# Central Arizona College

## CATALOG 2022-2023
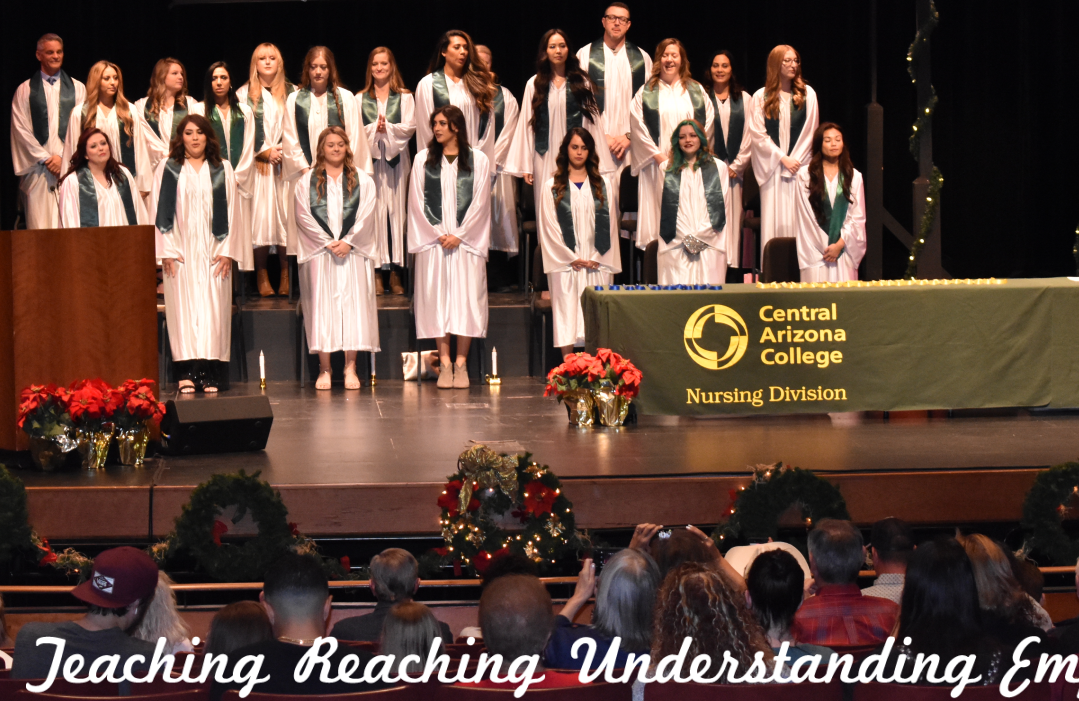
Defining & Achieving Goals…

*Together!*
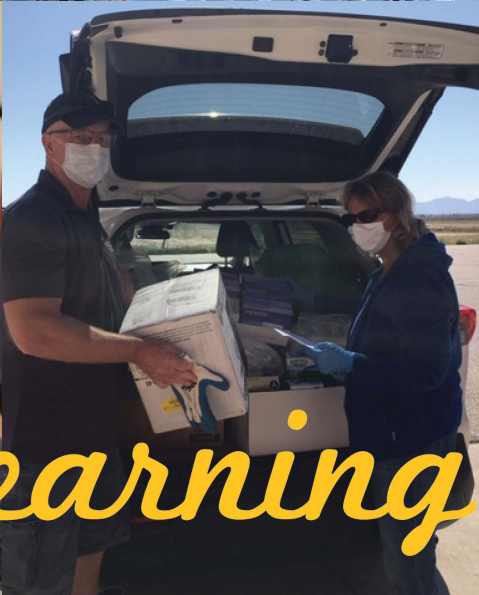
*Teaching Reaching Understanding Empowering Learning*

Central Arizona College
Nursing Division

Central Arizona College
Skilled Trades

Agriculture
Diesel Technology
Industrial Carpen
Commercial Elect
Installer

Equine Science
Automated Industrial Technolg
Heavy Equipment

Central Arizona College

Central Arizona College

True Learning

Central Arizona College recognizes that students and their families continue to experience challenges related to the ongoing Covid-19 Pandemic. As a college we are dedicated to providing a safe environment for our students, faculty, staff and the communities we serve. It is our goal to provide a world class learner experience.

Whether you are seeking a certificate or two-year degree, plan to transfer to a four-year institution, will be entering the career of your choice, or plan to complete courses for personal enhancement, I am pleased that you have chosen CAC to help you achieve your goals.

I encourage you to explore all that CAC has to offer. Throughout the pages of this catalog, you will discover the academic offerings, programs and services available to assist you along your educational journey.

Dr. Jackie Elliott

You are the future of our college. Please know that our team of dedicated faculty and staff is here to inspire you and help you achieve your full potential.

On behalf of Central Arizona College's faculty and staff, thank you for selecting CAC.

I wish you great success and look forward to seeing you around campus.


Sincerely,

President/CEO
Central Arizona College

## FALL 2022

| | | |
|---|---|---|
| Faculty on Campus | August 15-18 | M-Th |
| All College Day *(College Closed)* | August 15 | M |
| Last Day of Online Fall Registration | August 21 | Sun |
| **Weekday & Online Classes Begin** | **August 22** | **M** |
| Class Changes/Drop-Add | August 22-29 | M-M |
| **Weekend College Begins** | **August 26** | **F** |
| Labor Day - *College Closed* | September 05 | M |
| Military/Veteran Priority Registration Begins *(Continues through October 10)* | October 03 | M |
| 45 Day Census | October 05 | W |
| Spring Registration Begins *(Continues through January 16)* | October 10 | M |
| Mid-Term Week | October 10-15 | M-Sat |
| Priority Deadline for May 2023 Graduation | October 17 | M |
| Last Day to Withdraw from Semester Length Classes | October 27 | Th |
| Veterans' Day – *College Closed* | November 11 | F |
| Thanksgiving Break – *College Closed* *(Tuesday evening classes meet as scheduled)* | November 23-26 | W-Sat |
| Final Exams | December 05-10 | M-Sat |
| Semester Ends | December 10 | Sat |
| Grades due in Registrar's Office | December 13 | T |
| Grades Available in Student Portal | December 15 | Th |
| Winter Break - *College Closed* | Dec 19 – Dec 31 | M-Sat |

## SPRING 2023

| | | |
|---|---|---|
| College Reopens | January 02 | M |
| Faculty on Campus | January 09-12 | M-Th |
| Last Day Online Spring Registration | January 16 | M |
| Martin Luther King, Jr. Day - *College Closed* | January 16 | M |
| **Weekday & Online Classes Begin** | **January 17** | **T** |
| Class Changes/Drop-Add | January 17-24 | T-T |
| **Weekend College Begins** | **January 20** | **F** |
| President's Day – *College Closed* | February 20 | M |
| Development Day– *College Closed* | February 21 | T |
| Priority Deadline for Summer 2023 Graduation | February 27 | M |
| 45 Day Census | March 02 | Th |
| Military/Veteran Priority Registration Begins *(Continues through October 10)* | March 06 | M |
| Mid-Term Week | March 06-11 | M-Sat |
| Spring Break - *College Closed* | March 13-18 | M-Sat |
| Summer/Fall Registration Begins *(Continues through August 20)* | March 20 | M |
| Last Day to Withdraw from Semester Length Classes | March 30 | Th |
| Final Exams | May 08-13 | M-Sat |
| Semester Ends | May 13 | Sat |
| Grades due in Registrar's Office | May 16 | T |
| Grades Available in Student Portal | May 18 | Th |

### Commencement

| | | |
|---|---|---|
| Signal Peak Campus 7:00 pm | May 12 | F |

## SUMMER 2023

| | | |
|---|---|---|
| Last Day of Walk-In Summer Registration | May 25 | Th |
| Last Day of Online Summer Registration | May 29 | M |
| Memorial Day - *College Closed* | May 29 | M |
| **Summer Session Begins** | **May 30** | **T** |
| **1st 5-week and 8-week Classes Begin** | **May 30** | **T** |
| Class Changes/Add Drop for 1st 5-week | May 30-May 31 | T-W |
| Priority Deadline for Fall 2023 Graduation | June 01 | Th |
| Juneteenth – *College Closed* | June 19 | M |
| First 5-Week Classes End | June 29 | Th |
| **Second 5-week Classes Begin** | **July 03** | **M** |
| Class Changes/Add Drop for 2nd 5-week Classes | July 03-05 | M-W |
| Independence Day – *College Closed* | July 04 | T |
| 8-Week Classes End | July 20 | Th |
| Second 5-Week Classes End | August 03 | Th |
| Grades Due in Registrar's Office | August 08 | T |
| Grades Available in Student Portal | August 10 | Th |

**Signal Peak Campus**
*Location: Coolidge, AZ*
*Serving residents throughout Pinal County.*
Features: On-Campus Housing options for students; Men's & Women's Championship caliber athletic programs; Arts & Entertainment options in the Don P. Pence Center for the Performing & Visual Arts.

**Aravaipa Campus**
*Location: Winkelman, AZ*
*Serving the communities of Hayden, Kearny, Mammoth, Oracle, Saddlebrooke, San Manuel, Superior & Winkelman.*
Features: Education opportunities for residents living in the Copper Corridor; classrooms, learning center, community room.





**Superstition Mountain Campus**
*Location: Apache Junction, AZ*
*Serving East Valley residents.*
Features: Health programs with a Massage Clinic open to the public; includes advising, testing, a student lounge, library, labs & classrooms.

**San Tan Campus**
*Location: San Tan Valley, AZ*
*Serving Queen Creek, San Tan, & Florence.*
Features: CAC's newest campus; student center, library, state-of-the-art classrooms & labs, culinary arts kitchen.





**Maricopa Campus**
*Location: Maricopa, AZ*
*Serving residents of Maricopa, the Ak-Chin Indian Community & western Pinal County.*
Features: Eco-Friendly buildings complete with state-of-the-art science classrooms, community meeting space, library, & culinary arts kitchen.

**Casa Grande Center**
*Location: Casa Grande, AZ*
*Serving residents throughout Pinal County.*
Features: High School Equivalency (HSE), GED Preparation, & ESL classes available at the CG center & at remote locations throughout the county.

**Florence Center**
*Location: Florence, AZ*
*Serving eligible inmates of Florence, Eyman, & Winslow prison complexes.*
Features: Prison programming, Second Chance Pell, & skilled trades opportunities to eligible inmate students.

*Central Arizona College opened its doors in 1969  as the first – and still the only – college in Pinal County.  CAC serves and educates the diverse communities of Pinal County.  From students of Hispanic and Native American descent to participants in the lifelong learners program, the institution's diverse college community values the power of innovation, continuous quality improvement, and the contribution of the individual.*
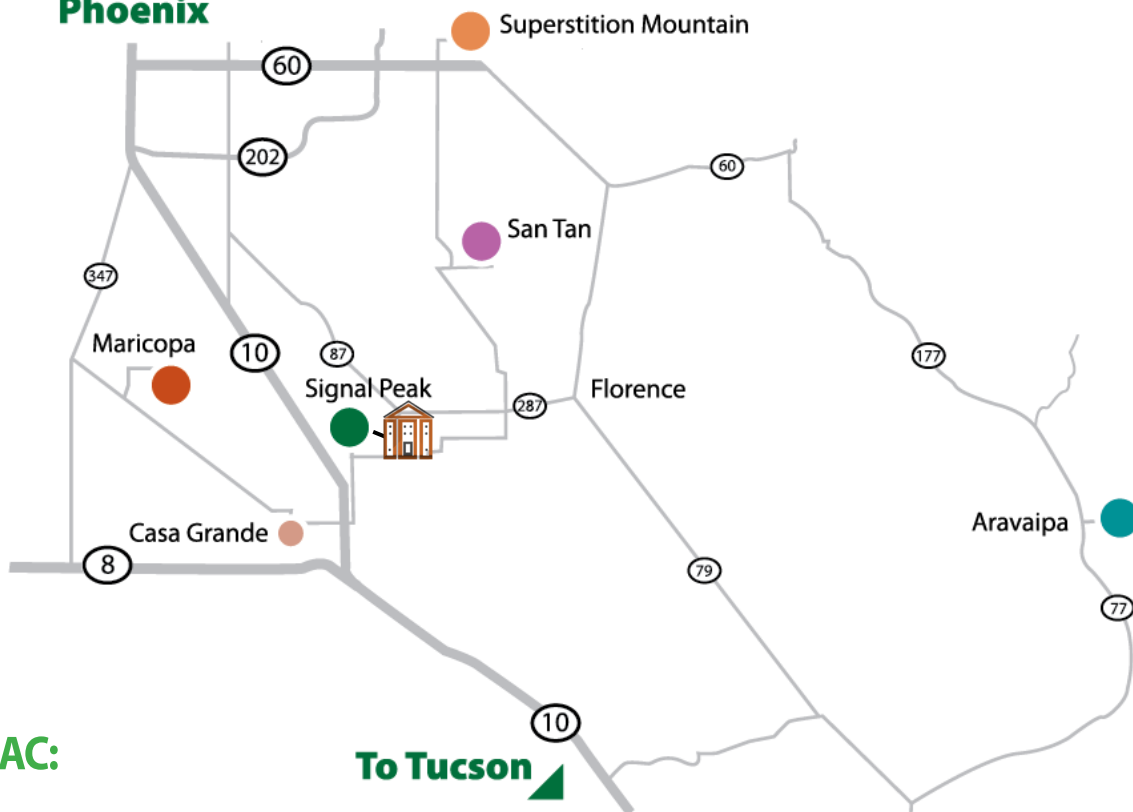
*With five campuses located strategically throughout the county, CAC provides accessible, educational, economic, cultural, and personal growth opportunities for those of all ages.  The College's talented and innovative faculty and staff is dedicated to fostering a spirit of learning.*

*Visit centralaz.edu/locations.*

Central Arizona College District Map -
*https://www.google.com/maps/d/viewer?mid=1YDmEtqCGq6DF0Gsc4yN6laLrCaY&usp=sharing*

**Phoenix**

Superstition Mountain

60

202

347

San Tan

Maricopa

10

87

Signal Peak

287

Florence

60

177

Casa Grande

8

79

Aravaipa

77

To Tucson

10

**Call CAC:**

520-494-5111

**Campus:**

● **Signal Peak Campus**
8470 N. Overfield Rd.
Coolidge, AZ 85128

🏠 **Resident Life Housing
Signal Peak Campus**
520-494-5470

● **Aravaipa Campus**
80440 E. Aravaipa Rd.
Winkelman, AZ 85192

● **San Tan Campus**
3736 E. Bella Vista Road
San Tan Valley, AZ 85143

● **Maricopa Campus**
17945 N. Regent Drive
Maricopa, AZ 85138

● **Superstition Mountain Campus**
805 S. Idaho Road
Apache Junction, AZ 85119

**Centers:**

● **Casa Grande Center**
1015 E. Florence Blvd.
Casa Grande, AZ 85122

● **Florence Center**
P.O. Box 707
800 E. Butte Avenue
Florence, AZ 85132

# Introduction

# CAC Offerings:
# What Can I Study At CAC?

# Admissions:
# How Do I Become A Student?

# Paying for College:
# What Are My Options?

# Registration:
# I'm A CAC Student, Now What?

# I Have My Schedule: Now What Do I Need To Know?

# I'm Almost Done With My Degree/Certificate: What Now?

# Student Rights & Responsibilities: What Are They?

## Opportunities Beyond the Classroom:
### How Do I Get Involved?

## Student Resources:
### Where Do I Go For Help?

## Accreditation

## Degrees & Certificates

## Biological/Physical Sciences & Agriculture

## Business & Professional Industries

## Communication & English

## Computer Technology, Engineering, & Math

## Education

## Industrial Technology & Skilled Trades

## Nursing, Health, & Emergency Careers

## Social/Behavioral Sciences & Public Service

## Visual, Fine, and Performing Arts

*This program is not eligible for federal financial aid
(Pell Grant and/or direct loans).*

## Course Descriptions

**2022-2023 College Catalog**      |      ix

## College Faculty & Staff Catalog

# CAC Offerings:

# What Can I Study @ CAC?

**Over 30 Accredited Degrees to Work/Transfer**

**Over 50 Accredited Certificates**

## DEGREES BY AREA OF INTEREST

### Biological/Physical Sciences & Agriculture
Agribusiness AAS
Equine Management and Training AAS
Associate of Arts in Liberal Studies, Agriculture Pathway
Associate of Science in Liberal Studies, Biology Pathway
Associate of Science in Liberal Studies, Chemistry Pathway
Associate of Science in Liberal Studies, Geology Pathway

### Business & Professional Industries
Business AAS
Business ABus
Culinary Arts AAS
Hotel and Restaurant Management AAS
Associate of Arts in Liberal Studies, Recreation and Tourism Pathway

### Communication & English
Associate of Arts in Liberal Studies, Communication Pathway
Associate of Arts in Liberal Studies, English (Literature) Pathway
Associate of Arts in Liberal Studies, English Education Pathway
Associate of Arts in Liberal Studies, Spanish Pathway

### Computer Technology, Engineering, & Math
Networking Technologies AAS (Cyber Security and Network Administration emphases)
Software Development AAS (Computer Programming and Web Development emphases)
Associate of Science in Liberal Studies, Engineering and Computer Science Pathway
Associate of Arts in Liberal Studies, Math Education Pathway
Associate of Arts in Liberal Studies, Statistics Pathway

### Education
Early Childhood Education AAS
Early Childhood Education AA
Early Childhood Education Infant Toddler AAS
Elementary Education AA

### Industrial Technology & Skilled Trades
Automated Industrial Technology AAS
Diesel Technology AAS
Heavy Equipment Operator AAS
Pipefitting/Pipe Welding Technology AAS
Structural Welding Technology AAS

### Nursing, Health, & Emergency Careers
Fire Science Technology AAS
Health Information Management AAS
Massage Therapy AAS
Medical Assistant AAS
Medical Laboratory Technician AAS
Nursing AAS
Nutrition and Dietetic Technician AAS
Paramedicine AAS
Radiologic Technology AAS
Associate of Arts in Liberal Studies, Nursing Pathway with Concurrent Enrollment to ASU
Associate of Arts in Liberal Studies, Nursing Pathway with Concurrent Enrollment to NAU

### Social/Behavioral Sciences & Public Service
Liberal Studies, Administration of Justice Studies Pathway
Associate of Arts in Liberal Studies, History Pathway
Associate of Arts in Liberal Studies, Political Science Pathway
Associate of Arts in Liberal Studies, Psychology Pathway
Associate of Arts in Liberal Studies, Sociology Pathway

### Visual, Fine, and Performing Arts
Digital and Media Arts AAS (Graphic Design and Digital Photography & Video Production emphases)
Fine Arts AA (Art and Music emphases)
Live Audio and Lighting AAS
Popular Music Performance AAS
Recording Engineering AAS
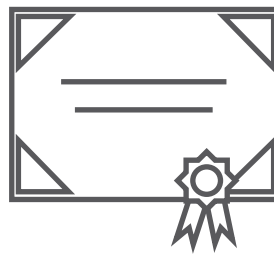
## CERTIFICATES BY AREA OF INTEREST

