field trips may be required. Prerequisite:* RDG094.

### POS104 Contemporary Issues in World Politics

3 Credits (3 Lectures) POS 1120

**Typically Offered:** Spring

A study of the international system, its actors and their capabilities; ends and means of foreign policy; international tension; conflict and cooperation in an age of increasing globalization. *Prerequisite:* RDG094.

### POS105 U.S. Constitution

2 Credits (2 Lectures)

**Typically Offered:** Fall and Summer

An examination of the U.S. Constitution, Bill of Rights and other significant amendments including the historic background, theory, organization and functions of the federal system of government in the United States. Meets the Arizona State Department of Education U.S. Constitution requirement for teacher certification. *Prerequisite:* RDG094.

### POS220 U.S. and Arizona Constitutions

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

An examination of the U.S. Constitution, the Bill of Rights and other significant amendments, and the Constitution of the State of Arizona, including the historic background, theory, organization and functions of the U.S. federal and state systems of government. Course is required to meet the Arizona State Department of Education U.S. Constitution and Arizona government requirements for teacher certification. Course meets the state requirements for the A.A.S Degree in Corrections. *Students selecting POS220 (3) should not enroll in either POS103 (1) or POS105 (2). Prerequisite:* RDG094. *Recommended:* This course meets the Arizona State requirements for teacher certification. *Students selecting POS220 (3) should not enroll in either POS103 (1) or POS105 (2). This is a required course for the Corrections AAS Degree.*





**PSYCHOLOGY (PSY)**

**PSY101 Introduction to Psychology**

3 Credits (3 Lectures) PSY1101

**Typically Offered:** Fall, Spring and Summer

Introduction to principles and theories of human behavior, development, personality and cognition, and the relationship to societal issues. Historical views and research methodology applied to psychology are also presented. *Field trips may be required. Prerequisite: RDG094.*

**PSY200 Social Psychology**

3 Credits (3 Lectures)

**Typically Offered:** Every other fall; consult CAC Class Schedule.

Principles of sociology and psychology with emphasis on the individual and his/her reciprocal interaction with groups, basic psychological factors, social attitudes, language and communication, society and cultures, small groups and their relation to the individual, leadership and group dynamics. *Prerequisite: PSY101 .*

**PSY202 Psychology of Abnormality**

3 Credits (3 Lectures)

**Typically Offered:** Every other fall; consult CAC Class Schedule.

Theories of normality and abnormality, models of psychopathology, classification and treatment of mental disorder and principles of various forms of psychotherapy. *Prerequisite: PSY101 .*

**PSY203 Developmental Psychology**

3 Credits (3 Lectures) *IW*

**Typically Offered:** Fall, Spring and Summer

Biosociopsychological approach to the study of human development, focusing on personality, social, physical and cognitive changes from conception to late adulthood. *Prerequisite: PSY101 ; Corequisite: ENG102 .*

**PSY205 Personality and Social Adjustment**

3 Credits (3 Lectures)

**Typically Offered:** Every other spring; consult CAC Class Schedule.

Explore personality theory and assessment, research methodology, hypothesis testing, life planning and social adjustment, utilizing the principles of positive psychology in order to increase self-awareness and health. *Prerequisite: PSY101 .*

**PSY230 Introduction to Statistics**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Descriptive statistics, probability and application, probability distributions of random variables, inferential statistics and statistical decision-making. *Prerequisites: MAT121; RDG094.*

**PSY277 Human Sexuality**

3 Credits (3 Lectures)

**Typically Offered:** Every other spring; consult CAC Class Schedule.

An exploration of psychological, sociological, physiological aspects of human sexuality within the context of individual development, family, culture, and society. *Prerequisites: SOC100 or PSY101 and ENG101 .* *Cross Listed: SOC277.*

**RADIOLOGY (RAD)**

**RAD100 Fundamentals of Radiologic Science and Healthcare**

1 Credit (1 Lecture)

**Typically Offered:** Spring

Introduction to the field of radiology, the healthcare system and the Radiologic Technology program. Content also includes an introduction to radiologic terminology, ethics, patient care, health care systems, accreditation and professional organizations and radiation protection. *Prerequisites: HCC100, HCC111, HCC116 and Radiologic Technology cohort student.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **RAD110 Radiographic Positioning I**

4 Credits (2 Lectures, 6 Labs)

**Typically Offered:** Spring

An introduction to radiographic positioning and a review of related anatomy, covering anatomy and physiology and the fundamentals of radiographic positioning for the upper and lower extremities, shoulder girdle, chest, pelvis, pelvic girdle, abdomen and vertebral column. *Prerequisite: Radiologic Technology cohort student.*

## **RAD120 Principles of Radiographic Exposure I**

3 Credits (3 Lectures)

**Typically Offered:** Spring

An introduction to the fundamental factors of film-screen image production, processing, film imaging with related accessories and image analysis. *Prerequisite: Radiologic Technology cohort student.*

## **RAD130 Patient Care in Radiologic Science**

2 Credits (2 Lectures)

**Typically Offered:** Summer

Basic concepts of patient care, physical and psychological needs of the patient/family. Infection control measures, routine/emergency patient care procedures; patient safety, assessment, radiologic technologist/patient communications and patient care devices are presented. *Prerequisite: Radiologic Technology cohort student.*

## **RAD140 Practicum I**

3 Credits (3 Practica – 240+ Hours)

**Typically Offered:** Summer

Initial clinical radiography experience that applies radiographic theory to the performance of procedures. Through structured, sequential competency-based assignments under supervision, students acquire proficiency in clinical practice and the performance of radiographic exams. *Prerequisite: Radiologic Technology cohort student.*

## **RAD150 Radiation Physics I**

3 Credits (3 Lectures)

**Typically Offered:** Fall

The fundamentals of radiation production/characteristics including the basics of atomic structure, the nature of radiation, interactions of photons with matter and associated terminology. *Prerequisite: Radiologic Technology cohort student.*

## **RAD160 Radiographic Positioning II**

4 Credits (2 Lectures, 6 Labs)

**Typically Offered:** Summer

Human structure/function, sectional anatomy and the fundamentals of radiographic positioning of the bony thorax, contrast studies of urinary and digestive systems, cranium, arthrography, myelography, venography, pediatric imaging, basic mobile radiography and imaging during trauma and surgery. *Prerequisites: RAD110 and Radiologic Technology cohort student.*

## **RAD170 Principles of Radiographic Exposure II**

3 Credits (3 Lectures)

**Typically Offered:** Fall

Digital image acquisition, image display and image analysis. *Prerequisites: RAD120 and Radiologic Technology cohort student.*

## **RAD180 Practicum II**

3 Credits (3 Practica – 240 Hours)

**Typically Offered:** Fall

Structured, sequential competency-based assignments under supervision; students will acquire proficiency in clinical practice and the performance of radiographic exams. *Prerequisite: Radiologic Technology cohort student.*

## **RAD200 Practicum III**

7 Credits (7 Practica – 600 Hours)

**Typically Offered:** Spring

Through structured, sequential competency-based assignments under supervision, students acquire proficiency in clinical practice and the performance of radiographic exams. *Prerequisite: Radiologic Technology cohort student.*

## **RAD210 Radiation Physics II**

3 Credits (3 Lectures)

**Typically Offered:** Summer

A continuation of “Radiation Physics I” covering the basics of imaging systems and quality control. *Prerequisites: RAD140 and Radiologic Technology cohort student.*



### **RAD230 Radiobiology and Radiation Protection**

3 Credits (3 Lectures)

**Typically Offered:** Summer

This course builds and expands on the basic and radiation protection concepts presented in the “Fundamentals of Radiologic Science and Healthcare.” Content includes the principles of the interaction of ionizing radiation, biological systems and concepts of radiation protection. *Prerequisites: RAD100 and Radiologic Technology cohort student.*

### **RAD240 Practicum IV**

4 Credits (4 Practica – 360 Hours)

**Typically Offered:** Summer

Through structured, sequential competency-based assignments under supervision, students will acquire proficiency in clinical practice and the performance of radiographic exams. *Prerequisite: Radiologic Technology cohort student.*

### **RAD250 Pharmacology and Venipuncture**

1 Credit (1 Lecture)

**Typically Offered:** Fall

The theory and practice of pharmacology, including basic techniques of venipuncture and administration of diagnostic contrast agents and/or intravenous medications. *Prerequisite: Radiologic Technology cohort student.*

### **RAD260 Radiographic Pathology**

2 Credits (2 Lectures)

**Typically Offered:** Fall

The concepts of disease and the etiology of selected pathologic conditions are examined with an emphasis on the radiographic appearance of various diseases and the influence of pathologic changes on considerations of technique. *Prerequisite: Radiologic Technology cohort student.*

### **RAD270 Advanced Imaging**

2 Credits (2 Lectures)

**Typically Offered:** Fall

An overview of the various fields of medical imaging with a focus on Computed Tomography. *Prerequisite: Radiologic Technology cohort student.*

### **RAD280 Registry Review**

3 Credits (3 Lectures)

**Typically Offered:** Fall

A comprehensive review geared toward preparing students for the national ARRT registry examination. *Prerequisite: Radiologic Technology cohort student.*

### **RAD290 Practicum V**

4 Credits (4 Practica - 360 Hours)

**Typically Offered:** Fall

The final course in the clinical radiography experiences series that applies radiographic theory to the performance of procedures and continued application and reinforcement of skills mastered in previous practicums. Through structured, sequential competency-based clinical assignments under supervision, students continue to refine and enhance proficiency in an effort to achieve professional entry level competency. Observations in specialized imaging areas will be optional during this practicum. *Prerequisites: RAD240 and Radiologic Technology cohort student.*

## **READING (RDG)**

### **RDG090 Introduction to College Literacy**

4 Credits (4 Lectures)

**Typically Offered:** Fall, Spring and Summer

Reading strategies to increase comprehension, including vocabulary clarification techniques, vocabulary reference materials, graphic organizers and genre-specific attributes recognition. *Prerequisites: English speaking proficiency and (COMPASS score below 47 or an ASSET score below 33).*

### **RDG091 College Vocabulary**

4 Credits (4 Lectures)

**Typically Offered:** Fall, Spring and Summer

Increase reading comprehension, reading fluency, and college level vocabulary by exploring the relationship between words and ideas, word parts, context clues, and how they all contribute to determining the topic, main idea, and details in a reading selection. To pass the course, a grade of "C" or better must be achieved. *Prerequisite: RDG090.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **RDG091A College Vocabulary for English Language Learners**

4 Credits (4 Lectures)

**Typically Offered:** Fall

Reading comprehension and vocabulary skills for ELL students emphasizing the relationship between words and ideas, word parts, word history, context clues of Standard American English and how they contribute in determining the topic, main idea and details of a reading selection. *Students may take only one: RDG091 or RDG091A. Prerequisite: RDG090.*

## **RDG094 College Reading**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Emphasizes effective reading and critical thinking skills leading to increased reading comprehension necessary for college-level texts. Completion of this course with a grade of "C" or better fulfills the college reading proficiency requirement. *Prerequisite: RDG091 or appropriate placement score.*

## **RDG094A College Reading for English Language Learners**

3 Credits (3 Lectures)

**Typically Offered:** Fall

Reading comprehension and critical reading skills necessary for college-level texts with language skill development and cultural awareness for ELL students. *Students may take only one: RDG094 or RDG094A. Completion of this course with a grade of "C" or better fulfills the college reading proficiency requirement. Prerequisite: RDG091 or RDG091A.*

## **REAL ESTATE (REA)**

### **REA122 Real Estate Principles and Practices**

6 Credits (6 Lectures)

**Typically Offered:** Fall, Spring and Summer

Basic principles of real estate including estates, real estate code, commissioner's rules, land description, title acquisition, contracts, escrow procedures, title insurance, encumbrances-burdens in title, financing, government restrictions, toxic waste and environmental hazards, water rights, ethics, valuations, taxation and property management. *The course meets a requirement for licensure of real estate sales personnel. Satisfactory/Unsatisfactory grading option is available.*

### **REA124 Introduction to Contract Writing**

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

A course on writing real estate contracts and real estate law required for real estate licensure activation.

## **RECREATION (REC)**


### **REC101 Recreation, Leisure and the Quality of Life**

3 Credits (3 Lectures)  

**Typically Offered:** Fall, Spring and Summer

The conceptual foundations of recreation, play and leisure from cultural, historical, philosophical, physiological, psychological and sociological perspectives, and the significance of recreation, play and leisure on life quality. *Prerequisite: RDG094.*

### **REC102 Leisure and Society**

3 Credits (3 Lectures) 

**Typically Offered:** Fall, Spring and Summer

Analysis of the human relationship to leisure; a survey of the historical, environmental, philosophical, political, psychological and socioeconomic foundations for the development of systems that provide leisure programs. *Corequisite: RDG094.*


### **REC108 Recreation Practicum**

3 Credits (1 Lecture, 6 Labs)

**Typically Offered:** Fall, Spring and Summer

The special duties and problems of aides and supervisors of recreation programs; observation and participation in assigned situations.

### **REC203 Leisure Delivery Systems**

3 Credits (3 Lectures) 

**Typically Offered:** Fall, Spring and Summer

Development, management and organization of public, nonprofit and private sectors of the leisure services profession and industry. *Corequisite: RDG094.*



### REC220 Introduction to Nonprofit Youth and Human Service Agencies

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Exploration of the nonprofit youth and human service agency sector, its unique structure and its role in the delivery of services, the economy and society at large.

### REC230 Program Planning

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Effective leisure and recreation program planning in the public, nonprofit and private sectors.

### REC250 Leadership in Recreation

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Theories and strategies for leadership in recreation and tourism settings, including communication skills, group dynamics, motivational processes and supervisory skills.

## RENEWABLE ENERGY TECHNOLOGY (RET)

### RET105 Introduction to Renewable Energy

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

An introduction to energy systems and renewable energy resources, with a scientific examination of the energy field and an emphasis on alternate energy sources, their technology and application. Explores society's present needs and future energy demands, examines conventional energy sources and systems, including fossil fuels and nuclear energy, alternate, renewable energy sources such as solar, biomass (conversions), wind power, geothermal and hydro energy conservation methods.

### RET150 Pollution Controls and Industrial Waste

2 Credits (2 Lectures)

**Typically Offered:** Fall, Spring and Summer

Industrial pollution control of chemical, physical and biological treatment processes, including pollution prevention, waste minimization and disposal.

### RET160 OSHA Safety for Renewable Energy

1 Credit (1 Lecture)

**Typically Offered:** Fall, Spring and Summer

Training for renewable energy workers, including renewable energy science terminology and principles, safety equipment and OSHA standards.

### RET250 Ethanol Process Fundamentals

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall, Spring and Summer

The history, chemistry, legal and political issues and fundamental processes of ethanol production, including the rationale for feedstock and additives used in ethanol processing and co-product production and use. Ethanol plant Process Flow Diagram (PFD) includes residence time, pressures and temperatures in production stages. *Prerequisite: RDG094.*

### RET252 Biofuels Facilities Design and Boiler Systems

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall, Spring and Summer

Biofuels facilities including boiler system design, operation, maintenance, philosophy, code and standard compliance and troubleshooting. *Prerequisite: RDG094.*

### RET255 Distillation and Evaporation Theory

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall, Spring and Summer

Basic distillation and evaporation theory including design of column internals, critical design aspects of trays, packings and ancillary equipment. Philosophy and practice of troubleshooting systems. *Prerequisite: RDG094.*

### RET275 Biodiesel Production and Design

3 Credits (3 Lectures) *R*

**Typically Offered:** Fall, Spring and Summer

Biodiesel production and design in transformation of biomass and other resources into biofuels and bio products. Includes biodiesel history, chemistry, legal factors and political factors. Technical applications focus on technologies for bioconversion of renewable resources. Consideration of technologies for future energy needs. *Prerequisite: RDG094.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094: *R*

SUN Course:





## RET296 Renewable Energy Technology Internship

4 Credits (4 Internships)

**Typically Offered:** Spring

Internship in renewable energy sector with placements tailored to the students' academic program, interests and skills. Since each internship is different and different skills may be learned. May be taken two times for credit. *Prerequisites: RDG094 and instructor consent.*

## SIGN LANGUAGE (SLG)

### SLG101 American Sign Language I

4 Credits (4 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

Introduction to the Deaf culture and the vocabulary and sentence structures of American Sign Language (ASL). Mastery of receptive and expressive basic communication skills.

### SLG102 American Sign Language II

4 Credits (4 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

Expanded ASL knowledge, vocabulary and performance skills. Refinement of receptive and expressive skills. *Prerequisite: SLG101 or instructor consent.*

### SLG201 American Sign Language III

4 Credits (4 Lectures)

**Typically Offered:** Consult CAC Class Schedule.

A continuation of the skills taught in SLG102. This course emphasizes improved fluency and comprehension of ASL, Deaf culture and the evolution of ASL. *Course is taught primarily in American Sign Language. Prerequisite: SLG102.*

### SLG202 American Sign Language IV

4 Credits (3 Lectures, 1 Recitation)

**Typically Offered:** Consult CAC Class Schedule.

Building upon the skills taught in SLG201, this course emphasizes advanced sign language fluency, conversational skills, comprehension skills and cultural features. *Course is taught primarily in American Sign Language. Prerequisites: RDG094, SLG201.*

## SKILLS – WORKFORCE (SKL)

### SKL110 Life Math Skills

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

A study of basic arithmetic skills including whole numbers, fractions, decimals and percents as applied in business situations. A variety of payroll concepts, loans and credit purchases, budgeting and banking services.

### SKL115 Employment Readiness Program Part I

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

The first of a two-part simulated, interactive workplace environment to prepare students with soft skills necessary for employment. Skills included are positive work habits, communication skills, workplace effectiveness and increased basic employability skill levels. *Satisfactory/Unsatisfactory grading option is available.*

### SKL116 Employment Readiness Program Part II

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

The second of a two-part simulated, interactive workplace environment to prepare students with soft skills necessary for employment. Skills included are workplace effectiveness, business etiquette and job search. *Satisfactory/Unsatisfactory grading option is available.*

### SKL117 Employment Skills

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

Employability skills necessary to identify personal interests and abilities, locate employment, and keep a job once employed. *Satisfactory/Unsatisfactory grading option is available.*

### SKL120 Intro to Solar and Green Construction Concepts

5 Credits (4 Lectures, 3 Labs)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

Overview of green collar jobs and the skills related to weatherization, alternative energy and green construction concepts. *Satisfactory/Unsatisfactory grading option is available.*



**SKL121 Intro to Green Block Construction**

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

Overview of construction using alternative block materials and the skill sets related to the green collar jobs in this trade. *Satisfactory/Unsatisfactory grading option is available.*

**SKL122 Intro to Steel Framing**

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

Overview of steel framing construction and the skill sets related to the green collar jobs in this alternative market. *Satisfactory/Unsatisfactory grading option is available.*

**SKL123 Intro to Weatherization**

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

Overview of insulation, appliance and low voltage systems that relate to the green collar jobs in weatherization. *Satisfactory/Unsatisfactory grading option is available.*

**SKL124 Intro to Rammed Earth and Straw Bale Construction**

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

Overview of rammed earth and straw bale construction and the skill sets related to the green collar jobs in these alternative programs. *Satisfactory/Unsatisfactory grading option is available.*