### Biological/Physical Sciences & Agriculture
Agriculture Business Certificate
Agriculture General Certificate
Equine Management and Training Certificate

### Business & Professional Industries
Baking and Pastry Certificate
Business Certificate
Culinary Arts I Certificate
Culinary Arts II Certificate
Hotel and Restaurant Management Certificate
Logistics and Supply Chain Management Certificate
Management Certificate
Recreation Management Certificate

### Communication & English
Communication Skills for the Professional Certificate
Communication Studies Certificate

### Computer Technology, Engineering, & Math
Computer Programming Certificate

### Education
Early Childhood Education Certificate
Early Childhood Education Infant Toddler Certificate

### Industrial Technology & Skilled Trades
Advanced Industrial Carpentry Certificate
Advanced Structural Welding and Fabrication Certificate
Automated Industrial Technology I Certificate
Automated Industrial Technology II Certificate
Commercial Electrician Installer Certificate
Computer Aided Drafting (CAD) Certificate
Diesel Technology II Certificate
Fundamentals of Pipe Welding Certificate
Fundamentals of Structural Welding Certificate
Heavy Equipment Operator Level I Certificate
Heavy Equipment Operator Level II Certificate
Industrial Carpentry Certificate
Pipefitting/Pipe Welding Certificate

### Nursing, Health, & Emergency Careers
Basic EMT Certificate
Clinical Laboratory Assistant Certificate
Community Nutrition Worker Certificate
Critical Care for Paramedics Certificate
Diabetes Care and Education Certificate
Dietary Manager Training Certificate
Driver Operator Certificate
Fire Officer I Certificate
Firefighter Operations Certificate
Massage Therapy Certificate
Medical Assistant Certificate
Nutrition and Foodservice Professional Training Program Certificate
Nutrition and Health Promotion Certificate
Paramedicine Certificate
Pharmacy Technician Certificate
Phlebotomy Certificate
Practical Nursing Certificate
Wildland Firefighter I Certificate

### Social/Behavioral Sciences & Public Service
Administration of Justice Certificate
Corrections Certificate

### Visual, Fine, and Performing Arts
Graphic Design Certificate
Live Audio and Lighting Certificate
Popular Music Performance Certificate
Recording Engineering Certificate

MILITARY FRIENDLY '22-23 BRONZE SCHOOL

ACCREDITED HIGHER LEARNING COMMISSION

# LEARNING MODALITY OFFERING TYPES -

**4**
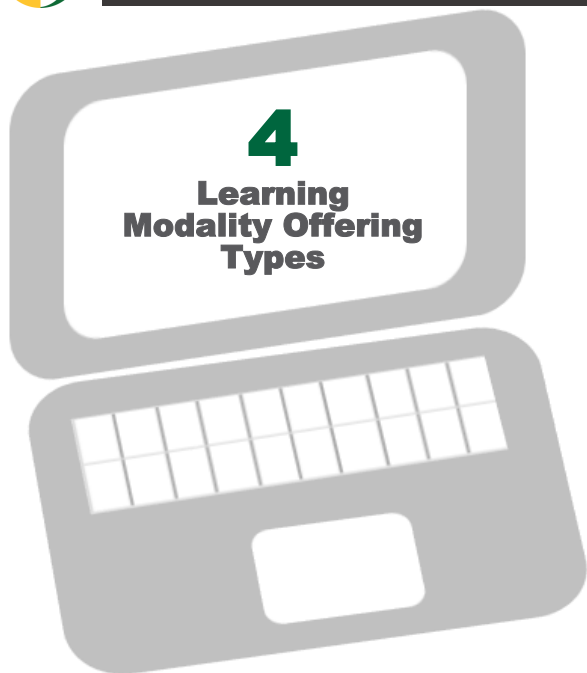
**Learning Modality Offering Types**

## 1. Face-to-Face (F2F):

Face-to-Face classes meet at designated dates, times, and locations as indicated in the Class Schedule.

## 2. Online:

Online classes meet virtually online using a Learning Management System (LMS) such as Blackboard. Totally online classes do NOT meet at designated dates, times, or locations.

## 3. Live Streaming:

Live Streaming classes meet virtually online at designated dates and times as indicated in the Class Schedule, but they do NOT meet at specific locations. These classes meet via live streaming using a Learning Management System (LMS) such as Blackboard.

## 4. Hybrid:

Hybrid classes meet using a combination of Face-to-Face (F2F), Online, and/or Live Streaming modalities. Examples include:

- **Hybrid: F2F/Online**
  - ⇒ F2F/Online classes meet at designated dates, times, and locations as indicated in the Class Schedule, plus students complete additional coursework online.

- **Hybrid: Live Streaming/Online**
  - ⇒ Live Streaming/Online classes meet via live streaming at designated dates and times as indicated in the Class Schedule, plus students complete additional coursework online.

- **Hybrid: F2F/Live Streaming**
  - ⇒ F2F/Live Streaming classes meet at designated days, times, and locations; plus, they meet via live streaming at designated days and times as indicated in the Class Schedule.

# High School Equivalency (HSE)/ GED Preparation & ESL Classes

### GED/HSE– High School Equivalency

We provide a flexible program that meets the diverse needs of students and advances their goals in passing GED tests, transitioning to college classes, and improving employment opportunities.: *centralaz.edu/GED*

### ESL– English as a Second Language

We provide a flexible program that meets the diverse needs of students and advances their goals in enriching English language skills, transitioning to college classes, and improving employment opportunities.: *centralaz.edu/ESL*

Contact us at *adult.education@centralaz.edu*.

A PROUD PARTNER OF
ARIZONA@WORK™

Expand Your World...
Attend Weekend College.
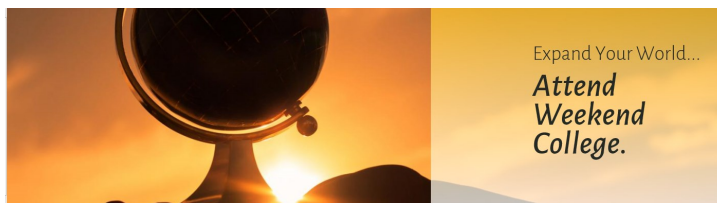
# Weekend College

Weekend College offers students the opportunity to attend courses in-person on Fridays, Saturdays and/or Sundays. Whether students seek a certificate or Associates degree for direct employment or for university transfer, Weekend College is designed to help students achieve their goals while balancing studies with life responsibilities.

For More Information, visit the Weekend College website at: centralaz.edu/weekend-college
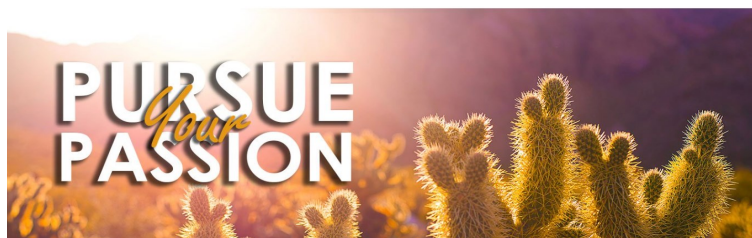
# Lifelong Learning & Continuing Education

Discover something unique for your personal enrichment, professional continuing education or industry training and certification. Lifelong Learning offers a variety of credit and non-credit options for personal and professional growth through courses, workshops, short series seminars, and CEU classes. The LLL non-credit offerings expand and change every semester based on interest and need. If there is something you are seeking and do not see it offered, please contact the LLL office and submit your request for consideration. There are no entrance requirements for Lifelong Learning courses beyond an interest in the subject. Classes begin throughout the semester and vary in length and cost. Whether you are seeking personal enrichment or professional training, Lifelong Learning is ready to create a course or certificate that meets your needs.

For more information: visit the Lifelong Learning website at

https://centralaz.edu/community/education-outreach/community-education/

or call Muriel Thomas at (520) 494-6421.

AMERICA'S SBDC® ARIZONA

POWERED BY SBA
U.S. Small Business Administration

# Small Business Development Center

Considering starting a business? CAC has been opening doors to business opportunity in Arizona since 1988. CAC's Small Business Development Center (SBDC) provides advising, training, and resources for business throughout Pinal County. Services are at no cost and offered for every industry and every stage of growth from start-ups to well-established companies.: *centralaz.edu/sbdc*.

# Admissions:

# How Do I Become a CAC Student?

# Central Arizona College | ENROLLMENT CHECKLIST

Aravaipa | Maricopa | San Tan | Signal Peak | Superstition Mountain

**For assistance with any of these steps please call the Central Help Desk at 520-494-5111**

## 1 GET ADMITTED

- Explore CAC's *Areas of Interest* to learn about our degrees or certificates and complete the *MyMajors* Interest Assessment.
- Apply online at *centralaz.edu/applynow* or visit any of our 5 campuses to apply for admissions.
- Visit the Financial Aid webpage for information on financial aid, scholarships, and/or the application process at *centralaz.edu/finaid*.
- Get your free student ID at any of our 5 campus locations.
- Register for new student orientation at *centralaz.edu/orientation*.
- Stay Connected with CAC! Download the CAC app. & follow us on *Facebook*, *Instagram*, *Twitter* and *LinkedIn*.
- CAC is honored to offer Veteran Services. Call 520.494.5517 or visit *centralaz.edu/va*.
- We offer accommodations. Call Student Accessibility Services at 520.494.5409 or visit *centralaz.edu/studentaccessibility*.
- Schedule your campus tour! Visit *centralaz.edu/campustours*.
- Upon admission, you obtain access to your *CAC Student Portal* for your student email, CAC computer labs and Blackboard.

## 2 USE THE CAC PLACEMENT TOOL

- Complete the CAC English/Reading and Math Placement Tools, which take between 5-15 minutes each. The English/Reading and Math Placement Tools and Assessment Tools can be found at *centralaz.edu/advising*.
  - o Record or take a screen shot of the suggested course(s) to provide to your advisor.
  - o If additional skills assessment is needed, you may be directed to complete the English/Reading or Math Skills Assessment Tool upon completion of the Placement Tool.
- If you have not taken the *MyMajors* Interest Assessment, do so now and provide your results to your advisor.

## 3 MEET WITH YOUR ADVISOR & REGISTER FOR CLASSES

- Make an appointment to meet with an advisor. Visit *centralaz.edu/advising*.
- If you graduated high school within the past 3 years, please bring a copy of your high school transcripts to your advising appointment for additional course suggestions.
- Your advisor will help you identify classes, determine a potential pathway, and establish a career path beneficial to your goals.
- Speak to your advisor about Associate Degrees, Certificates, Transfer Options, and University Partnerships.
- Register for classes early to maximize your financial aid options and be prepared for a successful semester. When choosing your classes, remember that 1 hour of class time usually means about 2 hours of study time.
- Register today at *centralaz.edu*, then click "*MyCAC*" at the top of the page.
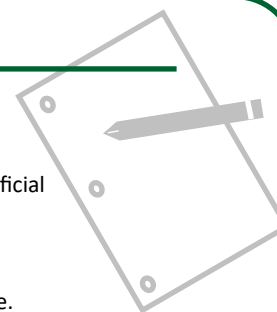
## 4 PAY TUITION & FEES

- Be sure to pay! You can pay online, by phone at **520-494-5240**, in person at any of our 5 campuses, or by mail:    **ATTN: Student Accounts**
  **Central Arizona College, 8470 N. Overfield Rd., Coolidge, AZ 85128**
  **\*\*Be sure to include your student ID # on all correspondence!\*\***
- Complete the *FAFSA* process as soon as possible to determine your eligibility. Log into your student portal to view your award letter or email CAC's financial aid team for assistance: *finaid@centralaz.edu*.
- Use your class schedule to determine which textbooks to buy or rent. Access CAC bookstore information at *centralaz.edu/student-portal* or visit a bookstore at the Signal Peak campus or Superstition Mountain campus.
  *If you have financial aid greater than institutional charges, you can charge your textbooks to your account.
- Tuition payment plans are available on your *CAC Student Portal*. For assistance, email *student.accounts@centralaz.edu*.

# Admissions

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.
- Visit *centralaz.edu/registration* for more information.

### Special Admit (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:
- PSAT (Preliminary Scholastic Aptitude Test – taken March 2016 or later) composite score of 720 or above
- SAT (Scholastic Aptitude Test-taken March 2016 or later) composite (Evidence Based Reading & Writing and Math portions combined) score of 720 or above;
- ACT (American College Test) composite score of 12 or above.

Students who are participating in a High School Program sponsored by the college, such as Dual Enrollment and Early 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 Special Admissions, not participating in a High School Program, must complete the following process:
- Completion of the *Admissions Form*;
- Consultation with the Vice President of Academics;
- Email: *admissions@centralaz.edu*.

### Admission of Students in Previous Status

Persons not meeting any of the provisions stated 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 admissions based on F-1 student visa status must submit the following to *international.admissions@centralaz.edu*:

- Completion of the *Admissions 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.
- Must enroll under full-time status (minimum of 12 credits);
- Must communicate place of Arizona residency at all times to the Registrar Office;
- It is the responsibility of the student to request transfer of F-1 visa, if desired.

### Admission of students supplementing secondary school or home school with college courses
- Completion of the *Admissions Form*;
- Submission of completed Approval for Enrollment of High School Student Form;
- Submission of a letter stating the reason for the special admission request;
- Provide copy of High School Transcript 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.
- Email: *admissions@centralaz.edu*.

### Students enrolling in a program sponsored by the college or in courses for dual credit
- Completion of the *Admissions Form*;
- *Completion of Registration Student Information Form*;
- Provide copy of High School Transcript if required for the courses in which the student plans to enroll.
- Visit *centralaz.edu/high-school-programs*.

**Students returning to CAC following an absence of more than one year**
- Completion of *Admissions Form*;
- Visit *centralaz.edu/returning-cac-student*.

# 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 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.
- Under the provisions of the Veterans Access, Choice, and Accountability Act, the following individuals shall be charged a rate of tuition not to exceed the in-state rate for tuition and fees purposes:
  ⇒ A Veteran using educational assistance under either Chapter 30 (Montgomery – Active Duty Program), Chapter 31 (Veteran Readiness and Employment), Chapter 33 (Post-9/11), or Chapter 35 (Dependents' Educational Assistance Program [DEA]) of title 38, United States Code, who lives in Arizona while attending a school located in Arizona (regardless of their formal State of residence) and enrolls in the school with a period of active duty service of 90 days or more
  ⇒ Any student using transferred Chapter 33 (Post-9/11 benefits, 38 U.S.C. § 3319) who lives in Arizona while attending a school located in Arizona (regardless of their formal State of residence)
  ⇒ Any student described above while they remain continuously enrolled (other than during regularly scheduled breaks between courses, semesters, or terms) at the same school
  ⇒ Any student using benefits under the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311 (b)(9)) who lives in Arizona while attending a school located in Arizona (regardless of their formal State of residence)

**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. 5-1801). 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) 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."

Questions/concerns? Email *admissions@centralaz.edu*.

**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 Office. The request must be in writing, with a completed Domicile Affidavit signed by the student and accompanied by a sworn statement of all facts relative to the matter. The Domicile Affidavit must be filed prior to the end of the semester. 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 Office shall be final.

## Definitions

- "Armed Forces of the United States" means the: Army, Marine, Navy, Air Force, Coast Guard, National 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 one of the following items will be used in determining a student's domicile in Arizona:
    a. Arizona driver's license
    b. Arizona income tax return
    c. Arizona voter registration
- The following items may be submitted as supporting information to the evidence listed above but will not be accepted as primary evidence:
    a. Source of financial support
    b. Notarized statement from employer
    c. Place of high school graduation
    d. Bank accounts
    e. Honorably discharged from the armed forces and demonstrates 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, Hawaii, 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 and may only be used for four semesters. Contact the Records Office for an application form or additional information.

## Out-of-County Residence Affidavit

An Arizona resident attending classes in Pinal County from Apache, or Greenlee 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.

# Veteran Education Information

Veteran education benefit information is available throughout this catalog & online at *centralaz.edu/va*.

**Veteran Services office:**

- Military/Veteran Specialist, School Certifying Official (SCO)- Elizabeth Barrett at 520-494-5517 or *Elizabeth.Barrett@centralaz.edu*

- Office Assistant II Veteran Services & Student Accessibility Services- Mariela Felix, at 520-494-5402 or *Mariela.Felix@centralaz.edu*

# 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.

Students may use an unofficial transcript only once for registration purposes while waiting for an official transcript to be received.

# 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)** (See *centralaz.edu/transfer* or *aztransfer.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 Records Office. 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 *centralaz.edu/transcripts*.  Online requests will be processed with priority.

## Transferring Credits to CAC

Transfer courses must have been acquired through a regionally accredited college or university.

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 2.0 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 AGEC 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. Visit *aztransfer.com*.

# 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- or degree-specific Transfer Pathway document on that institution's website to confirm transferability and applicability of CAC coursework. Transfer Pathways are updated annually and Transfer/Articulation Agreements state specific student eligibility requirements, scholarship opportunities and the programs available.

# 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.

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.

# 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.  Students using VA Benefits will need to meet CAC Residency for full benefits, regardless of special program requirements. Please contact the School Certifying Official for VA Benefits on Special program requirements.

# Academic Calendar

The college operates on a semester calendar with two 16-week semesters (including exams) beginning in August and January, and a shorter summer session beginning in May.  There are also shorter term classes available during the regular semesters (8-week condensed terms).  View at *centralaz.edu/academic-cal/*.

# Paying For College:
# What Are My Options?

# Financial Aid

Central Arizona College offers a variety of financial aid and scholarship programs to assist students in meeting their educational financial obligations. Details about federal and state aid, and CAC Institutional and Foundation Scholarship programs can be found on the web at *centralaz.edu/finaid*.

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 grants, student employment, 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.

## Ways to classify different types of financial aid:

Financial Aid you **don't** have to repay *(unless, for example, you withdraw from school or owe an overpayment):*

- Federal and State Grants
- CAC Institutional/ Foundation Scholarships
- Private and Corporate Scholarships
- Student Employment
- Native American Tribal Grants
- Veteran's Education Benefits
- 

Financial Aid you **do** repay:

- Federal Direct Stafford Subsidized and Unsubsidized Student Loan
- Federal Direct Parent PLUS Loan for Undergraduate Students
- Interest-free Online Payment Plan
- Private/Alternative Student Loans

## General Eligibility Requirements for Federal Financial Aid Programs

- Be a degree seeking student in an Associate degree program or an eligible certificate program
- 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 and have a valid social security number

- Make and maintain satisfactory academic progress for financial aid purposes
- Be enrolled in courses required for student's declared degree or certificate program
- 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
- Developmental education courses may effect financial aid eligibility

## How to Apply for Federal Financial Aid

The college uses the Free Application for Federal Student Aid (FAFSA) as its application for federal financial aid programs.