**SKL125 Intro to Solar Panel Systems**

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

Overview of solar panel systems and the skill sets related to the green collar jobs in solar panel installation. *Satisfactory/Unsatisfactory grading option is available.*

**SKL126 Building Analyst Energy Auditor**

2 Credits (2 Lectures)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

Introduction to Building Analyst and Energy Audit Training, including residential energy consumption devices, maintenance and safety issues, conservation and projected savings. May lead to Building Performance Institute (BPI) Building Analyst Certification. *Satisfactory/Unsatisfactory grading option is available.*

**SKL130 Intro to Weatherization, Solar and Green Construction**

5 Credits (4 Lectures, 3 Labs)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

Overview of green collar jobs and the skills related to weatherization, alternative energy and green construction concepts. *Satisfactory/Unsatisfactory grading option is available.*

**SKL141 Overview of Office Assistant**

2 Credits (2 Lectures)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

An overview of various office environments in which office assistants are employed, including the use of basic office machines such as copiers, faxes, telephones and others as well as general duties such as filing, customer service, making change and filling out forms. Students completing the course will have a comprehensive overview of the functions and duties of an Office Assistant position. *Satisfactory/Unsatisfactory grading option is available.*

**SKL142 Green Office Solutions**

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

An overview of current methods of green conservation techniques related to office environments in use today, including cost savings resulting from "green" techniques. *Satisfactory/Unsatisfactory grading option is available.*

**SKL143 Basic Accounting Concepts**

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

The concepts of accounting for front office clerk. *Satisfactory/Unsatisfactory grading option is available.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## SKL144 Proofreading for Accuracy

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

Introduction to proofreading skills to identify and modify basic grammar, spelling and formatting within common computer generated materials.

## SKL145 Communication Skills

3 Credits (3 Lectures)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

Written and oral communication in organizations with emphasis on writing business letters, memos and reports; speaking and listening skills; critical analysis of appropriate writing; and managing various communication situations.

## SKL146 Employment Coaching Workshop

1 Credit (1 Lecture)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

An interactive workshop designed to coach individuals to implement successful employment strategies with emphasis on specific tools for researching the job market and acquiring employment.

## SKL149 Practicum for Computer Applications for Business Users

3 Credits (1 Lecture, 2 Practica)

**Typically Offered:** Consult CAC Class Schedule or the Workforce Office.

Hands-on learning to further develop skills through employer based experiences. Students will work in an office environment utilizing the information, skills and software taught throughout the program. This is an unpaid practicum.

## SOCIAL WORK UNDERGRADUATE (SWU)

### SWU171 Introduction to Social Work

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

A descriptive and analytical historical perspective of the profession of social work, social problems and the social welfare system. *Prerequisite: RDG094.*

### SWU242 Introduction to Child Welfare Service in a Diverse World

3 Credits (3 Lectures)

**Typically Offered:** Every other fall; consult CAC Class Schedule.

Examine contemporary child welfare policies and practices in the United States, including the rights of children, the rights and responsibilities of parents and society and their point of conflict. The nature and impact of child maltreatment, the ways in which society prevents or responds to the social problem of child maltreatment, and the system of response to child maltreatment are addressed. *Prerequisite: ENG101*

### SWU291 Social Service Delivery

3 Credits (3 Lectures)

**Typically Offered:** Spring

Purpose, structures and delivery systems of human service agencies, including 40 hours of volunteer experience in local human service agencies. *Prerequisite: SWU171 and division chair consent.*

### SWU295 Foundations of Social Work Practice: Effective Helping in a Diverse World

3 Credits (3 Lectures)

**Typically Offered:** Every other spring; consult CAC Class Schedule.

Theoretical foundations and skills base for effective culturally competent communication and interviewing with individuals, families, small groups and larger systems. *Prerequisite: ENG101*

## SOCIOLOGY (SOC)

### SOC100 Introduction to Sociology

3 Credits (3 Lectures) SOC 1101

**Typically Offered:** Fall, Spring and Summer

The systematic study of society; the role and impact of society on individual and group social interaction. *Prerequisite: RDG094.*

### SOC102 Contemporary Issues in Society

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

A systematic study of contemporary American and global social problems from a sociological viewpoint. *Prerequisite: RDG094.*



**SOC200 Racial and Ethnic Minorities**

3 Credits (3 Lectures) SOC 2215 IW

**Typically Offered:** Every other spring; consult CAC Class Schedule.

Race and ethnicity in American society including such topics as discrimination, segregation, conflict, power and assimilation with an emphasis on contemporary issues.

*Prerequisites:* SOC100 and ENG101 . *Corequisite:* ENG102 .

**SOC203 Marriage and the Family**

3 Credits (3 Lectures) R

**Typically Offered:** Fall and Spring

A comprehensive examination of marriage and the family as a cultural unit and a social institution. *Prerequisite:* RDG094.

**SOC212 Gender in Society**

3 Credits (3 Lectures)

**Typically Offered:** Every other fall; consult CAC Class Schedule.

Social structures and processes related to the construction of gender in society, including theoretical perspectives, impact of politics past and present, sex versus gender, and gender in the workplace, media, religion, medicine and in global perspective. *Prerequisite:* ENG101 .

**SOC250 Family Violence**

3 Credits (3 Lectures) R

**Typically Offered:** Every other fall; consult CAC Class Schedule.

The introduction to concepts related to family/intimate violence with an emphasis on legal, social and psychological aspects of abuse. *Prerequisite:* RDG094.

**SOC277 Human Sexuality**

3 Credits (3 Lectures)

**Typically Offered:** Every other spring; consult CAC Class Schedule.

An exploration of psychological, sociological and physiological aspects of human sexuality within the context of individual development, family, culture and society.

*Prerequisites:* SOC100 or PSY101 and ENG101 . *Cross Listed:* PSY277.

**SPANISH (SPA)**

**SPA101 Elementary Spanish I**

4 Credits (4 Lectures, 1 Lab) SPA 1101

**Typically Offered:** Fall, Spring and Summer

The basic skills of understanding, speaking, reading and writing Spanish with a survey of cultural materials from Spanish-speaking countries.

**SPA102 Elementary Spanish II**

4 Credits (4 Lectures, 1 Lab) SPA 1102

**Typically Offered:** Fall, Spring and Summer

Refinement of basic communication skills in Spanish, emphasizing reading, writing, speaking and listening exercises. Survey of cultural norms, beliefs and traditions from areas where Spanish is spoken. *Prerequisite:* SPA101 or one full year of high school Spanish completed with a grade of "B" or better or instructor consent.

**SPA115 Conversational Spanish I**

3 Credits (1 Lecture, 2 Recitations)

**Typically Offered:** Fall, Spring and Summer

Introduction to conversational Spanish. Fundamentals of authentic speaking and listening skills in Spanish, with minimal grammar instruction. Introduction to cultures of the Spanish-speaking world.

**SPA117 Costa Rican Culture and Spanish Conversation I**

3 Credits (3 Lectures)

**Typically Offered:** Summer

Students will immerse themselves within the culture by living with Costa Rican families in Costa Rica conversing daily in conversational classes and participating in daily cultural activities and excursions.

**SPA118 Costa Rican Culture and Spanish Conversation II**

3 Credits (3 Lectures)

**Typically Offered:** Summer

Students will immerse themselves within the culture by living with Costa Rican families in Costa Rica conversing daily in conversational classes and participating in daily cultural activities and excursions. *Prerequisite:* SPA117.

ICON LEGEND: AGEC: Intensive Writing: IW Reading Required: RDG094: R SUN Course:



## SPA201 Intermediate Spanish I

4 Credits (4 Lectures, 1 Lab) 📍 SPA 2201 📖🔗

**Typically Offered:** Fall and Spring

Development of reading, writing, speaking and listening skills proficiency in Spanish, at the novice intermediate level. Continuation of understanding, appreciation and sensitivity to aspects of Hispanic cultures. *Prerequisites: RDG094; SPA102 or four semesters of high school Spanish with a grade of "B" or better.*

## SPA202 Intermediate Spanish II

4 Credits (4 Lectures, 1 Lab) 📍 SPA 2202 📖

**Typically Offered:** Fall, Spring and Summer

Continued development of speaking, writing, listening and reading proficiency in Spanish at the intermediate level. A continued study and appreciation of cultures of the Spanish-speaking world. *Prerequisite: SPA201 or instructor consent.*

## THEATER (THE)

### THE100 Theater Appreciation

3 Credits (3 Lectures) 📖🔗

**Typically Offered:** Fall and Spring

Survey of theater, including the origins of drama, influence of significant plays, contributions of the actors, directors, designers, stage managers and playwrights. Evaluation of stage and filmed versions of plays and how society influenced the development and creation of plays. *Prerequisite: RDG094.*

### THE101 Beginning Acting I

3 Credits (2 Lectures, 3 Labs) 🔗

**Typically Offered:** Fall and Spring

Intro to the fundamentals of acting through physical expression, improvisation and performance of short scenes. Designed for students with little or no experience. *Prerequisite: RDG094.*

### THE102 Beginning Acting II

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Continuing study of the fundamentals of acting with emphasis on script analysis, character analysis and the rehearsal process through the performing of two or three short scenes. *Prerequisite: THE101.*

### THE103 Introduction to Technical Theater

3 Credits (2 Lectures, 3 Labs) 🔗

**Typically Offered:** Fall and Spring

Theater safety, production organization and management, and introduction to basic technical design concepts, including scenic, stage lighting and sound design. Students perform the technical aspects for selected events in the Pence Center for the Performing and Visual Arts during the semester. *Prerequisite: RDG094.*

### THE104 Stagecraft

3 Credits (2 Lectures, 3 Labs) 🔗

**Typically Offered:** Fall and Spring

Basic backstage techniques in building, painting and rigging of scenery. Operation of stage lighting, sound and curtain equipment. *May be taken two times for credit. Prerequisite: RDG094.*