## The Process

- Apply for a FSA ID at: *https://fsaid.ed.gov*.
- Complete and submit the 2022-23 FAFSA (to the Department of Education). It's available online at *fafsa.gov*. Be sure to include the CAC School Code: 007283. The 2023-24 FAFSA will be available after October 1.
- Check your CAC student email frequently. You will be notified by email when we receive your FAFSA results instructing you to check your eligibility requirements by logging into the CAC website, clicking on **My CAC**, **Student Portal**, and My Financial Aid. Respond to any requested information as soon as possible.
- Once your file is completed and eligibility is determined, awards will be outlined in your student portal.
- The award amount is applied to any outstanding funds you may still owe the college after the drop/add period. You may then receive a stipend for any remaining credit balance. Stipends are issued by the Cashiers/Student Accounts Office.

## Satisfactory Academic Progress for Federal Financial Aid Recipients

Federal regulations require that financial aid students maintain Satisfactory Academic Progress (SAP) toward an eligible degree or certificate program. SAP is reviewed at the end of each semester to determine financial aid eligibility for the upcoming semester. SAP is evaluated on a student's entire academic history within the active program of study regardless of whether financial aid was received. For more information, please visit the section titled 'Satisfactory Academic Progress for Federal Student Aid' on the Financial Aid web page at *centralaz.edu/finaid*.

## Standards of Satisfactory Academic Progress

At the end of each semester, the academic records of all financial 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 program grade point average (GPA).

**Incremental Assessment**
- Earned credit hours must be at least 67 percent of attempted credit hours each semester to be considered satisfactory.

**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 the college/university where hours were attempted, Central Arizona College's Satisfactory Academic Progress policy will apply.
- 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.

## Determining Satisfactory Academic Progress

- 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 credit hours/semesters completed.
- Students are then placed on Satisfactory, FA Warning, or FA Suspension status based on the results from above.
    - All new and first time students to CAC are placed on satisfactory status.
    - Students that are deficient in any of the standards of measurement are placed on FA Warning status for one semester.
    - Students that do not meet SAP standards after the FA Warning semester are placed on suspension.
- Students on FA Suspension must fund their education using their own resources, without the assistance of federal financial aid or VA Education Benefits and some scholarship programs. Students who have been suspended are encouraged to meet with an advisor to be assigned to an academic plan to reinstate eligibility for aid. Students who become ineligible for federal financial aid by failing to meet the requirements of the satisfactory progress policy may appeal such a determination based on mitigating circumstances.

## Appealing a Decision

If a determination is made that a student is not making satisfactory academic progress and on FA Suspension status, a student may appeal that decision based on mitigating circumstances that prevented from meeting SAP requirements. Procedures and forms for the appeal process are available online at *centralaz.edu/finaid* or by contacting the Financial Aid Office.

## Resolving Financial Aid Suspension

Students who do not appeal or whose appeal was denied may resolve their financial aid suspension on their own financial resources by meeting with an academic advisor to create an academic plan aiming to regain financial aid eligibility by restoring minimum SAP standards.

## Payout of Financial Aid

A student's financial aid award is based on the number of credits in which the student is enrolled that apply toward a declared degree or certificate program. Financial aid awards are 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 awards are disbursed after the Drop/Add period.

## Withdrawal/Repayment Guidelines for Federal Financial Aid Recipients

Central Arizona College is required to follow specific guidelines as directed by the U.S. Department of Education for students who withdraw from ALL courses. The guidelines are used to calculate the amount of federal aid that will be returned to the various financial aid programs.

When a student is dropped from class due to "No Show", awards are recalculated based on the adjusted enrollment status and Cost of Attendance (COA). This may result in the student having to repay funds already received through a stipend. When a student withdraws from ALL courses, their financial aid is evaluated to determine the amount of aid that has been earned, and any unearned aid will be required to be paid back. Please note that this repayment calculation will be determined for student who follow official withdrawal procedures as well as for student who stop attending classes. 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 enrollment status through the National Student Clearinghouse.

It is important to understand that the institutional tuition/fee refund schedule is different than 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.

## CAC Scholarship Opportunities

Central Arizona College offers a wide 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 be pursuing a degree or certificate;
- Must complete the Free Application for Federal Student Aid (FAFSA) at *fafsa.gov*.

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. Interested students should visit the Financial Aid website at *centralaz.edu/finaid* for scholarship details and application process.

## CAC 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 donations from individuals, organizations, corporations and foundations 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:

- 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.

Interested students should visit the financial aid website at *centralaz.edu/finaid* for scholarship details and application process.

### Pinal Promise

(formerly known as Promise for the Future) is an educational initiative launched in 2001 by a caring community that believed college should be a reality for every Pinal County student. This program was developed to encourage young people to stay in high school, graduate, and move on to a college or university. More than a twenty years later, the Promise continues with the original partnership of CAC Foundation, Central Arizona College, and Pinal County School Districts with a new focus on ease of access and equity for all Pinal County students.

Eligible students must:

- Reside and graduate from a Pinal County high school (online high schools must have a physical presence in Pinal County).
- Participate in 20 hours of community service that can be completed in high school or while attending CAC.

Eligible students receive two years of in-state tuition or four consecutive semesters (fall/spring + fall/spring)). Pinal Promise provides funding for any tuition need that has not been met. This means that Pinal Promise funds will be applied after all other Financial Aid has been applied to the student's account (this excludes student loans).

- Begin the fall semester after high school graduation;
- Complete the **FAFSA** (Free Application for Federal Student Aid);
- Upon high school graduation complete and submit the online **CAC Scholarship application** and in the application attach an unofficial high school transcript with graduation date;

- Enroll in a minimum of 12 credit hours per semester
- Pursue a CAC degree or certificate program

Visit the **Pinal Promise webpage** to view additional Pinal Promise guidelines and complete the CAC Scholarship application

## Financial Aid Contact Information:

**Central Arizona College Financial Aid Office,**
**Signal Peak Campus-M Bldg.**
8470 N. Overfield Road
Coolidge, AZ 85128

- Phone: (520)494-5425 or (520)494-5111
- Fax: (520)494-5091
- E-Mail: *finaid@centralaz.edu*
- Website: *centralaz.edu/finaid*
- In-person assistance is available at all campuses.

## 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 available online

For more information on federal financial aid programs:

- *fafsa.gov/* - FAFSA on the Web
- *finaid.org/* - The Financial Aid Information Page
- *studentaid.ed.gov/* - Federal Student Aid for students

## Payment Options

Central Arizona College accepts cash, check, credit or debit card (Visa, MasterCard, Discover, American Express) as forms of payment. Tuition payment plans are offered throughout each semester in affordable installments and can be set-up online through the student portal. To pay online with a credit or debit card or echeck, visit the student portal. Also, visit or call your nearest CAC Cashier's Office at any of the 5 campus locations to assist with payments. For more information visit *centralaz.edu/paying*.

Students can mail checks to the District Office at
Central Arizona College-
**ATTN: Student Accounts**
**8470 North Overfield Road**
**Coolidge, AZ 85128**
*Please be sure to include your student ID number with your payment.*

## TRIO Student Support Services

For eligibility information visit the TRIO webpage at *centralaz.edu/trio* or call (520) 494-5007. TRIO is on Facebook and Instagram: cac_sss_trio.

The TRIO SSS Program at Central Arizona College is funded the U.S. Department of Education.

## Veterans Educational Benefits

Central Arizona College (CAC) is approved by the Arizona State Approving Agency (SAA), which is in authority to grant approval for use of VA Education benefits programs offered by an institution in Arizona. Eligibility of benefits for students and the program is determined by the SAA. Most programs are approved by the SAA, however, there may be some exceptions. For additional information, regarding required documentation and approved educational programs, including non-approved programs, please visit *centralaz.edu/va*.

It is the responsibility of the student using veteran education benefits to ensure they are classified under the correct residency status before the start of the semester. Please see Residency Guidelines for additional information regarding residency requirements or visit *centralaz.edu/va*.

Federal regulations require that prior education and training be evaluated by the institution for transferability by submitting official transcripts, this includes both institutional and military. Veteran educational benefits may be denied or delayed without submission of transcripts to the Records Office. All students receiving veteran educational benefits are required to meet with an academic advisor every semester to ensure all information is accurate. Transcripts will be evaluated and credit will be granted, as appropriate.

Eligible veterans, spouses, and dependents seeking to use their educational benefit at CAC will need to work with the School Certifying Official (SCO) for certification. It is the responsibility of the student to submit necessary paperwork to the SCO for processing and report all changes to the enrollment status prior to certification. Any changes after certification, will need to be reported by the student within 30 days of the change.

For information, please contact the Veteran Services office:

- Military/Veteran Specialist,
  School Certifying Official (SCO):
  Elizabeth Barrett at 520-494-5517 or
  *Elizabeth.Barrett@centralaz.edu*

- Office Assistant- Veteran Services
  & Student Accessibility Services:
  Mariela Felix, at 520-494-5402 or
  *Mariela.Felix@centralaz.edu*

Central Arizona College is in compliance with Executive Order 13607 also known as the Principle of Excellence (POE). Please visit CAC's VA webpage at *centralaz.edu/va*.

*\*\*CAC is in Compliance with Title 38 USC 3679(e) for all students covered under Chapter 31 and 33 of the VA Education Benefits. No penalties will be imposed on the covered individual due to their inability to meet financial obligations due to the delayed disbursement of VA funding.\*\**

## Academic Calendar:
*https://centralaz.edu/academic-cal/*.

## Career & University Transfer Center

Utilize the Career & University Transfer Center for information and resources to ensure a successful transfer to the workplace or to a 4-year institution. Visit *centralaz.edu/transfer* or *centralaz.edu/career*

## Student Employment Opportunities

CAC offers student employment opportunities to students as they pursue future college and career aspirations. Visit the Student Employment Services web page at *https://www.schooljobs.com/careers/centralaz/transferjobs*.

Should you require more information or assistance, please email *studentjobs@centralaz.edu*

### Employment Eligibility Requirements
There are three employment options available for students. Each employment option has different eligibility requirements. All students are encouraged 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.

*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.*

## Central Arizona College
## 2022-2023 Academic Year
## Adopted Tuition & Fee Schedule

| Credit Hours/Semester | General Tuition & Fees | Western Undergraduate Education Program (1) | |
| --- | --- | --- | --- |
| | Regular Courses | Current | |
| | Current | Fall/Spring | Summer Session Only |
| **Arizona Resident** | | | |
| 1 | 50 | N/A | N/A |
| 2 | 100 | N/A | N/A |
| 3 | 150 | N/A | N/A |
| 4 | 200 | N/A | N/A |
| 5 | 250 | N/A | N/A |
| 6 | 300 | N/A | 450 |
| 7 | 350 | N/A | 525 |
| 8 | 400 | N/A | 600 |
| 9 | 450 | N/A | 675 |
| 10 | 500 | N/A | 750 |
| 11 | 550 | N/A | 825 |
| 12 | 600 | 900 | 900 |
| 13 | 650 | 975 | 975 |
| 14 | 700 | 1050 | 1050 |
| 15 | 750 | 1125 | 1125 |
| 16 | 800 | 1200 | 1200 |
| 17 | 850 | 1275 | 1275 |
| 18 | 900 | 1350 | 1350 |
| 19 | 950 | 1425 | 1425 |
| 20 | 1000 | 1500 | 1500 |
| 21 & up an additional | $50 p/hr | $75 p/hr | $75 p/hr |

(1) Participating states: Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming, Common Wealth of the Northern Mariana Islands. **Student pays 150% of** normal stated fees. Must be a full time student & classes must be in AZ. 12 credits are considered full time for Fall and Spring Semester. 6 credits are considered full time for Summer session only.

Central Arizona College
2022-2023 Academic Year
Adopted Tuition & Fee Schedule

| Out-of-State Student | Current | | |
|---|---|---|---|
| | General Tuition | Out of State Tuition | Total |
| 1 | 50 | 50 | 100 |
| 2 | 100 | 100 | 200 |
| 3 | 150 | 150 | 300 |
| 4 | 200 | 200 | 400 |
| 5 | 250 | 250 | 500 |
| 6 | 300 | 300 | 600 |
| 7 | 350 | 350 | 700 |
| 8 | 400 | 400 | 800 |
| 9 | 450 | 450 | 900 |
| 10 | 500 | 500 | 1000 |
| 11 | 550 | 550 | 1100 |
| 12 | 600 | 600 | 1200 |
| 13 | 650 | 650 | 1300 |
| 14 | 700 | 700 | 1400 |
| 15 | 750 | 750 | 1500 |
| 16 | 800 | 800 | 1600 |
| 17 | 850 | 850 | 1700 |
| 18 | 900 | 900 | 1800 |
| 19 | 950 | 950 | 1900 |
| 20 | 1000 | 1000 | 2000 |
| 21 & up an additional | $50 p/hr | $50 p/hr | $100 p/hr |

# Central Arizona College
## 2023-2024 Academic Year
## Adopted Tuition & Fee Schedule

| Credit Hours/Semester | General Tuition & Fees — Regular Courses | Western Undergraduate Education Program (1) — Current | |
|---|---|---|---|
| | Current | Fall/Spring | Summer Session Only |
| **Arizona Resident** | | | |
| 1 | 75 | N/A | N/A |
| 2 | 150 | N/A | N/A |
| 3 | 225 | N/A | N/A |
| 4 | 300 | N/A | N/A |
| 5 | 375 | N/A | N/A |
| 6 | 450 | N/A | 675 |
| 7 | 525 | N/A | 787.5 |
| 8 | 600 | N/A | 900 |
| 9 | 675 | N/A | 1012.5 |
| 10 | 750 | N/A | 1125 |
| 11 | 825 | N/A | 1237.5 |
| 12 | 900 | 1350 | 1350 |
| 13 | 975 | 1462.5 | 1462.5 |
| 14 | 1050 | 1575 | 1575 |
| 15 | 1125 | 1687.5 | 1687.5 |
| 16 | 1200 | 1800 | 1800 |
| 17 | 1275 | 1912.5 | 1912.5 |
| 18 | 1350 | 2025 | 2025 |
| 19 | 1425 | 2137.5 | 2137.5 |
| 20 | 1500 | 2250 | 2250 |
| 21 & up an additional | $75 p/hr | $112.5 p/hr | $112.50 p/hr |

(1) Participating states: Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming, Common Wealth of the Northern Mariana Islands. **Student pays 150% of** normal stated fees. Must be a full time student & classes must be in AZ. 12 credits are considered full time for Fall and Spring Semester. 6 credits are considered full time for Summer session only.

Central Arizona College
2023-2024 Academic Year
Adopted Tuition & Fee Schedule

| Out-of-State Student | General Tuition | Out of State Tuition | Total |
|---|---|---|---|
| 1 | 75 | 75 | 150 |
| 2 | 150 | 150 | 300 |
| 3 | 225 | 225 | 450 |
| 4 | 300 | 300 | 600 |
| 5 | 375 | 375 | 750 |
| 6 | 450 | 450 | 900 |
| 7 | 525 | 525 | 1050 |
| 8 | 600 | 600 | 1200 |
| 9 | 675 | 675 | 1350 |
| 10 | 750 | 750 | 1500 |
| 11 | 825 | 825 | 1650 |
| 12 | 900 | 900 | 1800 |
| 13 | 975 | 975 | 1950 |
| 14 | 1050 | 1050 | 2100 |
| 15 | 1125 | 1125 | 2250 |
| 16 | 1200 | 1200 | 2400 |
| 17 | 1275 | 1275 | 2550 |
| 18 | 1350 | 1350 | 2700 |
| 19 | 1425 | 1425 | 2850 |
| 20 | 1500 | 1500 | 3000 |
| 21 & up an additional | $75 p/hr | $75 p/hr | $150 p/hr |

Central Arizona College
2022-2023 Academic Year
Adopted Tuition & Fee Schedule

### Special Fees

| | Adopted | |
|---|---|---|
| AAMA Certification Exam - Medical Assistant | $ 125.00 | /each |
| Arizona State Prison inmate (self-pay) | 104.00 | /hour |
| Assessment of Credit for prior Learning Each Credit Hour Evaluated | 50.00 | /cr hour |
| Business & Industry Training | Negotiated | |
| Certificate/Degree Replacement Fee | 10.00 | /each |
| Certified mail fee | 7.00 | /each |
| Check non-sufficient funds | 25.00 | /each |
| Conduct Education Student Sanction Fee | 50.00 | /each |
| Public/police records - paper or electronic | 0.50 | /page |
| Copy of public/police records media fee | 8.00 | /each |
| Credit by examination | 50.00 | /cr hour |
| Express mail at student's request | 30.00 | /each |
| Fax Transcript, Letter of Acceptance, Enrollment Verification, other materials and personal use | 3.00 | /page |
| Fees for travel courses and lab's | Actual cost | |
| G.E.D. test | 149.00 | /each |
| G.E.D. test retake | 35.00 | / test |
| HESI Testing Fee - RN | 47.00 | /each |
| HESI A2 Testing Fee - Health Information Technology, Medical Assistant & Pharmacy Technology | 47.00 | /each |
| I.D. Replacement | 5.00 | /each |
| Moving violations (stop sign, speeding) | 25.00 | /each |
| Parking fines | 15.00 | /each |
| Proctoring fee (non CAC students) | 25.00 | /each |
| Transcript Fee - In person | 10.00 | /each |
| Transcript Fee - Online | 7.50 | /each |
| College for Kids - Aravaipa | 210.00 | /each |
| Massage Fees - Hot Rock | 25.00 | /each |
| Massage Fees - 45 Minutes | 20.00 | /each |

### Residence Hall Fees

| | | |
|---|---|---|
| Room Deposit | $ 150.00 | /room |
| Room (quads and suites) | 1,500.00 | /semester |
| Room (single) | Room Rate + 1,350 | /semester |
| Temporary room only | 200.00 | /week |
| Board | 2,450.00 | /semester |
| Cleaning fee | 700.00 | /each |
| Replacement room lock - simple | 75.00 | /each |
| Replacement room lock - complex | 100.00 | /each |

## 2022-2023 Academic Year

# Adopted Course Fee Schedule

| Course | Credit Hours | Malpractice Insurance Fee | Music and Voice Lesson Fee | Internship Fee | Laboratory Fee | Technology/ Equipment Fee | Exam Fee |
|---|---|---|---|---|---|---|---|
| **CLA** | **SIGNATURE: Nancy Juarez** | | | | DATE: | | |
| CLA155 | 3.0 | 25.00 | | | | | |
| CLA255 | 3.0 | 25.00 | | | | | |
| CLA169 | 4.0 | 25.00 | | | | | |
| CLA170 | 4.0 | 25.00 | | | | | |
| CLA175 | 3.0 | 25.00 | | | | | |
| | | | | | | | |
| **CNA** | **SIGNATURE: Marc Pueleo** | | | | DATE: | | |
| CNA 125 | 7.0 | 25.00 | | | 35.00 | | |
| CNA 125A | 6.0 | 25.00 | | | 30.00 | | |
| | | | | | | | |
| **CUL** | **SIGNATURE: Chris Demaline** | | | | DATE: | | |
| CUL 108 | 1.0 | | | | 20.00 | | |
| CUL 110 | 1.0 | | | | 20.00 | | |
| CUL 112 | 1.0 | | | | 20.00 | | |
| CUL 114 | 1.0 | | | | 20.00 | | |
| CUL 130 | 3.0 | | | | 60.00 | | |
| CUL 160 | 3.0 | | | | 60.00 | | |
| CUL 161 | 1.0 | | | | 20.00 | | |
| CUL 162 | 1.0 | | | | 20.00 | | |
| CUL 230 | 3.0 | | | | 60.00 | | |
| CUL 260 | 3.0 | | | | 60.00 | | |
| CUL 261 | 1.0 | | | | 20.00 | | |
| CUL 262 | 1.0 | | | | 20.00 | | |
| CUL 263 | 1.0 | | | | 20.00 | | |
| CUL 268 | 3.0 | | | | 60.00 | | |
| | | | | | | | |
| **DIE** | **SIGNATURE: Louis Teel** | | | | DATE: | | |
| DIE 216 | 8.0 | | | | | | 50.00 |
| | | | | | | | |
| **EMS** | **SIGNATURE: Tina Berry, Academic Dean** | | | | DATE: | | |
| EMS 100 | 0.5 | | | | 17.50 | | |
| EMS 101 | 0.5 | | | | 11.50 | | |
| EMS 123 | 3.0 | | | | 69.00 | | |
| EMS 125 | 9.0 | 60.00 | | | 286.00 | | |
| EMS 190 | 1.0 | | | | 63.00 | | |
| EMS 191 | 1.0 | | | | 83.00 | | |
| EMS 200 | 2.0 | | | | 71.00 | | |
| EMS 201 | 0.5 | | | | 21.50 | | |
| EMS 240 | 1.0 | | | | 58.00 | | |
| EMS 242 | 3.0 | | | | 120.00 | | |
| EMS 245 | 1.0 | | | | 63.00 | | |
| EMS 255 | 2.0 | | | | 71.00 | | |
| EMS 272A | 13.5 | | | | 825.50 | | |
| EMS 272B | 8.5 | | | | 520.50 | | |
| EMS 272C | 8.5 | | | | 295.50 | | |
| EMS 272D | 6.0 | 60.00 | | | 138.00 | | |

## 2022-2023 Academic Year
## Adopted Course Fee Schedule

| Course | Credit Hours | Malpractice Insurance Fee | Music and Voice Lesson Fee | Internship Fee | Laboratory Fee | Technology/ Equipment Fee | Exam Fee |
|---|---|---|---|---|---|---|---|
| EMS 272E | 6.0 | 60.00 | | | 138.00 | | |
| | | | | | | | |
| **FSC** | SIGNATURE: Tina Berry, Academic Dean | | | | DATE: | | |
| FSC 106 | 3.0 | | | | 60.00 | | |
| FSC 111 | 2.0 | | | | 40.00 | | |
| FSC 117 | 3.0 | | | | 60.00 | | |
| FSC 118 | 3.0 | | | | 60.00 | | |
| FSC 126 | 2.0 | | | | 40.00 | | |
| FSC 129 | 2.0 | | | | 60.00 | | 150.00 |
| FSC 130 | 1.5 | | | | 30.00 | | |
| FSC 134 | 3.0 | | | | 60.00 | | |
| FSC 140 | 11.0 | | | | 520.00 | | 150.00 |
| FSC 180 | 3.0 | | | | 110.00 | | |
| FSC 181 | 0.5 | | | | 10.00 | | |
| FSC 182 | 1.0 | | | | 20.00 | | |
| FSC 183 | 1.5 | | | | 30.00 | | |
| FSC 185 | 1.0 | | | | 20.00 | | |
| FSC 186 | 1.5 | | | | 30.00 | | |
| FSC 187 | 0.5 | | | | 10.00 | | |
| FSC 188 | 2.0 | | | | 40.00 | | |
| FSC 189 | 2.0 | | | | 40.00 | | |
| FSC 190 | 1.5 | | | | 30.00 | | |
| FSC 191 | 2.0 | | | | 40.00 | | |
| FSC 202 | 3.0 | | | | 60.00 | | |
| FSC 205 | 3.0 | | | | 60.00 | | |
| FSC 208 | 3.0 | | | | 60.00 | | |
| FSC 220 | 3.0 | | | | 60.00 | | |
| FSC 238 | 2.0 | | | | 40.00 | | |
| FSC 250 | 1.0 | | | | 20.00 | | |
| FSC 252 | 1.0 | | | | 20.00 | | |
| FSC 255 | 3.0 | | | | 60.00 | | |
| | | | | | | | |
| **HIM** | SIGNATURE: Sandra S. Brightwell | | | | DATE: | | |
| HIM 115 | 2.0 | | | | | | 25.00 |
| HIM 117 | 3.0 | | | | | | 25.00 |
| HIM 121 | 3.0 | | | | | | 25.00 |
| HIM 138 | 3.0 | | | | | | 25.00 |
| HIM 158 | 3.0 | | | | | | 25.00 |
| HIM 160 | 2.0 | | | | | | 25.00 |
| HIM 200 | 2.0 | | | | | | 25.00 |
| HIM 205 | 2.0 | | | | | | 25.00 |
| HIM 210 | 3.0 | | | | | | 25.00 |
| HIM 215 | 3.0 | | | | | | 25.00 |
| HIM 220 | 3.0 | | | | | | 25.00 |
| HIM 230 | 3.0 | | | | | | 25.00 |
| HIM 296 | 4.0 | 25.00 | | | | | 25.00 |

## 2022-2023 Academic Year
# Adopted Course Fee Schedule

| Course | Credit Hours | Malpractice Insurance Fee | Music and Voice Lesson Fee | Internship Fee | Laboratory Fee | Technology/ Equipment Fee | Exam Fee |
|---|---|---|---|---|---|---|---|
| **LMT** | **SIGNATURE: Christina Brown** | | | | **DATE:** | | |
| LMT175 | 1.0 | 25.00 | | | | | |
| LMT176 | 1.0 | 25.00 | | | | | |
| LMT177 | 1.0 | 25.00 | | | | | |
| LMT178 | 1.0 | 25.00 | | | | | |
| | | | | | | | |
| **MDA** | **SIGNATURE: Susan Horn. MA Program Director** | | | | **DATE:** | | |
| MDA140 | 5.0 | | | | 25.00 | | - |
| MDA141 | 5.0 | 25.00 | | | 25.00 | | - |
| MDA175 | 4.0 | 25.00 | | | | | - |
| | | | | | | | |
| **MLT** | **SIGNATURE: Jacquelyn Gillespie, MT (ASCP) Prog. Dir.** | | | | **Date:** | | |
| MLT210 | 2.0 | 25.00 | | | - | | - |
| MLT220 | 7.0 | 25.00 | | | 40.00 | | - |
| MLT230 | 4.0 | 25.00 | | | 40.00 | | - |
| MLT240 | 7.0 | 25.00 | | | 40.00 | | - |
| MLT250 | 7.0 | 25.00 | | | 40.00 | | - |
| MLT275 | 7.0 | 25.00 | | | 40.00 | | - |
| | | | | | | | |
| **MUP** | **SIGNATURE: Susan Tatterson, Chair** | | | | **DATE:** | | |
| MUP109B | 1.0 | | 160.00 | | | | |
| MUP109D | 1.0 | | 160.00 | | | | |
| MUP109G | 1.0 | | 160.00 | | | | |
| MUP109P | 1.0 | | 160.00 | | | | |
| MUP109S | 1.0 | | 160.00 | | | | |
| MUP109V | 1.0 | | 160.00 | | | | |
| MUP109W | 1.0 | | 160.00 | | | | |
| | | | | | | | |
| **NTR** | **SIGNATURE: Sheri Steincamp** | | | | **DATE:** | | |
| NTR 163 | 1.0 | | | | | 90.00 | |
| NTR196 | 4.0 | 25.00 | | 200.00 | | | |
| NTR295 | 1.0 | | | 50.00 | | | - |
| NTR296 | 6.0 | 25.00 | | 300.00 | | | - |
| | | | | | | | |
| **NUR** | **SIGNATURE: Marc Puleo** | | | | **DATE:** | | |
| NUR121 | 8.0 | 25.00 | | | 40.00 | | |
| NUR122 | 8.0 | 25.00 | | | 40.00 | | |
| NUR221 | 8.0 | 25.00 | | | 40.00 | | |
| NUR222 | 8.0 | 25.00 | | | 40.00 | | |
| | | | | | | | |
| **PHT** | **SIGNATURE: Jeremy Gwizdalski** | | | | **DATE:** | | |
| PHT 101 | 6.0 | | | | 48.00 | | |
| PHT 102 | 6.0 | | | | 48.00 | | |
| PHT 175 | 4.0 | 25.00 | | | 32.00 | | |
| | | | | | | | |
| **RAD** | **SIGNATURE: Frank Mollica** | | | | **DATE:** | | |
| RAD140 | 3.0 | 25.00 | | | | | |

### 2022-2023 Academic Year
## Adopted Course Fee Schedule

| Course | Credit Hours | Malpractice Insurance Fee | Music and Voice Lesson Fee | Internship Fee | Laboratory Fee | Technology/ Equipment Fee | Exam Fee |
|---|---|---|---|---|---|---|---|
| RAD180 | 3.0 | 25.00 | | | | | |
| RAD200 | 7.0 | 25.00 | | | | | |
| RAD240 | 4.0 | 25.00 | | | | | |
| RAD290 | 4.0 | 25.00 | | | | | |
| | | | | | | | |
| **WLD** | **SIGNATURE: Louis Teel** | | | | **DATE:** | | |
| WLD078 | 3.0 | | | | 60.00 | | |
| WLD110 | 3.0 | | | | 60.00 | | |
| WLD115 | 5.0 | | | | 100.00 | | |
| WLD125 | 5.0 | | | | 100.00 | | |
| WLD129 | 6.0 | | | | 120.00 | | |
| WLD130 | 6.0 | | | | 120.00 | | |
| WLD143 | 5.0 | | | | 100.00 | | |
| WLD221 | 3.0 | | | | 60.00 | | |
| WLD222 | 3.0 | | | | 60.00 | | |
| WLD229 | 6.0 | | | | 120.00 | | |
| WLD230 | 6.0 | | | | 120.00 | | |
| WLD243 | 5.0 | | | | 100.00 | | |
| WLD246 | 5.0 | | | | 100.00 | | |
| WLD247 | 5.0 | | | | 100.00 | | |
| WLD255 | 8.0 | | | | 160.00 | | |
| | | | | | | | |

# Registration:

# I'm A CAC Student, Now What?

# 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 Student Accounts 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: *centralaz.edu/paying*.

Failure to make payment arrangements may result in the loss of registration. Purge dates (withdrawal for non-payment) for each academic term occur 35, 28, 21, and 7 days prior to the semester start date.

**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 document that is being requested are a copy of one of the following: a driver's license, a birth certificate, or a passport.

## Online Registration

New and continuing students may register via the Internet at *centralaz.edu/applynow* or by accessing **MyCAC**. Most CAC courses have prerequisites. Processes for registration for students using VA Benefits may differ, please contact the School Certifying Official (SCO) for more information.

**Academic Calendar**:
*centralaz.edu/academic-cal/*.

## Multiple Measure Placement Tools

CAC uses two guided placement tools for students to determine which English/Reading and Math courses are best for them.

The English/Reading and Math placement tools use multiple measures (factors) to help with suggested course placements. These measures typically include:
- High School G.P.A. (if student has graduated within 3 years)
- Self-reported standardized Test Scores listed below (In some instances, students may need to provide those results to their Academic Advisor.)
  - GED (General Education Development) certificate
  - AZ Merit score
  - Accuplacer Next Gen score
  - SAT (spring 2016 or later) score / ACT score
  - Advanced Placement (AP) score
  - College Level Examination Program (CLEP) score
  - Cambridge International Exam score
  - International Baccalaureate (IB) score

Students will be able to view their suggested course placements upon completion of the Placement Tools. Students should bring the recommendations with them when meeting with an Academic Advisor. Students may need to enroll in Foundational level courses to help gain the academic skills necessary for success at the college level.

In some instances, or if desired, students may also take a Skills Assessment in English/Reading or Math to help determine the best placement. The Skills Assessments include a number of questions designed to gauge students' suggested exposure or experiences in English, Reading and Math skills.
The English/Reading and Math Placements should be completed by students new to the college or by students before:
- Registering for English, mathematics, or reading classes
- Registering for courses with an English, mathematics, or reading prerequisite
- Seeing an Academic Advisor for the first time

The English/Reading and Math Placements are self-administered through the CAC Website:
- **English/Reading Placement Tool**
- **Mathematics Placement Tool**

For guidance in appropriate math course placement, please use the **Math Placement Guide for Students and Advisors**.

**Students with College Level Credits**
Students who have earned 9 or more academic credit hours from a regionally accredited college or university may be exempt from the reading placement tool. The credit hours must be transferable (see Transfer of Credits section in catalog) and earned in courses that require college-level reading and writing activities as part of their core curriculum. Scores on certain placement assessments, administered at institutions other than CAC, are acceptable.

**Reading Proficiency Requirement**
Reading is a prerequisite or co-requisite for many courses and programs. Reading proficiency can be demonstrated by:
- High School Cumulative Grade Point Average of 3.0 (if graduated in last 3 years or currently in high school)
- Testing as "college ready" using the English/Reading Course Placement Tool
- Transferring 9 or more academic credit hours from another college or university as described above.
- Achieving a minimum score of 18 on the Reading portion of the ACT or a minimum score of 480 on the Evidence-Based Reading & Writing portion of the SAT (taken March 2016 or later).

## Academic Advising

Students are encouraged to participate actively in their learning experience by meeting regularly with an academic advisor. 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. Advising is a developmental process that offers students the opportunity to understand the nature and purpose of higher education and to plan courses and activities that support their career objectives. Advisors offer personal and academic support, refer students to valuable campus resources, and assist students to develop a sense of community and identity with the college: *centralaz.edu/advising*.

### 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 **academic and career goals**; review placement into needed English, Reading and Mathematics courses; and select a program and courses consistent with the student's interests and level of preparation.

### Academic Advising for Returning Students

Continuing students should see an advisor for assistance in developing a comprehensive academic plan based upon the student's stated **Area of Interest** and desired degree or certificate. For students wishing to transfer to a four -year institution, an advisor can provide information about selecting a particular major and how and when to apply for admission. Students who plan to transfer to one of Arizona's three public universities, or any other college or university, should access resources at the **CAC Career and Transfer Center**. Additional transfer tools for ASU, NAU, and UArizona can also be found at *centralaz.edu/university-transfer*.

### High School Students Attending CAC

Students currently attending both high school and CAC can make an appointment with an Academic Advisor to discuss courses. Those students are considered participants in **CAC's High School Programs**. Those students' registration process is outlined on the **High School Programs webpage**. When registering for classes there is an electronic form that will be signed by the student, parent, and high school counselor before being submitted to the CAC registration department.

### Course Numbering System

Most college courses carry three-digit numbers. The course number designates the level of instruction:

| Course Number | Level of Instruction |
| --- | --- |
| 070-079 | Special Interest (non-degree) |
| 080-099 | Developmental |
| 100-199 | First-Year Level |
| 200-299 | Second-Year Level |

### Prerequisites and Corequisites

A prerequisite is a course which must be taken prior to taking another course. For example, if ENG 101 is a prerequisite for ENG 102, then ENG 101 must be taken prior to ENG 102. In order to satisfy a prerequisite course, a student must earn a grade of "C" or better in the prerequisite course or complete a competency examination. A prerequisite can also be a satisfactory score based on the English/Reading and Mathematics Course Placement tool.

A corequisite is a course which must be taken at the same time as another course. For example, if MTC 101 is a corequisite for MTC 100, then both MTC 101 and MTC 100 must be taken at the same time. Dropping a corequisite will result in the student being withdrawn from the course requiring the corequisite.

Course prerequisites and corequisites are listed in the course descriptions. If you have questions about a prerequisite or corequisite, please see an academic advisor or faculty advisor. You may also determine a need for a prerequisite with the Course Placement Tool. In order to register for a course (other than English, mathematics, or reading) without having satisfied the prerequisite, a student must obtain the approval of the instructor and division chair. A complete contact list of department names, deans, division chairs and full-time faculty is available at : *centralaz.edu/academics/copy-of-deans-division-chairs-directory/*. Approvals may be in the form of e-mail messages from the instructor and division chair to the student's CAC e-mail address. If you do not see your professor's name listed in the directory, they may be a part-time faculty member. Contact information may be obtained by contacting the division chair or the Student Services Help Desk at (520) 494-5111 or by emailing *centralhelpdesk@centralaz.edu*.

## Academic Load

College-level classes generally require two to three hours of outside-of-class preparation for each hour spent in class. For example, a three-credit-hour class will usually require 2.5 clock hours of class time and between 5 and 7.5 clock hours of outside-of-class work per week. Students carrying 12 or more credit hours during a spring or fall semester are considered full-time students. During summer sessions, 6 or more credit hours are considered full time. (Note that "full time" is defined differently for purposes of eligibility for financial aid.) Students may enroll in a maximum of 20 credit hours during a spring or fall semester and a set number of combined hours during summer sessions. Students who wish to enroll in more than the 20 credit maximums must obtain approval from an academic dean.

**Military Experience:** Veterans that have served in the United States Armed Forces may submit their Military Transcripts for evaluation. Currently, Central Arizona College awards one credit for Physical Education. No other credit is being accepted at this time.

**Veteran Education Information**
Veteran education benefit information is available throughout this catalog & online at *centralaz.edu/va*.-
**Veteran Services office:**
- Military/Veteran Specialist, School Certifying Official (SCO)- Elizabeth Barrett at 520-494-5517 or *Elizabeth.Barrett@centralaz.edu*

- Office Assistant II Veteran Services & Student Accessibility Services- Mariela Felix, at 520-494-5402 or *Mariela.Felix@centralaz.edu*

## Credit by Evaluation

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

## 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:
*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 and are designed to test competence in specific subject areas at the lower division college level. High school students may request the opportunity to participate in advanced placement examinations through their high school counselor's office. Credit may be earned for successfully completed exams. It is the student's responsibility to submit an official score report.

### College Level Examination Program (CLEP)

CLEP examinations are nationally developed and administered. The examinations provide an opportunity for students to demonstrate college level learning in a variety of subjects. CAC offers general and subject CLEP examinations. CAC 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 on the CLEP website: *clep.collegeboard.org/*.

# High School Equivalency Classes

We provide a flexible program that meets the diverse needs of students and advances their goals in transitioning to college classes, passing GED tests, and improving employment opportunities. The goal of HSE classes (formerly known as GED) is to assist adults in obtaining knowledge and skills necessary for employment, family empowerment and self-sufficiency. The classes include instruction in the five areas tested on the GED® 2014 tests: Reasoning through Language Arts, Mathematical Reasoning, Science, Social Studies and Civics. HSE classes are individualized and include computer-based instruction. The time it takes a student to prepare to take the GED tests varies and depends on such factors as regular student attendance and skill level in reading, math, and writing upon entry. HSE classes are held at various locations throughout the county, as well as online.