### THE105 Lighting I

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Introduction to the technical aspects of concert and theatrical lighting, including basic design, color theory, instrument types, power distribution, control, safety and the proper hanging, connection, focus and control of instruments. *Prerequisite: EIT101.*

### THE110 Stage Combat

3 Credits (2 Lectures, 3 Labs) 🔗

**Typically Offered:** Fall and Spring

Stunt fighting including hand-to-hand combat and the possible use of rapier, rapier-and-dagger or quarterstaff. *May be taken two times for credit. Prerequisite: RDG094.*

### THE111 Improvisational Acting I

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Actors gain experiential understanding of improvisational acting and develop a strong improvisational perspective essential to scripted work. Topics include development of physical and vocal characteristics; development of imagination, listening and observations skills; individual and group improvisations to communicate character, emotion and conflict; and live performance. *May be taken two times for credit.*





**THE112 Introduction to the Performing Arts**

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Students meet once per week to explore the theater as an art form. Students work 28 hours over the course of the semester behind the scenes of a theatrical production to gain first-hand experience and attend one live theater production. *May be taken four times for credit. Prerequisite: RDG094.*

**THE113 Theater Workshop: Stagecraft**

2 Credits (6 Labs)

**Typically Offered:** Fall and Spring

Production experience in technical theater as a member of one or more technical activities. Positions are stage lighting, sound reinforcement and recording, properties, costumes, scenic artist, multimedia graphics design and set construction. *May be taken four times for credit. Prerequisite: RDG094.*

**THE115 Introduction to Cinema**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. *Prerequisite: RDG094.*

**THE116 Contemporary Cinema**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Survey of various genres of motion picture films since 1960, including criticism of aesthetic and technical elements. *Prerequisite: RDG094.*

**THE117 Theater Workshop: Drama**

2 Credits (6 Labs)

**Typically Offered:** Fall, Spring and Summer

Participation as an actor, understudy or assistant to the director in the semester's production. Actors are selected by audition. Participation as an assistant to the director is based on availability of a position. *May be taken four times for credit. Prerequisite: RDG094.*

**THE163 Scenic Design**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Design, plan and execute scenery with emphasis on craftsmanship, a safe work environment, creating and maintaining an organized work place and estimating time and energy to build various units of scenery.

**THE164 Costume Design**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Costume design and execution using traditional and creative methods and generating all production work. Course includes design, fitting, sewing and repairs; budgeting and calculations to maximize efficiency and minimize cost; and creative and critical problem solving techniques. *Prerequisite: THE104.*

**THE165 Makeup Design**

2 Credits (1 Lecture, 3 Labs)

**Typically Offered:** Fall and Spring

Makeup design and execution using traditional and newly developed methods, including corrective makeup, old age makeup, facial prosthetics, facial hair/wig appliances, as well as a wide range of fantasy makeup applications. *Prerequisite: THE104.*

**THE203 Intermediate Acting I**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Continuing study of the fundamentals of acting with emphasis on movement and voice. In addition to performing in scenes and/or one-act plays, students learn two monologues to further prepare them for auditioning. *Prerequisite: THE102 or instructor consent.*

**THE204 Intermediate Acting II**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Continuing study of the fundamentals of acting with emphasis on career opportunities, further training opportunities and the introduction of acting style. In addition to performing in scenes and/or one-act plays, students learn two monologues to further prepare them for auditioning. *Prerequisite: THE203 or instructor consent.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094:

SUN Course:



## **THE205 Stagecraft II**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Advanced stagecraft techniques and concepts, including the visual aspects of theater created through design, planning and executing scenery creation. Emphasis is on quality craftsmanship, a safe work environment, creating and maintaining an efficient and organized work place, estimating time and energy required to build various units of scenery and executing designs to meet deadlines. *Prerequisite: THE104.*

## **THE261 Acting for the Camera**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Develop an actor's approach to the special demands of acting in front of a camera. Emphasis is placed on the development of specific performance skills used for television and film acting. A capstone portfolio includes a variety of audition shorts. *Prerequisite: THE101 or instructor consent. Cross Listed: EIT261.*

## **THE262 Meisner Acting Technique I**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

Actors gain experiential understanding of improvisational acting and develop a strong improvisational perspective essential to scripted work. Topics include development of physical and vocal characteristics; development of imagination, listening and observations skills; individual and group improvisations to communicate character, emotion and conflict; and live performance. *Course may be taken two times for credit.*

## **THE270 Education through Drama in the Elementary Classroom**

3 Credits (3 Lectures)

**Typically Offered:** Fall and Spring

Hands-on opportunity to learn and teach drama based classroom activities that support learning in the elementary classroom. Develop an understanding of the research supporting the use of drama in the classroom. *Cross Listed: EDU270.*

## **WELDING (WLD)**

### **WLD110 Survey of Welding Processes**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Fundamental welding processes and procedures including basic shield arc, oxy-acetylene, tungsten inert gas and metal inert gas welding using manual setting machines and digital machines.

### **WLD120 Oxy-Acetylene Welding**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

The fundamentals of oxy-acetylene welding including equipment use and safety procedures in brazing, cast iron, silver soldering, running all-directional beads and machine cutting.

### **WLD121 Shielded Metal Arc Welding I**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

The fundamentals of arc welding using manual setting machines and digital machines with emphasis on running beads in all positions, identification of electrodes, hand flame cutting with the torch and identification of metal.

### **WLD122 Shielded Metal Arc Welding II**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Advanced arc welding using manual and digital setting machines with emphasis on out-of-position welding, basic destructive and non-destructive testing, oxy-acetylene cutting, arc air cutting, plasma arc cutting. *Prerequisite: WLD120 or WLD121.*

### **WLD125 Pipe Welding I**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Basic pipe welding of underground and industrial pipelines. Students will cut, bevel, fit and weld pipe. *Prerequisite: WLD122.*



**WLD128 Blueprint Reading for Welders**

3 Credits (3 Lectures)

**Typically Offered:** Fall, Spring and Summer

The fundamentals of reading and interpreting welding symbols and blueprints as they pertain to the area of welding technology.

**WLD196 Welding Technology Internship**

3 Credits (3 Internships – 135 hours)

**Typically Offered:** Fall, Spring and Summer

This internship provides career advancement study to help students obtain hands-on work experience. Students gain experience using machines and tools only available in that work setting, such as operation of a press brake for forming steel, operation of overhead cranes, rigging and lifting materials, actual fit-up and welding of a production product, and/or operating a shear for cutting heavy steel materials. *This Internship requires 135 hours. Prerequisites: Welding Technology Certificate or Welding Technology AAS Degree student, Minimum CGPA 3.0, and program director consent.*

**WLD221 Gas Tungsten Arc Welding**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

Techniques of Gas Tungsten Arc welding including the theory, operation, safety, care and maintenance of the Gas Tungsten Arc Welding equipment, both manual and digital. Additionally students will use oxy-acetylene torch and tungsten inner gas welding processes on ferrous and non-ferrous metals with various joint designs.

**WLD222 Gas Metal Arc Welding**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall and Spring

This welding course focuses on short-circuiting, spraying and globular transferring of ferrous and non-ferrous metals and flux-cored welding in the flat and horizontal positions, with an emphasis on proper use and care of equipment and safety procedures. *Prerequisite: WLD110.*

**WLD223 Automatic and Semi-Automatic Welding**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Development of the necessary skills to enter the welding industry, including TIG and MIG techniques. *Prerequisite: WLD221.*

**WLD225 Shielded Metal Arc Welding III**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring and Summer

Use of E7018 and E6011 electrodes in the flat, horizontal and overhead welding positions, with emphasis on basic joints placed in out-of-position per AWS D1-1 Guided Bend Test, and Destructive Methods. *Prerequisite: WLD122.*

**WLD227 Welding Design and Fabrication**

3 Credits (2 Lectures, 3 Labs)

**Typically Offered:** Fall, Spring, Summer and Open Entry/Open Exit

Welding design, layout and fabrication processes with job/shop oriented environment and emphasis on instructor pre-approved individual and group projects. *May be taken two times for credit.*

**WOMEN AND GENDER STUDIES (WGS)**

**WGS100 Introduction to Gender and Women’s Studies**

3 Credits (3 Lectures) *R*

**Typically Offered:** Every other spring; consult CAC Class Schedule.

Interdisciplinary survey of gender and feminist issues in contemporary society. Includes theoretical approaches to gender and gender socialization; body, health and intimacy issues; gender and religion; contemporary issues in politics/law, education, work and family. *Prerequisite: RDG094.*

ICON LEGEND:

AGEC:

Intensive Writing: *IW*

Reading Required: RDG094: *R*

SUN Course:



# General Information



San Tan Campus – CAC's newest campus opened in January 2014.



## BOARD OF GOVERNORS



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District 2



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Assistant Dean of Workforce Development

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**Jani Attebery**  
Acting Assistant Dean of Student Affairs

**William F. Brown, M.B.A.**  
Executive Director of Institutional Research & Planning

**Luisa Ott, CPA, CFE**  
Executive Director of Accounting  
Services/Comptroller





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M.B.A., University of Phoenix
- Sanchez, Miriam**, Human Resources Assistant,  
District/SPC  
Certificate, Central Arizona College  
B.A., Prescott College
- Sanders, Cameron**, Oracle Programmer Analyst II,  
District/SPC  
B.S., Northern Arizona University
- Savage, Barbara**, Office Assistant II, District/SPC
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District/SPC  
Certificate, Central Arizona College  
A.G.S., Central Arizona College
- Scharf, David**, Facilities Technician I, SPC
- Schnoor, Chuck**, Professor of Sports and Fitness,  
Athletic Director/District Division Chair,  
Sports & Fitness, District/SPC  
B.A., University of Nebraska  
M.Ed., Northern Arizona University
- Scudder, Michael**, Assistant Director, Residence Life,  
SPC  
B.A., University of Albany, SUNY  
M.S., University of Albany, SUNY
- Searle, Michael**, Facilities Reservation/Scheduling  
Assistant, District/SPC  
A.S., Indiana University  
B.S., Indiana University
- Secrist, William**, Police Officer, SPC  
AZPOST, Central Arizona College
- Sexton, Audrey**, Coordinator I, Learning Support, MC  
A.A., Cochise College  
B.A., Northern Arizona University
- Shank, Derek**, Director I, Student Affairs, SMC  
B.S., University of Arizona  
M.A., University of Arizona  
M.C., Arizona State University  
J.D., University of Arizona
- Shelton, Monica**, Program Assistant - Dietetic  
Education Program, SPC  
A.A., Instituto Peruano Norteamericano
- Shultz, Kevin**, Director III, Technology Support  
District/SPC  
B.S., University of Wyoming  
M.B.A., University of Wyoming
- Simmons, Bonnie**, Librarian, District/SPC  
B.S., Wright State University  
M.L.I.S., Kent State University
- Smith, Laurette**, Academic Division Assistant/  
Nursing, SPC  
A.A., Elgin Community College
- Smith, Tabatha**, Coordinator I, Experiential Learning  
District/SPC  
B.A., Arizona State University
- Snavely, Tom**, Facilities Technician III, SPC
- Snellman, Scott**, Librarian, SPC  
B.A., University of Montana - Missoula  
M.A., University of Arizona
- Soria, Sherrie**, Coordinator II, TRIO Student Support  
Services, District/SPC  
B.A., State University of New York College at  
Cortland  
M.Ed., Northern Arizona College
- Span, Derrick**, Professor of Sociology, District/SMC  
B.S., University of Louisville  
M.Div., Interdenominational Theological  
Center  
M.A., Binghamton University
- Spence, Dosia**, Secretary II, District/SPC/CGC
- Stapleton, Charlene**, Student Services Generalist,  
District/SPC  
B.A., Arizona State University  
M.Ed., Arizona State University
- Steincamp, Hugo**, Director I, Resource Development  
District/SPC  
B.A., University of Canterbury, New Zealand  
M.A., Northeastern University
- Stephens, Robert**, Director II, Employee  
Development, District/SPC  
B.S., University of Phoenix  
M.B.A., University of Phoenix
- Stuhr, Devon**, Academic Division Assistant, SMC  
A.A., Central Arizona College
- Talamantez, Yolanda**, Student Services Assistant III,  
District/SPC
- Tatterson, Susan**, Professor of Digital Media,  
District/SPC  
A.A.S., Community College of Baltimore  
County  
B.S., University of Baltimore  
M.F.A., University of Baltimore





## GENERAL INFORMATION

- Tavares, Paul**, Professor of Biology, Division/SPC  
B.S., University of Wisconsin, Parkside  
D.C., National College of Chiropractic
- Teel, Louis**, Professor of Heavy Equipment  
Operations, District/SPC  
A.A.S., Central Arizona College
- Teel, Skyla**, Professor of Reading, District/SPC  
A.A., Pima Community College  
B.S., Northern Arizona University  
M.Ed., Northern Arizona University
- Teeple, Larry**, Facilities Foreman, SMC  
Journeyman Certification, Plumbers/  
Pipefitters Local 469
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District/CCC  
A.G.S., Central Arizona College  
B.A., Northern Arizona University
- Thompson, B. Joyce**, Fiscal Agent, SMC  
A.A.S., Central Arizona College
- Thompson, Karen**, Accountant, District/SPC  
Certificate, City University of Seattle  
B.S., Central Washington University
- Tinnin, Sarah**, Business Office Assistant, District/  
SPC  
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Clerk Typist, Stenographer & General Office  
Clerk Certificates
- Torres, Monica**, Facilities Assistant I, SPC
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B.A., University of Arizona  
M.B.A., University of Phoenix
- Trevino, Sophia**, Preceptor II - GED, CGC  
B.S., Northern Arizona University  
M.A., University of Phoenix
- Vangilder, Clark**, Professor of Physics, SPC  
B.S., Grand Canyon University  
M.N.S., Arizona State University
- Vega, Sylvia**, Coordinator I, Learning Support, STC  
B.A., Northwestern University  
M.A., Arizona State University
- Verdugo, Kimberlee**, Director I, Compensation &  
Classification, District/SPC  
B.A., California State University, Long Beach
- Verduzco, Jeanette**, Student Services Generalist,  
District/SPC  
A.A., Central Arizona College
- Villa, Ricardo “Omar”**, Preceptor II - Mathematics,  
SPC  
B.S., Arizona State University
- Vogan, Monica**, Coordinator II- Outreach and Promise  
Activities, SPC  
B.S., Arizona State University
- Voyce, Jennie Lee**, Program Assistant, District/SPC
- Wagner, Louis**, Facilities Technician III, MC
- Warner, M. Sue**, Professor of Social Sciences, SMC  
Social Science Division Chair  
A.A.S., State University of New York, Alfred  
B.A., California State University Sacramento  
M.A., California State University Sacramento
- Weir, Estella**, Technical Support Generalist,  
District/SPC  
A.A., Central Arizona College
- Wente, Jon**, Head Baseball Coach, Sports  
& Fitness Specialist, SPC  
B.A., Arizona State University
- Wente, Sandra**, Head Softball Coach, Sports and  
Fitness Specialist, SPC  
B.S., University of Phoenix
- White, Emily**, Grants Accountant, SPC  
B.S., Colorado State University - Pueblo
- Wiley, Mary**, Accounting Clerk II, District/SPC
- Williams, Eugene**, Professor of Diesel Technology  
District/SPC  
Diploma – Diesel & Heavy Equipment Repair,  
Des Moines Area Community College  
B.T., University of Northern Iowa
- Wilson, Maren**, Professor of Social  
Sciences & Anthropology, AVC  
B.A., New Mexico State University  
M.A., New Mexico State University
- Wisniewski, Sharon**, Coordinator III- STEM  
District/SPC  
B.S., University of Wisconsin, Milwaukee  
M.S., University of Wisconsin, Milwaukee
- Wodka, Chris**, Vice President Business Affairs, CFO,  
District  
B.A., Saint Xavier University  
M.B.A., Saint Xavier University  
Certified Public Accountant
- Woodbury, Christy**, Student Services Generalist,  
District/SPC  
B.A., Arizona State University  
M.Ed., Northern Arizona University
- Wooten, Loida**, Program Assistant, SPC  
B.S., Philippine College of Commerce