Students who complete 12 or more attendance hours in a CAC HSE class, and who pass all 5 GED tests (either at a CAC location or remotely) are eligible for a 12-credit CAC scholarship in the semester immediately after passing the test.

Contact *adult.education@centralaz.edu* for more information.

We are more than a GED program; we are a path to your future.: *centralaz.edu/ged.*

## GED Tests

GED tests are given at Central Arizona College and cost $149 to take all five subjects, including the $9 fee for the Civics Test (required as of January 1, 2017). Scheduling and payment of fees is done through the website *GED.com.*

# English as a Second Language Classes

We provide a flexible program that meets the diverse needs of students and advances their goals in transitioning to college classes, enriching English language skills, and improving employment opportunities. The goal of these classes is to assist adults in obtaining knowledge and skills necessary for employment, family empowerment and self-sufficiency.

ESL classes are individualized and include computer-based instruction. The program also includes a career component to assist students with their next steps. Learners are assessed upon entry to determine English skill levels and placed in the appropriate learning level. Learners progress at their own pace and may repeat the course to continue in the next level as they move toward completion of all six ELAA levels.

ESL classes are held at various locations throughout the county, as well as online.

Contact *adult.education@centralaz.edu* for more information.

We are more than an ESL program; we are a path to your future.: *centralaz.edu/esl*

## New Student Orientation

New Student Orientation (NSO) provides new and returning students and their families the opportunity to connect with other students, faculty, and staff. Learn how to access academic resources and successfully navigate through your Central Arizona College experience.

New Student Orientations are provided virtually and last approximately one hour with time allotted for student questions. Visit *centralaz.edu/orientation* for available dates and times. Don't forget to register!

## Housing & Residence Life

If you wish to live in on-campus housing, you must be admitted to the College, complete the online application, pay the room deposit fee, and meet all the living requirements which can be found at *centralaz.edu/reslife*.

## Bookstore

San Tan, Signal Peak and Superstition Mountain campuses provide full-service bookstores to accommodate students with textbooks, supplies, clothing and snacks. Extended hours are available during the first week of classes. Regular bookstore hours vary by location; please, contact your campus location for more information. Visit *https://centralaz.bncollege.com/*.

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# I Have My Schedule:
# Now What Do I Need To Know?

# Dropping or Adding a Class

Changes may be made to a current student's 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 and submitting it to *admissions@centralaz.edu* for processing prior to the semester start. During the official Drop/Add period, current students may add classes.

## 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 *admissions@centralaz.edu* 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. Financial Aid awards are affected when students do not show up to class during this week. 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

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. Request withdrawal after the allotted time period for extenuating circumstances must be submitted to registration.appeals@centralaz.edu

## Withdrawal Timeline:

| Length of Class | Must Withdraw by Thursday of: |
|---|---|
| 5 Week Course | 3rd Week |
| 8 Week Course | 5th Week |
| 10 Week Course | 6th Week |
| 16 Week Course | 10th Week |
| Classes less than 5 weeks | Prior to the first day of class |

**Academic Calendar:**
*centralaz.edu/academic-cal/*.

## Administrative Withdrawal

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

## Federal Financial Aid Recipients who totally withdraw from classes:

The financial aid office will perform a Return to Title IV Calculation (R2T4) to determine the amount of aid required to be refunded to the federal financial aid program(s). If a grant overpayment is due from the student; the student will be notified by mail and/or email. The student may pay the grant overpayment directly to the school during the same academic year. At the end of the academic year, any uncollected overpayments will be turned over to the Department of Education for collections.

# Tuition 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 final date of the 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 first day of class.

Students withdrawing during the official withdrawal period 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. Visit *centralaz.edu/refunds* for more information.

## Auditing

Students may 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 official class start date.

## 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. If the student earns the same grade when repeating the course only the most current grade will be included in the grade point average. Students should review academic transcripts for including/excluding of repeated courses.

## 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. Please check with your transfer university/college to see what their policy is regarding the transfer of courses to the university/college and specific majors/programs at that university/college.

**Academic Calendar:**
centralaz.edu/academic-cal/.

## Academic Honors Recognition

### Dean's and Honors List

Students will be placed on the Dean's list with a 3.5 semester GPA or above. Students will be placed on the Honors List with a semester GPA of 3.0-3.49. 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."

### 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 3.5 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.  A PTK seal will be posted to the diploma/certificate.  Visit *centralaz.edu/honors* for more information.

### 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 scholarly inquiry in this program will provide a strong base for a lifelong quest for knowledge and excellence.  For more information about Honors, please visit *centralaz.edu/honors*

## Food Services

Signal Peak, Superstition Mountain, Maricopa, San Tan Valley and Aravaipa campuses offer on-campus food service open to the public. At Signal Peak Campus, meals are served seven days per week for residence students. Our Campus Dining at Signal Peak, The Peak & The Point, offers food service for students, staff and public. For menus, hours and locations visit, *campus-dining.com/centralaz* or call (520) 494-5450.

**Catering**
Catering service may be arranged by contacting Catering Manager at 520-494-5034 or by visiting *caccatering.catertrax.com/*.

## Housing & Residence Life

Students planning to live on campus must purchase a meal plan. The College provides food services to on-campus residents during periods of the official academic year, which excludes Thanksgiving Day and winter break periods. The last day of food service each semester will be the same day that Residence Halls close. Visit *centralaz.edu/reslife*.

For dining room hours and any specific information about our dining halls, please visit *campus-dining.com/centralaz/*.

## Bookstore

San Tan, Signal Peak and Superstition Mountain campuses provide full-service bookstores to accommodate students with textbooks, supplies, clothing and snacks. Extended hours are available during the first week of classes. Regular bookstore hours vary by location; please, contact your campus location for more information. Visit *https://centralaz.bncollege.com/*.

*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.*

# I'm Almost Done With My Degree/ Certificate: What Now?

# Application for Graduation

Students applying for graduation must file an Application for Graduation with the Records office by emailing *grad.application@centralaz.edu*.

Please see the official **Academic Calendar** for application deadlines. Graduation cycles are May, August, and December of each year.

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. Visit *centralaz.edu/graduation*.

**Academic Calendar:**
*centralaz.edu/academic-cal/*.

Students may request a duplicate diploma and/or certificate for a duplication charge. The diploma and/or certificate will be stamped 'Duplicate'. Please see Tuition & Fee schedule for appropriate fee. Students who borrowed a student loan while attending CAC, must complete an Exit Counseling session to prepare for loan repayment. Please contact the Financial Aid Office to get started.

# 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.

# 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.
- Student must apply through the normal graduation application process.
- The Associate of General Studies will not be awarded as a second degree.

# Career & University Transfer Center

Utilize the Career & University Transfer Center for information and resources to ensure a successful transfer to the workplace or to a four-year institution. Visit *centralaz.edu/transfer* or *centralaz.edu/career*.

## Arizona Transfer Information

Completion of an associate degree does not necessarily guarantee admission to a particular university's program of study. Students planning to earn a four-year baccalaureate degree should go to the Arizona Transfer website (*aztransfer.com/*) for detailed information on the Arizona Transfer Model and options.

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.

Use the following Arizona Transfer Resources:
**Arizona Transfer (AZTransfer)-** *aztransfer.com*

**Course Equivalency Guide (CEG):** *https://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.

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):** https://aztransmac2.asu.edu/cgi-bin/WebObjects/ATASS.woa/wa/examquery

## 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 at least 35 credits which meet the target institution's general education requirements provided students earn a minimum degree program grade point average (CGPA) of 2.0 on a 4.0 scale.

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 program grade point average 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 may refer to this topic within the **Degrees and Certificate** section for additional information.

## Arizona Shared Unique Numbering (SUN) System

Arizona community college students planning to transfer to Arizona State University (ASU), Northern Arizona University (NAU) or the University of Arizona (UArizona) may use the SUN System to identify transferrable courses. 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 50 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 *aztransfer.com/sun/*.

## Transfer Agreement Options

The *aztransfer.com/* website offers transfer tips and valuable transfer tools for students, advisors, faculty and others. Students are strongly encouraged to consult a CAC academic advisor. Special program agreements with partnering higher education institutions build upon the CAC associate's degree.

In addition, some transfer pathways accept 90 or more CAC credits towards a baccalaureate degree program.

**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 earn 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 (AGEC) 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 A.A.S. degree, students may take the additional three hours in any one of the five remaining areas. The following table illustrates the relationship between the A.A.S. 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. See Transfer Agreement options for AAS to BAS degree.

## A.A.S. to B.A.S. (75+45 Credit Hour Model)

*Approved by APASC, April 29, 2011*

| 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 |

## Articulation and Transfer Options for Degree Completers

### Albright College
1621 N. 13th St., Reading, PA 19604
610-921-2381
*albright.edu/*

### Arizona Christian University
2625 E. Cactus Road, Phoenix, AZ 85032
800-247-2697
*arizonachristian.edu/*

### Arizona State University (see page 37)
1151 S. Forest Ave., Tempe, AZ 85287
480-965-2100/855-278-5080
*transfer.asu.edu/cac*

### Benedictine University
225 E. Main Street, Mesa, AZ 85201
602-888-5500/866-295-3104
*ben.edu/mesa*

### Chamberlain College of Nursing
2149 W. Dunlap Avenue, Phoenix, AZ 85021
602-331-2720
*chamberlain.edu/phoenix*

### College of St. Scholastica
3550 N. Central Avenue, Suite 1020, Phoenix, AZ 85012
480-602-6241
*http://www.css.edu/*

### Fashion Institute of Design & Merchandising
919 S. Grand Avenue, Los Angeles, CA 90015
800-624-1200
*www.fidm.edu*

### Fondazione Marco Polo SRL – Italy
*marcopoloinstitute.org/*

### Frontier Nursing University
195 School Street, Hyden, Kentucky 41749
606-672-2312
*frontier.edu/*

### Grand Canyon University
3300 W. Camelback Road, Phoenix, AZ 85017
602-639-7500
*gcu.edu/*

### Northcentral University
8667 East Hartford Drive, Suite 100, Scottsdale, AZ 85255
866-776-0331
*ncu.edu/community-colleges*

### Northern Arizona University (see page 39)
Signal Peak Campus
8470 N. Overfield Road, Coolidge, AZ 85128
520-421-1394
*nau.edu/why2nau*

### Ottawa University
15950 N. Civic Center Plaza, Surprise, AZ 85374
855-546-1342
*ottawa.edu/*

### Palmer College of Chiropractic
1000 Brady Street, Davenport, IA 52803
800-722-2586
*palmer.edu/*

### Prescott College
220 Grove Avenue, Prescott, AZ 86301
877-350-2100
*prescott.edu/*

### Southern New Hampshire University
2500 North River Road, Manchester, NH 03106
*https://www.snhu.edu/*

### University of Arizona (see page 40)
University of Arizona-Pinal
8470 N. Overfield Road, M Bldg. Coolidge, AZ 85128
520-840-4878
*uas.arizona.edu/*

### University of Maryland University College
3501 University Blvd. East, Adelphi, MD 20783
800-888-8682
*umuc.edu/*

### University of Phoenix
1625 W. Fountainhead Parkway, Tempe, AZ 85282
888-766-0766
*phoenix.edu/*

### University of the Potomac
1401 H Street, N.W., Suite 100, Washington, DC 20005
888-635-1121
*potomac.edu/admissions/transfer-students/*

### Upper Iowa University
1601 W. Main St., Building 15, Mesa, AZ 85201
480-461-6790
*mesa@uiu.edu*

# Arizona State University

U.S. News & World Report named ASU the #1 university in the nation for innovation in 2016 and 2017, ahead of #2 Stanford and #3 MIT.

ASU continues to earn national recognition as a top university for graduate employability, according to the 2016 Global University Employability Survey. ASU now ranks in the top 10 in the nation, ahead of MIT, Columbia and UCLA. Eighty-eight percent of ASU graduates looking for a job get at least one job offer within 90 days of graduating.

ASU is proud to have special partnerships with Central Arizona College. Through these close working relationships, we have created transfer pathways to provide you with a clear plan to achieve both your associate and bachelor's degrees.

Transfer Simplified: These pathways are designed to help you experience a seamless transfer to ASU.

## MyPath2ASU

**MyPath2ASU**™ — a set of customized tools to help transfer students from U.S. regionally accredited institutions (including international students transferring from U.S. regionally accredited institutions). MyPath2ASU™ creates a seamless transfer experience to ASU after earning credits or an associate's degree from a U.S. community college or university. Choose from more than 400 pathways into an on-ground or online ASU degree program, and have access to personalized benefits to help you navigate the transfer experience. Plan a path into your major of choice by taking classes that transfer to ASU—shortening your time to degree completion. A simple, seamless transition into one of the nation's top 10 universities for undergraduate education — that's MyPath2ASU™.

The benefits of transferring with **MyPath2ASU** 🔼.

- Guaranteed general admission and admission into major of choice if all requirements are satisfied*. Some majors have additional or higher admission requirements.
- 400+ on-ground and online pathways
- Minimize loss of credit
- Self Service Transfer Tools
- Personalized Support
- Save time and money


Transfer events

*General university admission is guaranteed upon successful completion of the following conditions:1) Completion of an associate degree from a regionally accredited higher education institution with a minimum 2.00 cumulative GPA (Arizona residents) or 2.50 cumulative GPA (nonresidents) or 2) completion of 24 or more transferable semester credits post-high school with a minimum cumulative transfer GPA of 2.50 (4.00="A") and verification of high school graduation or the equivalent. NOTE: Some ASU colleges and schools have additional or higher requirements for admission into their majors. Students will also need to submit an Arizona State University admission application, including an application fee and other required documents, such as official college/university transcripts. MyPath2ASU™ pathway programs are based on a minimum of 24 transfer credit hours; students with fewer than 24 credit transfer credit hours will need to meet the appropriate admission requirements. International students will need to meet international admission requirements.*

## ASU Online

Did you know that ASU has more than 60 undergraduate degree programs offered completely online? See what is available online at *asuonline.asu.edu/*. Our online degree programs are effective, flexible and smart. Unlike a standard online lecture, ASU's online courses are highly interactive and engaging, and ensure the subject matter is fully understood. This structure also facilitates interaction with classmates and highly recognized faculty to encourage learning through collaboration. It was specifically designed to provide access to the vast academic, research and career resources that ASU offers—to anyone, anywhere. Many of our TAG programs with CAC will transfer directly into our online programs.

## General Transfer

You can transfer to ASU at any time and earn your bachelor's degree by meeting our transfer admission requirements. Use the Degree Search at *asu.edu/degrees* to learn more about our 300+ undergraduate programs and career opportunities.
To find out which courses will transfer to ASU, use our Transfer Credit Guide at *asu.edu/transfercreditguide*. Our transfer specialists are also available to help you prepare for transfer to ASU by answering questions about the application process and guiding you to additional ASU resources.

### Financial Aid and Scholarships

Named one of the best colleges for the money nationwide and #1 in Arizona by Fox Business, ASU is committed to helping you finance your education. ASU offers a wide range of financial aid opportunities for transfer students, including millions of dollars in awards and scholarships to students who demonstrate academic achievement and have financial need. For more information about financial aid and scholarships, visit *students.asu.edu/financialaid*.
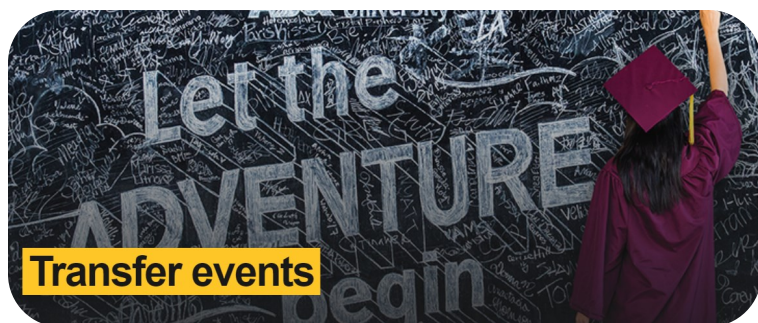
## ASU@Pinal

Arizona State University and Central Arizona College have established a partnership that will allow you to complete your associate degree at CAC and then pursue your ASU bachelor's degree by taking classes delivered through CAC. Students can now earn a Bachelor of Arts in Organizational Leadership (BA) without leaving Pinal County. More information can be found at
 *https://admission.asu.edu/transfer/pinal*.



Students can now earn a Bachelor of Arts in Organizational Leadership (BA) without leaving Pinal County. More information can be found at *https://admission.asu.edu/transfer/pinal* .

## ASU Nursing Options

### Concurrent Enrollment Program:

The ASU-CAC Concurrent Enrollment Program (CEP) pathway is available to select CAC nursing students. These students will be enrolled in the CAC nursing and ASU BSN programs concurrently. This pathway may be completed in five to six terms, including summer sessions. This is an excellent option for students who want an accelerated program which helps them earn their associate's degree and their bachelor's degree in nursing.

### RN to BSN Pathway:

This online program is ideal if you are in the process of completing or have completed your Associate of Science degree in nursing and have obtained your RN
credential.

- Apply up to 75 specified credit hours from CAC toward the BSN at ASU. A minimum of 45 credit hours beyond this pathway is required to complete the ASU BSN degree.
- Receive guaranteed admission to ASU's RN to BSN program upon completion of pathway requirements.
- Access ASU transfer specialists via in-person, phone or web-based appointments.

To sign up at *transfer.asu.edu/cac*. Choose "Sign up for a TAG" and complete the agreement form. Once ASU processes your form, you will have access to your My ASU account and begin receiving communications from ASU.

### AAS to BAS pathway program

This pathway allows you to earn an Associate of Applied Science degree and transfer to a Bachelor of Applied Science program at ASU. ASU offers a variety of BAS programs, including health sciences, operations management, technology and more. See which BAS programs are aligned with CAC AAS degrees at
*transfer.asu.edu/aas-bas/central-arizona-college*.

Benefits of this program include:
- Guaranteed admission to a specific ASU Bachelor of Applied Science degree program.
- Transfer up to 75 credit hours from CAC toward the completion of the BAS degree at ASU.
- Support from ASU transfer specialists via in-person, phone or web-based appointments.

Contact your ASU transfer specialist at *transfer.asu.edu/contact* for more information.

# Northern Arizona University

**Flagstaff, Online and Community Campuses**

Open doors to new opportunities by earning an undergraduate or graduate degree through Northern Arizona University - locally, online or by attending our campus in Flagstaff. NAU's programs are designed to help you advance in high-demand career fields such as criminal justice, healthcare, education and business. To learn more, visit *nau.edu/*.