**Wright, Daniel**, VP, Academic Affairs/CAO, District

B.A., West Virginia University

M.S., University of Maryland

M.B.A., Pace University

Ph.D., University of Maryland

**Young, Michelle**, Professor of Speech

Communications, District/SPC

B.A., Pittsburg State University

M.A., Lindenwood University

**Young-Chiverton, Victoria**, Professor of Early

Childhood Education, SPC

B.A., Clark University

M.Ed., University of New Hampshire

**Youtsey, Mykel**, Accounting Clerk II, District/SPC

**Yubeta, Dawn**, Secretary II, CGC

Certificates, Central Arizona College

## EMERITUS FACULTY AND STAFF

Abril, Rogelio “Larry”, 1986-2008

Facilities Technician I, SPC

Adamavich, Carol, 2001 – 2012

Preceptor II, SPC

Alexander, S. Leslie, 1985 – 2008

Professor of Psychology, SMC

Almendarez, Anne, 1990 – 2009

Executive Secretary, CCC

Al Zibaree, Sabah, 1984-2010

Professor of Computer Information Systems,  
District

Amado, Dolores, 1974-1995

LRC Technician, AVC

Anderson, Flint, 1985 – 2004

Program Manager/Student Services, AVC

Atencio, Alfonso, 1970-2001

Professor of Business, SPC

Austin III, Robert Calvin, 1970-1992

Professor of Sociology, SPC

Avina, Lucy, 1989-2001

Office Assistant II, SPC

Babb, Wayne, 0981 - 2009

Campus Facilities Supervisor

Banta, Russell, 1980-2010

Vice President, Finance & Administrative  
Services, District

Belden, Thomas, 1989-2002

Professor of Art, SPC

Blank, Nancy, 1990-2004

Administrative Assistant, SPC

Blasco, Nancy, 1999-2013

Library Assistant I

Blow, James, 1979 – 2008

Facilities Assistant III, AVC

Bloxham, Anne, 1972-1983

Systems Analyst, SPC

Bolgren, Carol, 1978-2003

Office Assistant II, SPC

Bowles, Loren, 1978-2003

Facilities Assistant, SPC

Buttery, William, 1974-1987

Executive Dean, AVC

Buttram, Gary, 1984 - 2009

Professor of Masonry, ASP

Buys, Ekdal, Jr., 1971-1994

Professor of Philosophy

Cardell, Sharon “Shay”, 1990 – 2008

Professor of Mathematics, AVC

Cardenas, Jesus, 1971-1983

Maintenance/Watchman Supervisor, SPC

Cardona, Ralph, 1981-1993

Custodian, SPC

Carpenter, Mary, 1997-2009

Office Assistant I, SMC

Castillo, Josephine, 1983-2004

Facilities Assistant III, AVC

Celaya, Pete, 1973-1992

Counselor, SPC

Chapman, Robert, 1987-1999

Program Manager-Academic Services, ASP

Chew, Al, 1969-2001

Professor of Mathematics, SPC

Cibbarelli, Edward, 1989-1996 & 1999-2006

Administration of Justice, SPC

Cockrill, Julia, 1996-2010

Website/Designer/Developer, District

Coleman, Laura “Jill”, 1997-2011

Librarian

Collard, Gerald, 1972-2000

Professor of Business, SPC

Cubbage, John F., 1974-1993

Professor of Business/Electricity, AVC

Denton, Helen, 1988-2001

Dean of Student Services, District

Dorsett, Terry, 1983-2000

Professor of CIS, SPC

Eddings, Patricia, 1995-2014

Professor of Sociology

Elliott, Allen, 1976-2002

Professor of Engineering/Technology, SPC

Elson, Ellen, 1989-2000

Professor of Office Administration, SMC

Faucette, Dixon, 1972-1998

Professor of Math/Science, SMC

Faucette, Walter, 1970-1998

Professor of Math/Science, SPC

Feliz, M. Fred, 1969-1996

Facilities Technician II/Plumber, SPC



## GENERAL INFORMATION

- Flores, William, 1968-1991  
Dean of Instruction, ASP
- Foster, Cass, 1990-2008  
Professor of Theater, SPC
- Foster, Cheryl 1975-1988 & 1990-2004  
Vice President of College Development Services,  
District
- Freyermuth, Kim, 1979-2007  
Professor of Vocal Music, SPC
- Gaunt, Eileen, 1983-1993  
Switchboard Operator, SPC
- Gessner, Michael, 1985-2001  
Professor of English, SPC
- Gibson, Dr. Dale, 1967-1983  
Vice President of Planning & Research, SPC
- Gray, Michael, 1996-2010  
Professor of Sports & Fitness, Head Cross  
Country Coach, SPC
- Haefner, Charles, 1987-2001  
Professor of Business, AVC
- Halford, Delores, 1989-1999  
Office Assistant II, SMC
- Harrington, Patrick, 1997 – 2012  
Professor of Farm Business Management, SPC
- Heal, Joe, 1968-1998  
Dean of Instruction, AVC
- Heaps, Melvin, 1995 – 2008  
Professor of Physics, SPC
- Heintz, Gary, 1990-2007  
Professor of Sports & Fitness, SPC
- Hight, Willie, 1978-1987  
Secretary-PEP, SPC
- Hillery, Kenneth, 1969-1999  
Welding Technology, SPC
- Honeycutt, Martha, 1972-1996  
Director of Continuing Education, SPC
- Huether, Delores, 1971-1995  
Professor of Nursing, SPC
- Irvine, John, 1990-2010  
Vice President, Academic Programs &  
Services, District
- Isbell, Thomas, 1988-2005  
Professor of Speech, SPC
- Jenkins, Dennis, 1972 – 2012  
President, District
- Jenkins, Marsaille, 1996-2007  
Distance Learning Operator I, AVC
- Johnson, Glen, 1976-1995  
Professor of Building Construction, AVC
- Johnson, James, 1969-1983  
Professor of Music, SPC
- Johnson, Katie, 1982-2003  
Professor of Sociology, SPC
- Johnson, Robert, 1978-1995  
Campus Safety Office, SPC
- Kessel, Joyce, 1994-2005  
Program Coordinator, Learning Resource  
Center/SMC
- Kinnison, William, 1970-2000  
Professor of Science, SPC
- Klein, John J., Jr., 1988-2003  
President, District
- Kochenderfer, Terrill, 1987 – 2008  
Professor of Computer Information Systems,  
SMC
- Kolb, Sandra, 1990-2011  
Professor of Reading
- Laursen, Linda, 1971-2007  
Professor of Sports & Fitness, SPC
- Lee, James, 1982-2001  
Professor of Music, SPC
- Lee, Judy, 1979-2010  
Student Services Assistant III, SPC
- Linnaus, Vernon, 1969-1987  
Professor of Business, AVC
- Marin, Alejandro, 1972-1983  
Maintenance Worker/Watchman, SPC
- Marinoff, Krist, 1990-2006  
Inventory Management
- Martinez, Guillermo “Willie”, 1979-2010  
Campus Facilities Supervisor, SMC
- Mason, Sheila, 1986-2004  
Secretary III, SMC
- McClellan, Patrick, 1984 – 2008  
Professor of History, SPC
- McEuen, Jody, 1992-2005  
Director of the Learning Resource Center, SPC
- McFee, Rebecca, 1975-2001  
Professor of Office Administration, AVC
- McGlynn, Cherie, 1970-1993  
District Director of Student Records & Registrar,  
SPC
- McIntyre, Harold “Mac”, 1994 – 2008  
Facilities Assistant III, SMC
- McLaughlin, L. Harold, 1992-2002  
Dean of Instruction, SPC
- Mauldin, Sheryl, 1975-2002  
Continuing Education Medical Manager, SMC
- Medley, John, 1982-2006  
Facilities Technician II, AVC
- Menke, Larry 1996-2009  
Facilities Technician III, SPC
- Mills, Gerald, 1984-2005  
Professor of English, SPC
- Mitchell, Marian, 1990-2006  
Professor of English/Reading, SPC



- Munoz, Maria Elda, 1979 – 2009  
Student Services Assistant III
- Myers, Clint, 1986-2005  
Professor of Sports and Fitness, SPC
- Myers, Varr, 1978 – 2008  
Professor of Heavy Equipment & Diesel  
Technology, SPC
- Nava, Steve, 1980 – 2004  
Facilities Technician II, SPC
- Nieto, Steve, 1976-2002  
Facilities Assistant I, SP
- O'Brien, Richard, 1969-1991  
Professor of Chemistry/Math, SPC
- Ochoa-Marek, Sandy, 1976-2007  
Program Manager, SPC
- Ortiz, Sr., Ruben, 1975-1995  
Facilities Assistant I/Gardener, SPC
- Pace, Wendell, 1988 – 2007  
Professor of Heavy Equipment, SPC
- Paddison, John, 1992-2007  
Professor of English, SMC
- Padilla, Ed, 1969-1991  
Superintendent of Building & Grounds, SPC
- Page, Frank, 1997-2005  
Professor of Plumbing, ASP
- Palmer, John, 1969-2003  
Professor of Electricity, SPC
- Patton, Norman, 1981-1994  
Professor of HPER/Men's Head Basketball  
Coach, SPC
- Peel, Jack, 1982-1998  
Facilities Assistant II, SPC
- Perez, Juan, 1985-2003  
Facilities Assistant, SPC I
- Peters, Edgar, 1982-2007  
Professor of Manufacturing/Engineering, SPC
- Peters, Fran, 1981-1998  
Accounting Clerk III, SPC
- Phillips, William, 1988-2000  
Dean of Instruction, ASP
- Policastro, Joseph, 1989-2004  
Professor of Business, SMC
- Powell, Louise, 1986-2001  
Professor of Early Childhood Education, SPC
- Randall, Ted, 1996-2007  
Professor of Cement Finishing, ASP
- Ratz, Arlene, 1974-1996  
Professor of Music/English, SPC
- Rhodes, Edwyna, 1974-1995  
Secretary II, AVC
- Richardson, Kenneth, 1973-1999  
Professor of Health, Physical Education,  
Recreation, SPC
- Romero, Marie, 1974 – 2008  
Office Assistant II, AVC
- Ross, Edna, 1975-1988  
Director of Nursing, SPC
- Ross, Jeffrey, 1979 – 2008  
Professor of English, SMC
- Ruelas, Augustine, 1969-1995  
Facilities Technician I/Assistant Craftsman, SPC
- Ruiz, Henry, 1979-1997  
Professor of Upholstery, ASP
- Runner, Robert, 1969-1983  
Professor of History & Government, SPC
- Rupp, Leslie, 1987-2008  
Bookstore Manager, SPC
- Schiller, Marjorie, 2000 – 2011  
Professor of Education, SPC
- Shaw, Susan, 1999-2011  
Vice President, Institutional Effectiveness &  
Advancement, District
- Shirley, Al, 1999 - 2013  
Student Services Generalist, SPC
- Soliz, Arle, 1982 - 2012  
Purchasing Assistant, District/SPC
- Soliz, Josie, 1980 - 2010  
Academic Division Assistant, SPC
- Soliz, Manuel, 1979 – 2009  
Facilities Foreman, SPC
- Sowers, John, 1976-2002  
Professor of Journalism, SPC
- Spillman, Craig, 1989-2003  
Program Manager, Continuing Education, AVC
- Stinard, Sharon, 1990-2011  
Community Outreach Coordinator, SMC
- Strang, Eleanor, 1989-2001  
Director of Nursing, SPC
- Takas, Suzette, 2001 - 2013  
Professor of Mathematics,
- Taylor, Beverly, 1986-1996  
Professor of Psychology, SPC
- Thielsen, Clarence, 1986-1996  
Professor of Cement, ASP
- Valencia, Henry, 1970-1994  
Custodian, SPC
- Van Hazel, Kurt, 1981-2003  
Professor of Mathematics, SPC
- Welsh, Dianne, 1995-2006  
Secretary II, SMC
- Weir, Janet, 1984-2002  
Associate Director of Public Services, SMC
- Westerman, Frank, 1975-2005  
Professor of Drafting, SPC
- Wilcox, Alice, 1973-2002  
Program Specialist, ECE, SPC