Design your education around your life, making it the most convenient and affordable way to earn your degree. Some advantages of earning your degree through NAU include:

- A full-time admissions counselor, located at the Signal Peak campus, to guide you through the transfer process;

- New Jacks Path tool designed to give you a customizable education plan: *jackspath.nau.edu*

- Accelerated class formats;

- Low tuition and fees blended with the high quality education provided by Northern Arizona University;

- Personalized Learning – a competency-based program that applies your prior learning and knowledge towards one of our degree programs;

- Transfer programs like our award-winning 2NAU Joint Admissions Program creating a seamless transfer from CAC.

## What's CAC2NAU?

NAU has partnered with CAC to provide a guided pathway from your associate's degree at CAC to your bachelor's degree at NAU. You will have the option to take NAU classes locally, attend classes at our Flagstaff campus, or complete classes online. All CAC students are eligible to participate in the 2NAU program, if you have at least one semester of coursework to take at CAC. Visit *nau.edu/why2nau*.

## NAU Learning Opportunities:

- 90/30 programs allow you to transfer up to 90 credit hours from other accredited universities and/or community colleges towards your NAU degree, in any of 8 career areas including Health Sciences, Nursing, Public Administration, Justice Studies and Technology Management.

- Our Concurrent Enrollment Nursing partnership allows students to work towards their AAS in Nursing at CAC while also working towards their BSN from NAU. Students complete the requirements for both in the same semester, enabling them to enter the health care industry more quickly through this affordable and efficient partnership.

- Special and Elementary Education classes are available through NAU, right on the CAC campus. Our unique partnership allows students to become a special education teacher by earning an associate degree through CAC and a bachelor's degree through NAU's cohort program.

- Flagstaff – come to our beautiful campus in Flagstaff to enjoy a high-quality and affordable education with your choice of over 90 different undergraduate majors. Round out a great education by getting involved in campus clubs; intramural sports; and cultural and theatrical performances. At NAU, we are committed to placing your needs at the center of everything we do. Schedule your tour today at *nau.edu/schedule-a-visit/*

- Personalized Learning (PL), NAU's competency-based online program, allows you to apply prior learning and knowledge into one of our PL bachelor's degrees through a series of assessments. Work at the pace that best fits your life for a flat tuition rate of $2,500 per 6-months. Take as many or as few classes online as you choose- you set the pace! For additional information, visit *pl.nau.edu/*.

- AAS to BAS degrees allow CAC students to transfer up to 75 credit hours to NAU, where you can complete the remaining 45 credit hours through NAU to earn your BAS degree.

**NAU @CAC**-
- Email: *centralazrizona@nau.edu*
- Phone: (520)421-1394

# University of Arizona

The University of Arizona provides Transfer Pathways for a variety of Bachelor's degree program options for students completing a CAC Associate's degree. Details for transfer pathway agreements are located at *admissions.arizona.edu/how-to-apply/transfer*.

**Benefits to CAC Students/Employees and Family Members**:
- Cost-effective pathway;
- Transfer course applicability;
- Access to UArizona transfer advisors;
- Affordable, accessible degree programs offered in Pinal County;
- Degree pathways from Associate of Science, Arts, and Applied Science degrees;
- UArizona Pinal Coordinator on-site at the CAC Signal Peak Campus to assist you with the transfer process *uas.arizona.edu/*.

**Eligibility Requirements:**
- Completion of AGEC;
- C or better in each transferrable course
- Specific majors will have minimum GPA requirements for admission; see transfer credit guide for more information: *registrar.arizona.edu/academics/transfer-credit-guide*
- UArizona Pinal Coordinator on-site at the CAC Signal Peak Campus to assist you with the transfer process *uas.arizona.edu/*.

**Terms of Agreement:**
a. Cumulative GPA and minimum grade for transfer courses: C (2.0) or better;
b. Tuition: *bursar.arizona.edu/students/fees*. Students completing branch campus programs through UArizona Pinal are eligible for the UArizona South tuition rate;
c. Fees: *bursar.arizona.edu/students/fees*;
d. Deadlines: *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: *catalog.arizona.edu/policy/proficiencycompetency-and-exemption-examinations-special-examination-credit-or-grade*;
g. Military Credit: *catalog.arizona.edu/policy/credit-us-military-service-and-training*;
h. Credit life limitations, if any: Applicability of transfer credit is determined with an academic advisor;
i. Scholarships available: *financialaid.arizona.edu/*.

**Enrollment information:**
- Transfer to UArizona main campus in Tucson: *admissions.arizona.edu/transfer/steps-to-apply*;
- Transfer to UArizona Pinal: *uas.arizona.edu/admissions*.

**Programs/Special Programs/Cohorts**:
A variety of transfer pathways are available for Bachelor's degree programs at the UArizona and through the branch campus, UArizona South: *https://transfer.arizona.edu/*

Students completing AAS degrees at CAC have the option of transferring to a Bachelor of Applied Science (BAS) program through UArizona Pinal, including majors in Administration of Justice, Early Childhood Education, Human Services, Informatics, Intelligence Studies, 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.

## AAS to BAS pathway program

Associate of Applied Science degrees allow CAC students to transfer up to 75 credit hours and complete a Bachelor of Applied Science program through UArizona.
Prospective transfer students are encouraged to visit: *admissions.arizona.edu/how-to-apply/transfer*

AZ Transfer Course Equivalency Guide: *https://aztransmac2.asu.edu/cgi-bin/WebObjects/CEG*

**Advising Information/Contact:**
⇒ UArizona Transfer Advising Appointment:
- Online/Virtual: *https://slate.admissions.arizona.edu/portal/admissionsvirtualchat*

⇒ UArizona Transfer Student Center:
- *transfercenter.arizona.edu/*

⇒ Questions?:
- Email: *katelynwildman@arizona.edu*
- Email: *kerdelyi@arizona.edu*

# Student Rights & Responsibilities: What Are They?

# ACADEMIC STANDARDS

## Student Code of Conduct & Student Handbook

The Student Code of Conduct (the Code) sets forth standards that are expected of all students and is developed as a means of implementing fair and consistent standards of student conduct. The code outlines students' rights and responsibilities and the College's expectations with respect thereto. Every student is expected to be aware of the obligations and responsibilities imposed by the Code and comply with it.  The Dean of Students is the primary person responsible for the creation, enforcement, and administration of the Code.

Please view the Code in the Student Handbook: www.centralaz.edu/studenthandbook.

In addition, students who live on the SPC campus residence halls should pay attention to an additional set of community living guidelines, in the Residence Life Compendium.

If you would like to notify campus officials of a student issue or conduct concern, please use the Incident Reporting Form: https://cm.maxient.com/reportingform.php?CentralAZCollege&layout_id=00.

## 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.

## SARA Complaint Process

For online students living outside Arizona, non-instructional complaints may be submitted at https://cm.maxient.com/reportingform.php?CentralAZCollege&layout_id=2.
Students may appeal SARA related complaints to the Arizona Community College Coordinating Council (AC4) at https://arizonacommunitycolleges.org/az-sara/.
CAC is also a member of the Arizona SARA Council, who can review unresolved non-instructional complaints for out of state students. Complaints may be requested by emailing

cbustamante@azcommunitycolleges.org.  You will receive a response with the complaint form and submission instructions. Students may also contact the SARA Portal Agency of their home state at https://nc-sara.org/. Instructional complaints, such as grade grievances, should be resolved with faculty, and are not reviewed by AZ SARA.

# STUDENT RECORDS

Student records are maintained in the Records Office.

# Family Educational Rights and Privacy Act (FERPA)

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 or by completing the electronic form via the student online services. 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.

# Student Right to Know

Student Right to Know Act (SRTK) , 34 C.F.R. 668, requires that institutions receiving Title IV funding disclose certain information to current and potential students and employees. It refers to a set of public disclosure documents that are designed to inform students and other stakeholders about aspects of the college including graduation and transfer rates, financial aid policies and information, costs of attendance, programs of study, policies, and contact information.

The Higher Education Opportunity Act requires colleges participating in federal student aid programs to make this information easily accessible for consumers at a single location. Please access the following links to read more about subjects that may be of interest: www.centralaz.edu/srtk.

# ATTENDANCE

## Absence Policy

### No Show Reporting 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, the instructor is required to withdraw the student from class. This ensures CAC is in compliance with federal regulations as the Financial Aid Office must recalculate student 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, all Active/Reservist service members of the United States Armed Forces, 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. At the time of such recommendation, it is the responsibility of the student to request the withdrawal with the registration office. Students may appeal 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.

Courses may be recorded. It is a student's responsibility to notify the course instructor if they do not wish to be recorded.

# Grading

## 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)
- **WF**- Withdrawal While Failing (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)

### Withdrawal While Failing (WF) Grade
Students who unofficially withdrawal from a class after the official withdrawal deadline, by non-attendance, will be assigned a grade of Withdrawal while Failing (WF) by the instructor with a last date of attendance (LDA). The grade of WF is recorded and calculated in the GPA as 0 points.

### 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 class has begun. 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.

### 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, WF= 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: _____ ÷ _____ = _____
   (Total Points)    (Total Number of Hours)    GPA

# Grade Change/Appeal

The student has the right to an explanation of an instructor's grading procedure and how a particular grade was determined. Only in exceptional cases shall a grade appeal be heard at times other than during the regular academic year (fall and spring semesters.) The Academic Dean will determine if a case is exceptional and warrants a review and has the authority to extend the time limits of the appeal process, which should begin before the end of the 10th week of the semester following the semester in which the grade was assigned. In no case shall the appeal process extend beyond the end of the first semester following the awarding of the grade without the consent of all parties involved. The Dean will decide if the time constraints have been satisfied.  The grade appeals procedure and form are located at *https://cm.maxient.com/reportingform.php? CentralAZCollege&layout_id=4*.  Select grade appeal as the nature of the report and selecting Academic Concern in the description.  A detailed reason why the student is requesting the appeal as well as steps taken up to the point of submission is required.

Please be aware that providing false information to a College Official is a violation of the Student Code of Conduct. A Student who is suspected of this will be adjudicated through the student conduct process as per the Student Handbook.

# Academic Progress

Academic progress is a system of monitoring all students in order to assist them in achieving their educational objective.  Criteria included in determining academic progress are program grade point average (GPA) and completion.  Program GPA is based on an accumulation of all grades for credit bearing courses taken at CAC that pertain to a student's selected program of study.  Completion refers to the requirement that a student complete 67% of the attempted credits of their program each semester including the summer session.  As an example a student taking 12 credits required for their program must successfully complete 8 in order to remain in good standing.  Students receiving federal Financial Aid are also monitored for maximum timeframe (please see link to Financial Aid: **www.centralaz.edu/finaid**).

# Academic Warning

A student placed on Academic Warning (formerly referred to as Academic Probation) has an overall GPA of less than 2.0, and/or has completed less than 67% of their semester credits.  The student will be notified of this designation via CAC email and will see an Academic Warning hold within their student portal which will limit registration activity.  This designation alerts students that they are not making satisfactory progress toward completion in their selected program of study.  Students placed on Academic Warning must meet with an academic advisor, collaboratively develop an **Academic Warning Success Plan**, and comply with the recommendations outlined within it.  The hold will be removed by the advisor at the conclusion of the conversation.

*A student who is receiving federal financial aid and on Academic Warning may continue to receive federal financial aid for that term.  They will, however, be suspended from receiving aid if their overall GPA remains below 2.0 and/or their semester completion rate remains below 67% in a subsequent semester, or if they have exceeded maximum timeframe. This includes students using Military or Veteran's Educational Benefits.  Visit* **www.centralaz.edu/finaid**.

# 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 program 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, WF 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 program GPA.

# Academic Concern

Students who have a question or concern regarding their grade(s) or course instructor should first speak to the instructor.
E-mail addresses and telephone numbers of full-time faculty can be found at *https://centralaz.edu/academics/copy-of-deans-division-chairs-directory/*.   Part-time faculty do not have offices on campus but can be reached through e-mail.  Contact the Central Help Desk at (520) 494-5111 or *centralhelpdesk@centralaz.edu* for e-mail addresses of part-time faculty.

If the concern is not resolved, or if the student if unable to reach the instructor after making reasonable attempts to do so, then the student should speak to the division chair or department director.  A complete contact list of department names, division chairs, & deans is available at *https://centralaz.edu/academics/copy-of-deans-division-chairs-directory/*.

After unsuccessful attempts with the instructor and/or division chair, students may also submit a formal complaint via the online form at *https://cm.maxient.com/reportingform.php?CentralAZCollege&layout_id=2*.

# Student Concern or Complaint with a Specific Office

CAC promotes an open educational environment.  We welcome all feedback, both positive and constructive, regarding your experience with us. What is working and what is not? Your input provides for continuous quality improvement at CAC. In the event of a concern or complaint, the college encourages all students and community members to first direct their complaints and concerns to the staff, or administrator specifically involved. If the situation cannot be remedied at this level the student may contact the staff or administrator's immediate supervisor. Click here for a Staff Directory.   In addition, the following form can be completed and will be considered a formal complaint with follow-up from an appropriate supervisor.: *cm.maxient.com/reportingform.php?CentralAZCollege&layout_id=2*.

# Concern or Complaint regarding any Disability Accommodation (non-employee related)

If you have a concern about a disability related issue, please contact the Student Accessibility Services department at 520-494-5409 or reference the Discrimination Complaint Process: *https://centralaz.edu/wp-content/uploads/2022/01/Documentation-Guidelines2.pdf*.

If you need additional assistance, please contact the Dean of Student Development at *DeanOfStudents@centralaz.edu*.

An individual may file a discrimination complaint with the Office for Civil Rights, by visiting: *https://www.hhs.gov/ocr/complaints/index.html*.

## CIVILITY STATEMENT FOR A LEARNING COLLEGE

Central Arizona College encourages & promotes an environment of civility & mutual respect among its diverse students, employees & community members.

As a community we are committed to building positive relationships, promoting well-being & safety.

As an institution of higher learning, it is essential that we continuously evaluate our strengths & weaknesses to demonstrate where we can & will do better.

We commit to making CAC a place where everyone finds the respect, dignity & support they deserve, not only as human beings, but as a member of our diverse CAC community.

The 'Be the L.I.G.H.T.' initiative was designed to foster an environment where all CAC faculty and staff exhibit the core values of L.I.G.H.T. when interacting with students and the community, at large.  Each letter in the acronym L.I.G.H.T. is defined below:

LISTENING: Listening to our students, employees & community to identify & assess the needs of ALL students with focus on underserved & underrepresented populations.

INSPIRATION: Inspiring students, employees & community members to step-up & step-in when injustice, inequity & intolerance are exhibited.

GUIDANCE: Guiding decision making with a culture of collaboration, respect, understanding & kindness.

HOLISTIC: Holistic approach to education & support that emphasizes the power of focusing not only on intellectual growth, but also the emotional, social, physical, & creative needs of individuals.

TRUST: Trust provides a foundation for understanding. Demonstrating integrity & leading with compassion fosters a greater sense of inclusion & community. Acting with these principles builds confidence that Central Arizona College is a trusted leader in T.R.U.E. Learning.
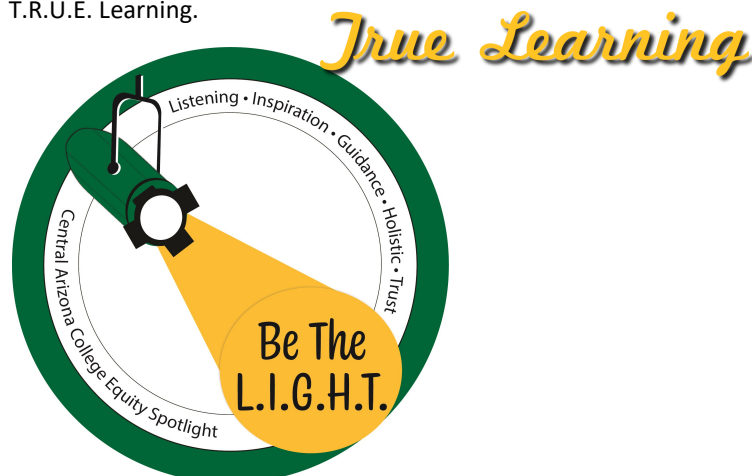


## Title IX

### What is Title IX (pronounced Title Nine)?

Title IX is a federal regulation which states, "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving federal financial assistance."

### How do we define Sexual Harassment?

The 2020 Title IX Regulations define sexual harassment broadly to include any of three types of misconduct that – on the basis of sex – jeopardize the equal access to education and the educational programs/activities that Title IX is designed to protect. These three types of misconduct are:

1. Any instance of quid pro quo harassment by a school's employee;
2. Any unwelcome conduct that a reasonable person would find so severe, pervasive, and objectively offensive that it denies a person equal educational access;
3. Any instance of sexual assault (as defined by the Clery Act), dating violence, domestic violence, or stalking (as defined in the Violence Against Women Act (VAWA). For definitions of sexual assault, dating/domestic violence, and stalking, please see the CAC Title IX Sexual Harassment Policy at centralaz.edu/titleix.

Central Arizona College seeks to provide an educational, employment, and business environment free of sexual violence, unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct or communications constituting sexual harassment as prohibited by state and federal law. Discrimination under this Policy includes an unequal treatment of a student or employee based on their actual or perceived gender, sexual orientation, or pregnancy. This Policy prohibits sexual harassment, discrimination, and retaliation in any college education program or activity, which means all academic, educational, extracurricular, athletic, and other programs.  Inquiries concerning the application of this Policy or the filing of a specific complaint may be referred to CAC's Title IX Coordinator at (520)494-5106/(520)840-1175, or at titleix@centralaz.edu.

File an anonymous report online at centralaz.edu/titleix.

**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, genetic test information, sexual orientation, or gender identity or expression.**

*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.*

# Opportunities Beyond the Classroom: How Do I Get Involved?

# Intercollegiate Athletics

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

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


Softball


Rodeo
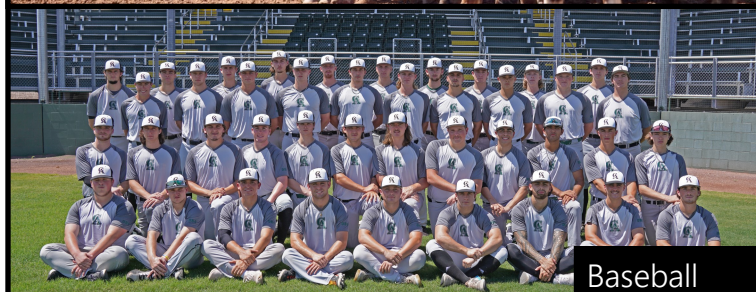

Baseball


Basketball

Central Arizona College is a member of the National Junior College Athletic Association (NJCAA), the Arizona Community College Athletic Conference (ACCAC) and National Intercollegiate Rodeo Association (NIRA). Central Arizona College has one of the most successful athletic programs in the ACCAC and NJCAA. It has posted 42 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: Student Services Office or the Athletic Department at 520-494-5300.

## Athletic Records
National Championship teams and year:
- Baseball 1976, 2002, 2019
- Women's Basketball 1989, 1998, 2005, 2009
- Men's Cross Country 1988, 2002, 2003, 2005, 2012, 2013, 2016, 2018
- Women's Cross Country 2005, 2009
- Women's Rodeo 1978, 1979, 2014
- 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 and rodeo arena. For more information, contact the athletic department at 520-494-5300 or 800-237-9814, ext. 5300.  Also, please visit our website: *www.vaquerosports.com*.

## Student Employment Opportunities
CAC offers student employment opportunities to students as they pursue future college and career aspirations.  Visit the Student Employment Services web page at *https://www.schooljobs.com/careers/centralaz/transferjobs*.

Should you require more information or assistance, please email *studentjobs@centralaz.edu*.

## Career Exploration
Explore career opportunities through the MyMajors and Strong Career Assessment tools. In addition, find job postings, resume help and more through Local First/Pipeline AZ at *www.centralaz.edu/career*.

## University Transfer Exploration
Explore and understand the process of transferring to a four-year college or university. University transfer information, including transfer events, checklists, contacts and more are available at *centralaz.edu/transfer*.  It is highly recommended to begin learning about this process your first semester at CAC or even before if possible.

*The U.S. Department of Education awarded Central Arizona College a five-year Title V Strengthening Hispanic Serving Institutions grant of $2,413,122 in September 2018. No institutional match is required. The Title V grant funds 100% of the project.*

# Intercultural Travel Programs

Central Arizona College offers multiple intercultural travel programs each year. These short-term programs are open to both students and community members.

Information on current programs can be found at https://centralaz.edu/current-students/international-studies/

# Housing & Residence Life

The Signal Peak Campus offers an on-campus living and a learning environment with space for approximately 256 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.

If you wish to live in on-campus housing, you must be admitted to the College, complete the online application, pay the room deposit fee, and meet all the living requirements which can be found at *centralaz.edu/reslife*. For more information about Housing & Residence Life, please visit *centralaz.edu/reslife* or contact the office directly at 520-494-5470.

# TRIO Upward Bound

**TRIO Upward Bound** at Central Arizona College seeks to promote a college-going culture among Pinal County high school youth. Operating at Casa Grande Union High School, Vista Grande High School, and Coolidge High School, the program is funded by a $1.3 million dollar grant from the United States Department of Education. Services offered include academic tutoring, cultural excursions, and career advisement for students in grades 9 through 12. The signature event is a six-week intensive summer institute free of charge to students that includes college-level coursework, academic tutoring,

mentoring, and social events. For more information, contact Upward Bound Project Director, April Ortega, at 520-494-5114 or *April.Ortega@centralaz.edu*.

# TRIO Student Support Services

The TRIO Student Support Services program focuses on access and academic success in a higher education setting, located on the Signal Peak Campus and available to all eligible students from all CAC campus sites, is designed to assist students to graduate and transfer to a four-year institution within guidelines set by the U.S. Department of Education. TRIO SSS applicants must meet certain criteria, such as being a first-generation college student and enrolled in a transfer program. TRIO student services include personalized academic advising, peer/faculty mentoring, peer tutoring, cultural activities, scholarship opportunities, and more. The goal of the program is to increase the retention, graduation, and transfer rates of TRIO SSS participants. For more information visit the TRIO SSS webpage at *centralaz.edu/trio* or call (520) 494-5007. TRIO is on Facebook and Instagram: cac_sss_trio.

The TRIO SSS Program at Central Arizona College is funded by the U.S. Department of Education.

# TRIO Summer Bridge

The **TRIO Summer Bridge Program** is FREE! It is an exciting and invaluable five-day college residential orientation program designed to give incoming students an edge in succeeding at CAC. This is a FREE program for eligible recent high school graduates or GED recipients that takes place on the Signal Peak Campus. For the duration of the program, students live in the residence halls, complete interactive workshops, topical discussions, meet, connect, and make lifelong friendships, enjoy social activities, have fun, and explore college life. This program is a full week of FREE engaging, fun, and interactive events with your peers, faculty, and staff at Central Arizona College. For more information, please visit *centralaz.edu/summer-bridge* or call 520-494-5007.

# STUDENT ENGAGEMENT AND ACTIVITIES

**Student Engagement and Activities** provide students a variety of involvement opportunities. Co-curricular programs include student government and advocacy, clubs and organizations, and student activities. The Vaquero Vibe is a weekly newsletter contains information about activities and happenings around the various CAC campuses.

## Student Government Association (SGA)

SGA at CAC is an important student organization that responds to student needs and issues. SGA provides students opportunities for advocacy on campus, in the community and throughout the state.

We are currently searching for leaders to be a part of our SGA. If interested, reach out to the Director of Student Engagement, Travares Peterson, for more information at travares.peterson@centralaz.edu.

Benefits to taking on a leadership role in SGA:
- Scholarships
- Leadership Training & National Conferences
- Community Involvement
- National recognition for leadership excellence

Visit centralaz.edu/student-leadership to learn more.

## Student Clubs and Organizations

**Student Clubs and Organizations** 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 for guidance and support. There are a variety of opportunities to be involved in leadership, social, service, religious, educational, ethnic, and cultural clubs and organizations.

Anyone interested in joining or starting their own group can visit *centralaz.edu/clubs-organizations*.

Creating a new student organization is an excellent way to develop leadership skills and provide your fellow Vaqueros with a way to get involved at CAC! Student Organizations help build community and create learning for students outside of the classroom. New Student Organizations are welcome to register at any point during the school year. There is no fee associated with registering a new student organization. If there are any questions on the requirements or steps involved in starting a new organization, please contact our Director of Student Engagement, Travares Peterson, *travares.peterson@centralaz.edu*.



Central Arizona College Business Division

**Campus Leadership Opportunities**

- **Christian Challenge** - Faith based student organization that nurtures students in their spiritual and personal development with an emphasis on knowing and applying the wisdom found in the Bible.

- **Histo-News Club at CAC** - Students practice the art of historians to search for reporting on events that took place during specific time periods.

- **Mise En Place at CAC** - Promotes skills through culinary and hospitality to serve the community & participate in competitions.

- **Mu Alpha Theta Math Honors Club** - Promotes scholarship in and enjoyment and understanding of mathematics among two-year college students. And to recognize the outstanding achievements of students who have completed math classes beyond College Algebra and maintain a 3.0 GPA in those math classes.

- **National Society of Leadership & Success (NSLS)** - Assists people to discover and achieve their goals. The NSLS offers life-changing lectures from the nation's leading presenters and a community where like-minded, success-oriented individuals come together and help one another succeed.

- **Queer Community at CAC** - We are a community organization here to provide a safe space and source of community for LGBTQ+ students and allies.

- **Vaqueros for Troops** - The club's primary mission is to provide military care packages to loved ones deployed, stateside or overseas.

*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.*

# Student Resources:

# Where Do I Go For Help?

**GET STARTED TODAY...**

# Central Help Desk Services

The Central Help Desk provides a central location for customer and student support. As the first point of contact for student services, the Help Desk offers a wide variety of assistance which includes obtaining a new or replacement CAC student ID card, scheduling a campus tour, resetting Online Services passwords, understanding Online Student Services features, troubleshooting Blackboard, using CAC e-mail, providing telephone numbers and e-mail addresses of faculty and staff. Also, whether you need to find out how to register for classes or where to go for tutoring, the Help Desk can point you to the right college department.

**Central Help Desk Services Contact Information:**
- Phone: 520-494-5111
- Email: *centralhelpdesk@centralaz.edu*
- Campus Tour Email: *campustours@centralaz.edu*
- CAC's Website offers General Help/FAQ's/ Vaquero Chat Bot: *centralaz.edu*

**All campuses locations are open Monday-Thursday | 8 a.m.-6 p.m.:**
- Signal Peak Campus (SPC) in the M Building (Student Services)
- Superstition Mountain Campus (SMC) in the Teaching and Learning Center (TLC)
- Aravaipa Campus (AVC) in the A Building
- San Tan Campus (STC) in the B building
- Maricopa Campus in the A building

**The Central Help Desk Services, at any of the campus locations or online, are the primary point of contact for issues related to Student Services including:**
- Online services assistance
- General customer service
- Campus Tours
- Telephone numbers and e-mail addresses of faculty and staff
- Information about the Student Hands-On Orientation to Online Learning (SCHOOL)
- Troubleshoot issues related to:
  - ⇒ Registration/schedule printing
  - ⇒ Financial aid
  - ⇒ Unofficial transcripts
  - ⇒ Admissions
  - ⇒ Student IDs

# Career & University Transfer Center

Utilize the Career & University Transfer Center for information and resources to ensure a successful transfer to the workplace or to a 4-year institution. Visit *www.centralaz.edu/transfer* or *www.centralaz.edu/career*

# Student Employment Opportunities

CAC offers student employment opportunities to students as they pursue future college and career aspirations. Visit the Student Employment Services web page at *https://www.schooljobs.com/careers/centralaz/transferjobs*.

Should you require more information or assistance, please email *studentjobs@centralaz.edu*.

# Information Technology Services – (ITS) Service and Support Desk

The Information Services - Service Desk troubleshoots technical issues for the following:
- Computer account password resets (including Blackboard and email)
- Troubleshoot problems with Blackboard and E-mail
- Classroom Multimedia and Technology support
- Computer and District software related issues
- Web Help trouble ticket submission assistance
- Network/WIFI assistance
- Campus Nexus trouble tickets

Password Self Service and Self Service Password Instructions are available at *centralaz.edu/information-technology*.

**ITS Office Information:**
- Work Phone: 520-494-5111
- Ticket submission: *https://centralaz.service-now.com/*
- Service Desk Location: Signal Peak Campus, O108
- Office Hours: Monday - Thursday, 7:30am- 6pm

# Bookstore

San Tan, Signal Peak and Superstition Mountain campuses provide full-service bookstores to accommodate students with textbooks, supplies, clothing and snacks. Extended hours are available during the first week of classes. Regular bookstore hours vary by location; please, contact your campus location for more information. Visit *https://centralaz.bncollege.com/*.

**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. For more information visit *https://centralaz.bncollege.com/customer-service*.

# Learning Center

Central Arizona College provides free tutoring for students in most academic areas of study through the Learning Centers, located at each campus. Tutors work with students individually or in small groups to address the various learning needs of students. In addition, tutors use several modalities including face to face, online, email and phone to assist students in their academic work. The Learning Centers offer customized workshops and computerized tutorials for many CAC courses as well as computer-assisted instructional programs for coursework or independent study.

## Academic & Proctored Testing
https://centralaz.edu/academic-proctored-testing/

Contact one of our Learning Centers near you:
- Aravaipa                         520-357-2821
- Maricopa                         520-494-6432
- San Tan                          480-677-7861
- Superstition Mountain            480-677-7728
- Signal Peak campuses             520-494-5570

# 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, printing, Wi-Fi, and study areas. Online resources, including millions of journal articles and over 125,000 eBooks, are available to students 24 hours a day. The library's print book collection contains over 85,000 volumes district-wide, includes government resources, and can be searched through the library's online catalog or by asking library staff for assistance.

# Student Accessibility Services

Student Accessibility 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 Disability Accommodation
In order to receive accommodations, students must meet with the Student Accessibility Services department. In order to receive accommodation, students must provide documentation of disability from a qualified medical professional. If you have questions regarding documentation, please refer to the website, www.centralaz.edu/studentaccessibility, or call SAS at 520-494-5409. SAS is available to meet with student at all 5 CAC campus locations.

## Student Accessibility Services Contact Information
Signal Peak Campus, M113C
- Phone: 520-494-5409, or 800-237-9814 ext. 5409
- Website: centralaz.edu/studentaccessibility
- Email: Cheryl.Hernandez@centralaz.edu

**Concern or Complaint**
If you have a concern or complaint regarding disability issues, please contact Student Accessibility Services:
- Director, Cheryl Hernandez, at 520-494-5409 or Cheryl.Hernandez@centralaz.edu

- Office Assistant, Mariela Felix, at 520-494-5402 or Mariela.Felix@centralaz.edu

For additional assistance, please contact the Dean of Student Development at DeanofStudents@centralaz.edu.

# ARIZONA@WORK Pinal County Youth Program

The Workforce Innovation & Opportunity Act (WIOA) legislation requires the ARIZONA@WORK Pinal County Youth Program to enroll young adults who are 16 to 24 years old with significant barriers to education and employment.

Some 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, financial literacy and financial assistance with job training activities.

The ARIZONA@WORK Pinal County Youth Program provides mentoring and career planning 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 youth program serves students who reside in Pinal County and surrounding areas. The Program is federally funded by the Department of Labor through the State of Arizona and the Pinal County Board of Supervisors and the Workforce Development Board. Applications and further information is available on our webpage at www.centralaz.edu/wioa. For more information call: 520-494-6404.

## TRIO Student Support Services

For eligibility information visit the TRIO webpage at *centralaz.edu/trio* or call (520) 494-5007. TRIO is on Facebook and Instagram: cac_sss_trio.

The TRIO SSS Program at Central Arizona College is funded by the U.S. Department of Education.

## Veteran Education Information

Veteran education benefit information is available throughout this catalog & online at *www.centralaz.edu/va*.

**Veteran Services office:**

- Military/Veteran Specialist,
  School Certifying Official (SCO)-
  Elizabeth Barrett at 520-494-5517 or
  *Elizabeth.Barrett@centralaz.edu*

- Office Assistant II Veteran Services & Student Accessibility Services-
  Mariela Felix, at 520-494-5402 or
  *Mariela.Felix@centralaz.edu*

## Student Health & Wellness Resources

Central Arizona College has a variety or programs and/or partnerships to contribute to the health & wellness of students. A healthy mind, body, and spirit are important factors for student success.

The College partners with local agencies to provide support for those students in need of mental health services. Arizona Complete Health offers 24 hour Crisis Line support and can be reached at 1-866-495-6735.  CAC is also partnered with Corazon Behavioral Health to provide counseling services  both in-person and virtually through the use of Zoom.  To learn more and/or to request counseling services visit *centralaz.edu/wellness*.

## Central Arizona College Police Department

The Central Arizona College Police Department (CACPD ) operates 24 hours a day at the Signal Peak campus. The CACPD office is located in the I building, room 200.  Officers are assigned to the Superstition Mountain, Maricopa, and San Tan Campuses Monday through Thursday from 8:00 a.m. to 6:00 p.m.  Contracted security guards from Allied provide coverage when officers are not on duty at these locations.

**CACPD Contact Information:**

- Signal Peak Campus, Room I200
- Main SPC Office: 520-494-5445
- 24-Hour Phone: 520-836-9655
- Silent Witness: 520-494-5011
- Fax: 520-494-5568
- Email: *cacpolice@centralaz.edu*
- Visit: *https://centralaz.edu/contact-us/cac-police-department/*

The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act requires the distribution of an annual security report to all current faculty, staff, and students and notice of its availability to prospective students, faculty, and staff. The annual security and fire safety report includes statistics for the previous three years concerning reported crimes that occurred on campus, in certain off-campus buildings or property owned or controlled by Central Arizona College, and on public property within, or immediately adjacent to and accessible from the campus. The report also includes institutional policies concerning campus security, such as policies concerning alcohol and drug use, crime prevention, the reporting of crimes, sexual assault, and other matters. You can obtain a copy of this report by contacting the Police Department, or by accessing the following *Annual Security and Fire Report* at *centralaz.edu/annual_security_fire_report*

# Accreditation

# OUR VISION
Central Arizona's premier choice in education and career excellence.

# OUR MISSION
Central Arizona College serves as **TRUE Learning** community by empowering our students and staff to succeed. **T**eaching. **R**eaching. **U**nderstanding. **E**mpowering. **Learning**.

# OUR VALUES
1. **A**ccountability (*internal & external stakeholders*)
2. **C**ommunities (*students, employees, public*)
3. **T**rust

# 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. For information about Central Arizona College's accreditation, you can contact the Higher Learning Commission at 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604-1411, 312-263-0456, *info@hlcommission.org*, or online at *ncahlc.org*. You may also contact Central Arizona College, 8470 North Overfield Road, Coolidge, AZ 85128 or call 520-494-5111. In addition, several CAC programs maintain external accreditations.

# Education

## Early Childhood Education AAS Degree
National Association for the Education of Young Children Commission on the Accreditation of Early Childhood Education Higher Education Programs (NAEYC)
1401 H Street NW Suite 600
Washington, DC 20005
202-232-8777
*naeyc.org*
*help@naeyc.org*

# Emergency Medical Services

## Paramedicine Program Degree/Certificate
The Central Arizona College Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs (*www.caahep.org*) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

Commission on Accreditation of Allied Health Education Programs
9355 - 113th St. N, #7709
Seminole, FL 33775
727-210-2350
*www.caahep.org*

Committee on Accreditation of Educational Programs for the Emergency Medical Services Programs
8301 Lakeview Parkway Suite 111-312
Rowlett, TX 75088
Phone: 214.703.8445
Fax: 214.703.8992
*www.coaemsp.org*

# Health Careers

## Community Health Worker Certificate
Arizona Community Health Workers Association
*azchow.org/*
*Info@AzCHOW.org*

## Dietary Managers Training Program Certificate & Foodservice Professional Training Program Certificate
Association of Nutrition & Foodservice Professionals (ANFP)
P.O. Box 3610
St. Charles, IL 60174
800-323-1908
*anfponline.org/home*

## Health Information Management Degree
The Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)
200 East Randolph Street, Suite 5100
Chicago, IL 60601
312-235-3255
*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)
9355 - 113th St. N, #7709
Seminole, FL 33775
727-210-2350 OR 727-210-2350
*caahep.org*

## Nutrition & Dietetic Technician AAS Degree
Accreditation Council for Education in Nutrition and Dietetics (ACEND)
120 S. Riverside Plaza, Suite 2190
Chicago, IL 60606-6995
800-877-1600
*eatrightpro.org/acend*

## Nursing Certificate and Degree

Arizona State Board of Nursing,
1740 W. Adams, Suite 2000
Phoenix, AZ 85007
602-889-5150
*azbn.gov*

Accreditation Commission for Education in Nursing, Inc.
3343 Peachtree Road NE, Suite 850
Atlanta, GA 30326
404-975-5000
*acenursing.org*

## Pharmacy Technician Certificate

Collaboration between the American Society of Health-System Pharmacists and the Accreditation Council for Pharmacy Education (ASHP/ACPE),
4500 East-West Highway, Suite 900
Bethesda, MD 20814
866-279-0681
*ashp.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
*jrcert.org*

# Technology

## Diesel Technology

Associated Equipment Distributors Foundation
615 W. 22nd Street
Oak Brook, IL 60523
630-574-0650
*aednet.org*

## Heavy Equipment Operators

National Center for Construction Education and Research (NCCER)
13614 E. Progress Blvd.
Alachua, FL 32615
386-518-6500
*nccer.org*

## Welding

**National Center for Construction Education and Research (NCCER)**
13614 E. Progress Blvd.
Alachua, FL 32615
386-518-6500
*nccer.org*

**All programs and courses are submitted through SAA approval.
Please see CAC's Military/Veteran Specialist for a list of programs and courses not approved.**

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.*

# 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 21st 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, measureable 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.