## GENERAL INFORMATION

Wise, Fred, 1986-2006

Facilities Assistant, SPC

Wolf, Louise, 1970-1983

Professor of Technical Communications, SPC

Wright, Phyllis, 1980-1993

Programmer/Analyst, SPC

Young, George, 1971-1996

Professor of HPER/Athletic, SPC

Zawlocki, Eleanor, 1973-1983

Professor of Nursing, SPC

Zeluff, Barbara, 1990-2000

Secretary II, ASP

Zesiger, Jack, 1976-1989

Police Officer I, SPC





# GENERAL INFORMATION

## FALL 2014

## SPRING 2015

Faculty on Campus	August 12-14	T-Th	Faculty on Campus	January 12–15	M-Th
Faculty Development Day	August 12	T	<b>Weekend College Begins (After 4:30 p.m.)</b>	<b>January 16</b>	<b>F</b>
<b>Weekend College Begins (After 4:30 p.m.)</b>	<b>August 15</b>	<b>F</b>	Last Day of Spring Registration	January 17	Sat 9-1 pm
Last Day of Fall Registration	August 16	Sat 9-1pm	Martin Luther King, Jr. Day <i>College Closed</i>	January 19	M
<b>Regular Classes Begin</b>	August 18	M	<b>Regular Classes Begin</b>	January 20	T
Class Changes/Drop-Add	August 15-21	F-Th	Class Changes/Drop-Add	January 16-26	F-M
Labor Day - <i>College Closed</i>	September 1	M	President's Day <i>College Closed</i>	February 16	M
All College Day (No classes prior to 4:30 pm) (No services all day)	September 2	T	Development Day (No classes prior to 4:30 pm) (No services all day)	February 17	T
45 Day Census	October 2	Th	Last Day to Apply for May Graduation	March 2	M
Spring Registration Begins (Continues through January 17)	October 6	M	45 Day Census	March 5	Th
Mid-Term Week	October 3-9	F-Th	Mid-Term Week	March 6-12	F-Th
Last Day to Apply for December Graduation	October 13	M	Spring Break - <i>College Closed</i>	March 16-21	M-Sat
Last Day to Withdraw from Semester Length Classes	October 25	Sat.	Summer/Fall Registration Begins (Continues through August 21)	March 30	M
Veteran's Day - <i>College Closed</i>	November 11	T	Last Day to Withdraw from Semester Length Classes	April 4	Sat
Thanksgiving Break (No evening classes or college services after 6 pm on Nov. 26 <sup>th</sup> )	November 27-29	Th-Sat	Final Exams	May 8-14	F-Th
Final Exams	December 5-11	F-Th	Semester Ends	May 14	Th
Semester Ends	December 11	Th	Grades due in Registrar's Office	May 18	M
Grades due in Registrar's Office	December 15	M			
Winter Break - <i>College Closed</i>	Dec 22 – Jan 1	M-Th			
			<b>Commencement</b>		
			Signal Peak Campus (7:00 pm)	May 15	F

## SUMMER 2015

Memorial Day - College Closed	May 25	M
Last Day of Summer Registration	May 28	Th
<b>First Summer Session Begins</b>	<b>June 1</b>	<b>M</b>
Class Changes/Add-Drop	June 1-2	M-T
Last Day to Apply for Summer Graduation	June 4	Th
First Five Week Session Ends	July 2	Th
<b>Second Summer Session Begins</b>	<b>July 7</b>	<b>T</b>
Class Changes/Add-Drop	July 7-8	T-W
Second Five Week Session Ends	August 8	Sat
Grades Due in Registrar's Office	August 10	M

Academic Calendar 2014-15  
Revised: 7/16/13



INDEX

A

Absence Policy.....24  
 Academic Advising.....9  
 Academic Calendar .....259  
 Academic Honors Recognition .....26  
 Academic Load .....9  
 Academic Probation.....26  
 Academic Progress.....26  
 Academic Renewal Guidelines .....26  
 Academic Standards .....24  
 Academic Suspension .....26  
 Accounting (A.A.S.) Degree.....61  
 Accounting Certificate .....62  
 Accounting (ACC) Courses .....142  
 Accreditation.....2  
 Activity Scholarship.....15  
 Adding Classes.....11  
 Administration of Justice (AJS) Courses .....142  
 Administration of Justice (A.A.) Degree.....62  
 Administration of Justice (A.A.S.) Degree .....63  
 Administration of Justice (Certificate).....64  
 Administrative Withdrawal.....11  
 Admission Catalog .....8  
 Admission Information .....5  
 Admission of International Students .....5  
 Advanced Corrections Certificate .....133  
 Agriculture (A.A.) Degree .....65  
 Agriculture (A.S.) Degree .....66  
 Agriculture Business Certificate .....67  
 Agriculture Business (AGB) Courses .....144  
 Agriculture General (A.A.S.) Degree.....68  
 Agriculture General (Certificate) .....69  
 Agriculture Science (AGS) Courses .....145  
 Albright College (AC) .....36  
 Animal Science (ANS) Courses.....146  
 Ann Williams Scholarship .....20  
 Anthropology (ASB) Courses .....148  
 Application Development and Web Design (Certificate) .....78  
 Application for Graduation .....22  
 Archaeology (ARH) Courses .....148  
 Arizona General Education Curriculum (AGEC) .....141  
 Arizona General Education Curriculum (AGEC)  
 Course List .....45  
 Arizona Shared Unique Numbering (SUN) System.....34  
 Arizona State University (ASU) .....37  
 Arizona Transfer Degree Information .....33  
 Art (ART) Courses.....149  
 Artist & Venue Management (Certificate).....85  
 Arthur and Mary Faul Scholarship.....17  
 Associate of Applied Science Degree (A.A.S.).....53  
 Associate of Arts Degree (A.A.) .....40  
 Associate of Arts in Elementary Education (A.A.E.E.) .....103  
 Associate of Business Degree (A.BUS.).....42  
 Associate of General Studies Degree (A.G.S.) .....54  
 Associate of Science Degree (A.S.) .....43  
 Astronomy (AST) Courses.....150  
 Athletic Records.....29  
 Athletic Scholarship.....15  
 Athletic Studies (A.A.) Degree .....126

Attendance Requirements .....24  
 Audit (AU) Grade .....25  
 Auditing .....11  
 Automotive/Diesel (AUT) Courses .....150

B

Baking and Pastry (Certificate).....91  
 Basic EMT (Certificate).....105  
 Benedictine University (BU) .....36  
 Biofuels Technician (Certificate).....124  
 Biology (BIO) Courses .....151  
 Biotechnology (A.S.) .....71  
 Board of Governors .....243  
 Bookstore .....27  
 Bookstore Refund Policy .....27  
 Boswell Scholarship .....17  
 Brigham Young University (BYU).....36  
 Business (A.A.S.) Degree .....72  
 Business (Certificate).....73  
 Business (BUS) Courses .....152

C

C.A. & Nellie Pope Scholarship .....20  
 CAC Academic Scholarship .....15  
 CAC Incentive Scholarship.....14  
 Calculation of Grade Point Average .....25  
 Calendars, College Academic .....259  
 Campus Leadership Opportunities .....31  
 Casa Grande Jr. Chamber of Commerce Scholarship .....17  
 Catalog under Which a Student Graduates .....22  
 Catering.....28  
 Central Arizona College Customer Service and Technical  
 Support.....28  
 Central Arizona College Foundation, Promise for the  
 Future Scholarship .....16  
 Central Arizona College Foundation Scholarships .....16  
 Certificates .....55  
 Chemistry (A.S.).....76  
 Chemistry (CHM) Courses .....155  
 Chinese (CHI) Courses .....156  
 Civil Technology (CET) Courses .....156  
 Clara Lovett University Foundation Scholarship.....19  
 Classification of Students .....8  
 Clinical Laboratory Assistant (Certificate) .....111  
 Co-curricular Scholarship Programs .....15  
 Coding & Reimbursement (Certificate).....112  
 College Administration .....243  
 College Mission .....2  
 College Policy, Student Code of Conduct.....55  
 Communication (COM) Courses .....156  
 Community Nutrition Worker (Certificate) .....121  
 Community Public Health (A.S.).....112  
 Community Public Health (CPH) Courses .....162  
 Computer Aided Design (Certificate) .....130  
 Computer Applications for Business Users (Certificate).....79  
 Computer Business Applications (CBA) Courses .....157  
 Computer Information Systems (CIS) Courses.....159  
 Computer Programming (A.A.S.) Degree.....79  
 Computer Programming Certificate .....80  
 Conferring a Second Degree from Central Arizona College .23



Coolidge Mounted Sheriff's Posse Scholarship.....	17	Entertainment Industry Technology Live Audio and Lighting (A.A.S.) .....	85
Corrections (A.A.S.) Degree .....	133	Entertainment Industry Technology Live Audio and Lighting Certificate .....	86
Counseling/Personal Development (CPD) Courses .....	162	Entertainment Industry Technology Popular Music Performance (A.A.S.) .....	87
Course Delivery .....	140	Entertainment Industry Technology Popular Music Performance Certificate .....	87
Course Descriptions .....	139	Entertainment Industry Technology Recording Engineering (A.A.S.) .....	88
Credit/No Credit.....	25	Entertainment Industry Technology Recording Engineering Certificate .....	89
Credit by Evaluation .....	23	Entertainment Industry Technology (EIT) Courses .....	182
Credit by Examination .....	22	Environmental Science (ENV) Courses.....	184
Critical Care for Paramedics (Certificate).....	105	Equine Management and Training (A.A.S.) .....	69
Cross Listed Courses.....	141	Equine Management and Training (Certificate).....	70
Culinary Arts Certificate I .....	93	<b>F</b>	
Culinary Arts Certificate II .....	93	Faculty and Staff Directory.....	244
Culinary Arts (A.A.S.) Degree.....	92	Family Education Rights and Privacy Act.....	21
Culinary Arts (CUL) Courses .....	163	Federal Financial Aid Programs .....	12
Customer Service & Technical Support.....	28	Field Programmable Gate Array (FPGA) (Certificate).....	118
<b>D</b>		Financial Aid and Scholarships.....	12
Dance (DAN) Courses .....	166	Financial Aid Contact Information .....	21
Dean's and Honors List.....	26	Fine Arts (A.A.) Degree.....	89
Declaration of Civility for a Learning College .....	3	Fire Science Technology (A.A.S.) Degree.....	109
Degrees and Certificates Information .....	32	Fire Science Technology (FSC) Courses .....	185
Diabetes Care and Education (Certificate).....	122	Fire Services .....	107
Diesel and Heavy Equipment (DIE) Courses.....	167	Firefighter Operations (Certificate) .....	108
Diesel and Heavy Equipment Technology (A.A.S) Degree..	94	Food Services.....	28
Diesel and Heavy Equipment Technology (Certificate) .....	95	Foundation Scholarships .....	16
Dietary Manager Training Program (Certificate).....	122	French (FRE) Courses.....	189
Dietetic Technician (A.A.S.) Degree .....	123	<b>G</b>	
Disability Resource Services.....	30	GED Scholarship .....	14
Donovan Kramer Scholarship .....	18	GED Test .....	29
Drafting (DFT) Courses .....	169	General Education Developmental (GED) Courses.....	190
Dropping Classes .....	11	General Information.....	243
Duane Irvin Scholarship.....	18	Geographic Information System (A.A.S.) Degree .....	80
Dual Enrollment.....	5	Geographic Information System (GIS) Courses .....	190
<b>E</b>		Geography (GEO) Courses .....	192
Early Childhood Education (ECE) Courses .....	169	Geology (GLG) Courses .....	192
Early Childhood Education Family Childcare (A.A.S.) Degree .....	98	Geology & Planetary Science (A.S.) Degree .....	110
Early Childhood Education Family Childcare (Certificate) ..	98	George Fridell Memorial Scholarship.....	16
Early Childhood Education Infant-Toddler (A.A.S.) .....	99	GIS Drafting & Mapping (Certificate).....	81
Early Childhood Education Infant-Toddler (Certificate) .....	99	Governing Board Members.....	243
Early Childhood Education Management (A.A.S.) Degree .	100	Grade Change .....	26
Early Childhood Education Management (Certificate).....	101	Grading Information .....	24
Early Childhood Education Preschool (A.A.S.) Degree .....	101	Graduation with Honors.....	26
Early Childhood Education Preschool (Certificate) .....	102	Graphic Design (A.A.S.) Degree .....	90
Economics (ECN) Courses .....	173	Group Fitness Instructor (Certificate) .....	127
Education (EDU) Courses.....	174	Guy Gilbert Scholarship .....	18
Electricity (ELC) Courses .....	175	<b>H</b>	
Electronics (ELT) Courses.....	176	Health Careers Center (HCC) Courses .....	192
Elementary Education (A.A.E.E.) Degree .....	103	Health Information Management (HIM) Courses .....	193
Emergency Medical Services (EMS) Courses .....	177	Health Information Tech (A.A.S.) Degree .....	113
Emeritus Faculty and Staff.....	255	Health Knowledge and Skills (HKS) Courses .....	195
Employment Services .....	27	Health Patient Management (HPM) Courses .....	195
Engineering (EGR) Courses.....	180	Heavy Equipment Mechanic's Apprenticeship (Certificate).....	134
English (ENG) Courses.....	180		
English Second Language (ESL) Courses .....	182		
Entertainment Industry Technology Artist and Venue Management (A.A.S.).....	84		
Entertainment Industry Technology Artist and Venue Management Certificate.....	85		



# GENERAL INFORMATION

Heavy Equipment Operations (HEO) Courses.....	198
Heavy Equipment Operator (A.A.S.) Degree.....	96
Heavy Equipment Operator (Certificate).....	97
History (HIS) Courses.....	199
Honors (HNR) Courses.....	200
Honors Program.....	26
Honors Scholarship.....	27
Hospitality Management (HRM) Courses.....	201
Hotel and Restaurant Management (A.A.S.) Degree.....	74
Hotel and Restaurant Management (Certificate).....	76
Humanities (HMC) Courses.....	202

**I**

Incompletes (I) Grade.....	25
Institutional Scholarship Programs.....	14
Intercollegiate Athletics.....	29
Interdisciplinary Studies (IDS) Courses.....	203
International Students.....	5
Internships.....	27

**J**

James Lee Music Scholarship.....	19
JoAnn Harter Memorial Scholarship for Nursing.....	18
Joe Refsnes Scholarship.....	20
John Deere Construction and Forestry Equipment Technology (A.A.S.) Degree.....	135
Judge Robert R. Bean Memorial Scholarship.....	16

**K**

Kathleen Van Cleft Indian Scholarship Fund.....	20
---	----

**L**

LabView Programming (Certificate).....	119
Learning Support Department.....	29
Law Enforcement & Administration of Justice (See Administration of Justice)	
Library.....	30
Literature (LIT) Courses.....	203
Live Audio & Lighting (A.A.S.).....	85
Live Audio & Lighting (Certificate).....	86

**M**

Management Certificate.....	74
Manufacturing Electronics (Certificate).....	119
Manufacturing Engineering (A.A.S.).....	119
Manufacturing Engineering Technology (MET) Courses.....	204
Mass Communications (MSC) Courses.....	206
Massage Therapy (A.A.S.) Degree.....	114
Massage Therapy (Certificate).....	115
Mathematics (MAT) Courses.....	208
Meal Plan Options Living On Campus.....	28
Medical Assistant (A.A.S.) Degree.....	116
Medical Assistant (Certificate).....	117
Michael Cepello Scholarship.....	17
Microcomputer Business Applications (A.A.S.) Degree.....	82
Microcomputer Business Applications Specialist (Certificate).....	82
Music History and Literature (MHL) Courses.....	210
Music Performance (MUP) Courses.....	211
Music Theory and Composition (MTC) Courses.....	212

**N**

Nanofabrication Technology (A.A.S.) Degree.....	120
---	-----

N.E. "Pete" & Josephine King Scholarship.....	18
Network Systems Administration A.A.S. & (Certificate).....	83
New Mexico Resident Tuition Waiver Program.....	8
New Student Orientation.....	10
Non-Traditional Student Scholarship.....	15
Northern Arizona University.....	38
Numbering System.....	12
Nursing (A.A.S.) Degree.....	136
Nursing (NUR) Courses.....	213
Nutrition/Dietetics (NTR) Courses.....	214
Nutrition and Health Promotion (Certificate).....	124

**O**

Office Automation Systems (OAS) Courses.....	217
Online Registration.....	11
On Time Registration (OTR).....	11
Open Entry/Open Exit Courses.....	11
Operator's Apprenticeship Program (Certificate).....	135
Out-of-County Residence Affidavit.....	8

**P**

Paramedicine (A.A.S.) Degree.....	106
Performing Arts Scholarship.....	16
Pharmacy Technician (Certificate).....	118
Philosophy (PHI) Courses.....	218
Phi Theta Kappa.....	26
Physical Education Activity (PAC) Courses.....	220
Physical Education (PED) Courses.....	218
Physical Education Health (PEH) Courses.....	225
Physical Education Varsity Sports (PEV) Courses.....	226
Physical Geography (See Geography)	
Physics (PHY) Courses.....	227
Pinal County University Foundation Scholarship.....	20
Placement Testing.....	9
Plagiarism Statement.....	24
Political Science (POS) Courses.....	228
Popular Music Performance (A.A.S.).....	87
Popular Music Performance (Certificate).....	87
Prerequisites and Corequisites.....	9
Program Requirements.....	8
Programs of Study.....	59
Proof of Residency.....	7
Promise for the Future Scholarship.....	16
Psychology (PSY) Courses.....	229

**R**

R.F. Schoen Scholarship.....	20
Radiologic Technology (A.A.S.) Degree.....	137
Radiology (RAD) Courses.....	229
Reading (RDG) Courses.....	231
Reading Requirement.....	9
Real Estate (REA) Courses.....	232
Recording Engineering (A.A.S.).....	88
Recording Engineering (Certificate).....	89
Recreation Management (Certificate).....	128
Recreation (REC) Courses.....	232
Refunds.....	12
Registration Information.....	10
Renewable Energy Technology (A.A.S.).....	125
Renewable Energy (RET) Technology Courses.....	233
Repetition of Courses.....	11
Residence Life.....	30



Residency Guidelines.....6  
 Roberta Phillips Scholarship .....20

**S**

Satisfactory/Unsatisfactory .....25  
 Sign Language (SLG) Courses.....234  
 Skills Workforce (SKL) Courses .....234  
 Social Work Undergraduate (SWU) .....236  
 Sociology (SOC) Courses .....236  
 Sodexo Scholarship.....20  
 Solar Photo Voltaic Technician (Certificate) .....126  
 Spanish (SPA) Courses .....237  
 Special Courses .....140  
 Sports Information (Certificate).....129  
 Sports Management (A.A.S.) Degree.....129  
 Staff and Faculty Directory .....244  
 Student Activities.....31  
 Student Clubs & Organization .....31  
 Student Code of Conduct .....33  
 Student Employment.....27  
 Student Engagement & Activities .....31  
 Student Leadership Organization.....31  
 Student Records .....21  
 Student Right to Know.....22  
 Student Services.....27  
 Summer Bridge Program .....30

**T**

Table of Contents ..... I  
 Tech Prep .....23  
 Tepi Maddock Scholarship .....19  
 Theater (THE) Courses .....238  
 Thomas Cole Art Scholarship .....17  
 Title IV Programs.....12  
 Tom Kunz Vaquero Scholarship .....19  
 Transfer Degree Information for Arizona .....33  
 Transfer of Credits .....10  
 Transfer Students .....8  
 TRIO Student Success Program.....30

**U**

Upper Division Course Transfer .....35

**V**

Veterans Educational Benefits .....21  
 Vision Statement .....2

**W**

Welding (Certificate) .....132  
 Welding (WLD) Courses .....240  
 Western Undergraduate Education Program.....7  
 Wildland Firefighter I (Certificate)..... 110  
 Withdrawal from Classes/College..... 11  
 Women and Gender Studies (WGS) Courses.....241

**Z**

Zelda (Chris) Ferryman Scholarship ..... 17






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