In supporting CAC's mission and commitment of *quality learning experiences for lifelong success*, students may be asked to participate in activities that assess their learning. Assessment activities such as projects, presentations, portfolios, satisfaction surveys or nationally normed examinations assist the faculty and staff in discovering how well students reach the expected learning outcomes of their course, program, and institution. CAC faculty and staff use the data to develop strategies that improve instruction and curriculum for overall continuous improvement.

# Degrees & Certificates

# DEGREE AND CERTIFICATE INFORMATION

Central Arizona College (CAC) offers students one- and two-year programs to meet their diverse interests and goals, including a variety of disciplines in nearly 100 degrees and certificates. These may be completed over an extended period to accommodate nontraditional students. Students completing these degrees with a 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.

Students undecided about their academic program should meet with an academic advisor to explore 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.

## Transferable Degrees

All of CAC's transferable degrees conform to one of three degree structures and include at least 35 semester credits of general education studies and transfer directly to the three Arizona public universities: Arizona State University (ASU), Northern Arizona University (NAU) and the University of Arizona (UA). CAC's three transferable degree structures are:
- Associate of Arts (AA)
- Associate of Business (ABus)
- Associate of Science (AS)

CAC transferable associate degrees require at least 60 semester credits and share five basic categories in addition to CAC core degree requirements. Specific degree requirements follow within each degree.

1. *General Education*
   Each of CAC's transferable associate degrees include a block of at least 35 semester credits of lower-division general education requirements known as the Arizona General Education Curriculum (AGEC). This block provides clear and secure transfer pathways from community college to university studies. The three available tracks are the AGEC-Arts (AGEC-A), AGEC-Business (AGEC-B), and AGEC-Science (AGEC-S).

2. *Subject Options*
   Based on your major, review the specific associate degree requirements in this catalog, consult an academic advisor, and review Transfer Guides at aztransfer.com.

3. *Special Awareness Requirements*
   - Intensive Writing and Critical Inquiry
   - Cultural Awareness-Ethnic/Race/Gender
   - Global/International Awareness or Historical Awareness

4. *Electives*
   Students may need to select additional transferable courses to meet the number of semester credits required for the associate degree as designated by the transfer pathway. Electives must transfer to at least one of the three Arizona public universities as "elective or better."

5. *Requirements for CAC Degrees*
   - A minimum of 3 earned CAC credits numbered 100 or above;
   - A grade of "C" or better in each course.

> **NOTE:** Consult information on specific degree and graduation requirements with the assistance of an academic advisor.

## Additional Degrees

CAC offers two additional degree options:
- Associate of Applied Science (AAS)
- Associate of General Studies (AGS)

The AAS and AGS degrees prepare students to directly enter the workforce of their chosen program. Some state universities permit students with these degrees to transfer most or all of their credits to a university to pursue a Bachelor's Degree. Based on your major, review the specific associate degree requirements in this catalog, consult an academic advisor, and review Transfer Guides at aztransfer.com.

The Associate of Applied Science degree requires at least 60 semester credits and includes three basic categories:

1. *General Education*
   The AAS degree requires a minimum of 19 semester credits of lower-division general education coursework. Students electing to transfer to one of the three Arizona public universities should earn an AGEC Certificate, which requires a minimum of 35 semester credits.

2. *Core Requirements and Electives*
   Students must complete at least 41 semester credits to meet the number required for the degree. Based on your major, refer to the specific AAS degree requirements in this catalog and consult an academic advisor.

3. *Requirements for CAC Degrees*
   - A minimum of 3 earned CAC credits numbered 100 or above;
   - Earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

The Associate of General Studies degree is appropriate for students who do not plan to transfer, requires at least 60 semester credits, and includes three basic categories:

1. *General Education*
   The AGS degree requires 29-30 semester credits of lower-division general education coursework. Students have the opportunity to transfer to one of the three

Arizona public universities by completing requirements for both the AGS degree and an AGEC Certificate.

2. *Electives*
   Students must complete at least 30 semester credits to meet the number required for the degree. Based on your major, refer to the specific AGS degree requirements in this catalog and consult an academic advisor.

3. *Requirements for CAC Degrees*
   - A minimum of 3 earned CAC credits numbered 100 or above.
   - Earn a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale.

# Physical and Biological Lab Science Courses

Students may select a 4-credit course with lab numbered 100 or above from the following Physical and Biological Science Lab lists to meet the Physical and Biological Sciences General Education Requirement. Students may also choose a course from the Biological and Physical Lab Science AGEC list.

**Biological Lab Science Courses**

AGS101   World of Plants (4)
AGS104   Agricultural Environmental Science (4)
AGS106   Entomology (4)
AGS221   Soil Science (4)
AGS240   Plant Biology (4)
ANT101   Physical Anthropology and Archaeology (4)
BIO100   Biology Concepts (4)
BIO109   Natural History of the Southwest (4)
BIO156   Introductory Human Biology (4)
BIO160   Introduction to Human Anatomy-Physiology (4)
BIO181   General Biology I (4)
BIO182   General Biology II (4)
BIO201   Human Anatomy and Physiology I (4)
BIO202   Human Anatomy and Physiology II (4)
BIO205   Microbiology (4)
ENV101   Environmental Science (4)
NTR141   Nutrition and Wellness (4)

**Physical Lab Science Courses**

AGS104   Agricultural Environmental Science (4)
AGS221   Soil Science (4)
AST101   Survey of Astronomy (4)
CHM130   Fundamental Chemistry (4)
CHM138   Chemistry for Allied Health with Lab (4)

CHM151   General Chemistry I (4)
CHM152   General Chemistry II (4)
CHM235   General Organic Chemistry I (4)
CHM236   General Organic Chemistry II (4)
CUL142   Applied Food Science (4)
ENV101   Environmental Science (4)
GEO111   Introduction to Physical Geography (4)
GLG101   Physical Geology (4)
GLG102   Historical Geology (4)
GLG110   Geological Hazards and Disasters (4)
PHY111   College Physics I (4)
PHY112   College Physics II (4)
PHY121   University Physics I: Mechanics (4)
PHY122   University Physics II: Electricity & Magnetism (4)

# ASSOCIATE OF ARTS (AA) DEGREE

## (60-64 Credits)

The Associate of Arts (AA) Degree is appropriate for students who plan to transfer to the university to earn a baccalaureate degree in various areas of study, typically within the Arts and Humanities and/or Social and Behavioral Sciences disciplines. Students should select a pre-designed pathway or work with an academic advisor to customize a pathway to align with their specific career and/or transfer goals.

Visit the CAC webpage under Areas of Interest to access a list of common pathways designed within the Associate of Arts degree:

   Administration of Justice Pathway
   Agriculture Pathway
   Communication Pathway
   English (Literature) Pathway
   English Education Pathway
   History Pathway
   Math Education Pathway
   Nursing Pathway with Concurrent Enrollment-ASU
   Nursing Pathway with Concurrent Enrollment-NAU
   Political Science Pathway
   Psychology Pathway
   Recreation and Tourism Pathway
   Sociology Pathway
   Spanish Pathway
   Statistics Pathway

A list of Common Courses associated with specific programs of study is available at aztransfer.com.

Visit the CAC webpage under Areas of Interest, to access a list of common pathways within the Arts and Humanities and/or Social and Behavioral Sciences disciplines. A list of Common Courses associated with specific programs of study is available at aztransfer.com.

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 AA 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: aztransfer.com.

## General Education (35-36)

*Students are encouraged to select coursework from more than one discipline for both the Arts and Humanities and the Social and Behavioral Sciences categories for a total of 15 credits.*

**Written Communications (6)**
ENG101    College Composition I (3) ⊙ⓐ
ENG102    College Composition II (3) ⊙ⓐ

**Oral Communications (3)**
   *Select an AGEC Course*

*For the two categories directly below, choose courses from the equivalent category on the AGEC course list in the CAC catalog to total 15 credits.*

**Arts and Humanities (6-9)**
   *Select AGEC courses.*

**Social and Behavioral Sciences (6-9)**
   *Select AGEC courses.*

**Physical and Biological Sciences (8)**
   *Select Physical and Biological Science AGEC courses with a laboratory component.*

**Mathematics (3-4)**
MAT141    College Mathematics, Standard (4) ⓐ ⊙
                MAT142 or higher

## Subject Options (0-6)

Based on your major, review the specific AA Degree

requirements in the CAC catalog, consult an academic advisor, and review Transfer Guides at aztransfer.com.

## 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 Communication Studies, 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 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, Historical Awareness, and a core requirement.

## Electives

Select approved elective courses which transfer as "elective or better" to at least one of the three Arizona public universities to complete the required AA Degree credit requirement. Consult the *Course Equivalency Guide*: aztransfer,com.

## Other AA Degree Requirements

Students must earn:
- a grade of "C" or better in each AA Degree required course;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

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

## ASSOCIATE OF BUSINESS (ABUS) DEGREE

### (60-64 Credits)

The Associate of Business (ABUS) Degree is appropriate for students who plan to transfer to the university to earn a baccalaureate degree in Business-related disciplines. Students should work with an academic advisor to customize a plan to align with their specific career and/or transfer goals.
Visit the CAC webpage under Areas of Interest, to access a list of common pathways within the Business related disciplines.   For a list of options of Common Courses associated with specific programs of study, go to aztransfer.com, select the current year or the year the course was completed.

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-B general education block of 35-36 credits. The AGEC-B satisfies requirements in many business programs and other programs that articulate with the ABus Degree. The AGEC-B requires a minimum of MAT211 Brief Calculus plus 32 credits from specific AGEC categories. Select AGEC courses only.

## General Education (35-36)
*For the categories below, if there are no required courses, choose from the recommended courses or select AGEC courses from the equivalent category.*

**Written Communications (6)**
ENG101    College Composition I (3)
ENG102    College Composition II (3)

**Oral Communications (3)**
*Select an AGEC course.*

**Arts and Humanities (6)**
*Select AGEC courses.*
*Students are encouraged to choose coursework from more than one discipline for the Arts and Humanities category.*

**Social and Behavioral Sciences (6)**
*Select AGEC courses.*
*Recommended:*
ECN201 Principles of Macroeconomics (3) and
ECN202 Principles of Microeconomics (3)
*These are Core Requirements of the Associate of Business (ABus) degree and also fulfill the degree's Social and Behavioral Sciences requirement.*

**Physical and Biological Sciences (8)**
*Select AGEC courses with a laboratory component.*

**Mathematics (3-4)**
MAT211   Brief Calculus or higher (4)

**Computer Competency (3)**
CIS120    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 at aztransfer.com.

## Special Requirements (0-9)
*Select courses from the AGEC list 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 Communication Studies, 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 be used to satisfy more than one Special Awareness Requirements category.

## Core Requirements (22-26)
ACC201    Financial Accounting (3)
ACC202    Managerial Accounting (3)
BUS201    Legal Environment of Business (3)
BUS208    Business Statistics (3)
ECN201    Principles of Macroeconomics (3)
*also fulfills Social/Behavioral Science requirement*
ECN202    Principles of Microeconomics (3)
*also fulfills Social/Behavioral Science requirement*
MAT215   Math for Business Analysis (4)

## Electives (0-4)
Select approved elective courses which transfer as "elective or better" to at least one of the three Arizona public universities to complete the required ABus Degree credit requirement. Consult the *Course Equivalency Guide*. Students must complete a total of 60-64 credits to earn the Associate of Business Degree.

## Recommended Business Electives:
ACC121    Income Tax Fundamentals (3)
BUS100    Introduction to Business (3)
BUS260    Applied Business Seminar (3)
CIS123    Introduction to Programming (3)
MAT151   College Algebra, Standard (4)

## Requirements for ABus Degree
**Computer Competency (3):**
- CIS120 Survey of Computer Information Systems (3)
  *(Fulfilled by AGEC-B requirements)*

## Other ABus Degree Requirements
Students must earn:
- a grade of "C" or better in each ABus Degree required course;
- a minimum of 3 earned CAC credits numbered 100 or above.

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

## ASSOCIATE OF SCIENCE (AS) DEGREE

### (60-64 Credits)

The Associate of Science (AS) Degree is appropriate for students who plan to transfer to the university to earn a baccalaureate degree in Biological and Physical Sciences areas. Students should select a pre-designed pathway or work with an academic advisor to customize a pathway to align with their specific career and/or transfer goals.

Visit the CAC webpage under Areas of Interest, to access a list of common pathways designed within the Associate of Science degree:

> Biology Pathway
> Chemistry Pathway
> Geology Pathway
> Engineering and Computer Science Pathway

A list of Common Courses associated with specific programs of study is available at aztransfer.com.

Visit the CAC webpage under Areas of Interest, to access a list of common pathways within the Biological and Physical Science-related disciplines. A list of Common Courses associated with specific programs of study is available at aztransfer.com.

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 (35-38 Credits)

The Associate of Science Degree requires the AGEC-Sciences (AGEC-S) general education block of 35-38 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 🔶 or higher math course, transferable to ASU, NAU and UA, plus 32 credits from specific AGEC categories. Refer to the AGEC Course List in this catalog or at aztransfer.com.

### General Education (29-30)

#### Written Communications (6)
ENG101   College Composition I (3) 🔶🅰️
ENG102   College Composition II (3) 🔶🅰️

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

#### Arts and Humanities (6)
*Select AGEC courses.*

#### Social and Behavioral Sciences (6)
*Select AGEC courses.*

#### Physical and Biological Sciences (8)
BIO181   General Biology I (4) 🔶🅰️ **AND**
BIO182   General Biology II (4) 🔶🅰️
           **OR**
CHM151   General Chemistry I (4) 🔶🅰️ **AND**
CHM152   General Chemistry II (4) 🔶🅰️
           **OR**
GLG101   Physical Geology (4) 🔶🅰️ **AND**
GLG102   Historical Geology (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 Guides at aztransfer.com.

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)

*Select courses from the AGEC courses list 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 Communication Studies, 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 be used to satisfy more than one Special Awareness Requirements category.

## Electives

Select approved elective courses which transfer as "elective or better" to at least one of the three Arizona public universities to complete the required AS Degree credit requirement. Consult the *Course Equivalency Guide*. Students must complete a total of 60-64 credits to earn the Associate of Science Degree.

## Other AS Degree Requirements

Students must earn:

- A grade of "C" or better in each AS Degree required course.
- A minimum of 3 earned CAC credits numbered 100 or above.

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

## ASSOCIATE OF APPLIED SCIENCE (AAS) DEGREE

## (60 Credits)

The Associate of Applied Science (AAS) Degree is appropriate for students who plan to directly enter the workforce of their chosen pathway or who may not plan to follow a traditional transfer pathway.

## General Education (19-20)

**Written Communications (3)**
*Select one:*
ENG101    College Composition I (3) 🔴🟢
ENG121    Applied Technical Writing (3)

**Oral Communications (3)**
  COM100    Fundamentals of Human Communication (3) 🔴🟢 or higher

**Arts and Humanities (3)**
*Select a course numbered 100 or above from the following: ART, HMC, LIT MHL, PHI, and THE. Students may also choose any course from the Arts and Humanities AGEC list.*

**Social and Behavioral Sciences (3)**
*Select a course numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also choose any course from the Social and Behavioral Science AGEC list.*

**Physical and Biological Sciences (4)**
*Select a 4-credit courses with lab numbered 100 or above from the Physical and Biological Science Lab list. Students*

*may also choose from the Biological and Physical Lab Science AGEC list.*

**Mathematics (3-4)**
*Select one:*
BUS101    Business Mathematics (3)
MAT106    Technical Math I (3)
MAT118    Essential Mathematics (4) or higher

## Core and Elective Requirements (41 or More)

The number of credits required depends on the chosen program of study. Refer to the specific AAS Degree program.

## Other Requirements

Students must earn:

- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- A minimum of 3 earned CAC credits numbered 100 or above;

The Associate of Applied Science Degree requires 60 semester credits.

## ASSOCIATE OF GENERAL STUDIES (AGS) DEGREE

## (60 Credits)

The Associate of General Studies (AGS) Degree is appropriate for students who desire flexibility in pursuing a degree, directly entering the workforce, or do not plan to transfer.

## General Education (29-30)

**Written Communications (3)**
ENG101    College Composition I (3) 🔴🟢

**Oral Communications (3)**
COM100    Fundamentals of Human Communication (3) 🔴🟢 or higher

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)**
*Select courses numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also choose any course from the Arts and Humanities AGEC list.*

**Social and Behavioral Sciences (6)**
*Select courses numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also choose any course from the Social and Behavioral Sciences AGEC list.*

**Physical and Biological Sciences (8)**
*Select 4-credit courses with lab numbered 100 or above from the Biological and Physical Science Lab list. Students may also choose a course from the Biological and Physical Lab Science AGEC list.*

**Mathematics (3-4)**
Select one:
BUS101    Business Mathematics (3)
MAT118    Essential Mathematics (4) or higher

## Electives (30-31) Credits
*Select courses numbered 100 or above to meet 60 credit minimum requirement.*

## Requirements for AGS Degree
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;

The Associate of General Studies Degree requires 60 semester credits.

## ARIZONA GENERAL EDUCATION CURRICULUM (AGEC) 2022-2023

Completion of the AGEC or AGEC 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: AGEC-Arts, AGEC-Business and AGEC-Science. All require completion of 35-38 transferable credits.

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

## Multiple-Use Course Guideline:
Students may use a course to fulfill an AGEC category, such as the Social and Behavioral Sciences along with AGEC Special Awareness Requirement Areas, such as Intensive Writing and Historical Awareness. In addition, students may use the same course to fulfill degree core or elective requirements as well as AGEC categories or Special Awareness Requirement Areas. Students must earn the minimum credits required for each credential. For example, an AA Degree with an AGEC-A requires a minimum of 60-64 credits, including a minimum of 3 credits earned from CAC.

## AGEC (35-38 Credits)

## General Education
When fulfilling the AGEC requirements, follow the instructions carefully.

## Written Communications

ENG101    College Composition I (3)
ENG102    College Composition II (3)

## Oral Communications

COM100    Fundamentals of Human Communication (3)
COM101    Interpersonal Communication (3)
COM202    Small Group Communication (3)
COM206    Public Speaking (3)
COM207    Introduction to Communication Inquiry (3)
COM259    Professional Communication (3)
COM263    Intercultural Communication (3)

## Arts and Humanities

AGS235    Principles of Sonoran Horticulture (3)
AJS123    Ethics and the Administration of Justice (3)
ANS104    Human and Animal Interrelationships from Domestication to Present (3)
ART100    Art Appreciation (3)
ART101    Two-Dimensional Design (3)
ART102    Three-Dimensional Design (3)
ART103    Beginning Jewelry and Metalwork (3)
ART104    Advanced Jewelry and Metalwork (3)
ART105    Ceramics I (3)
ART106    Ceramics II (3)
ART107    Drawing I (3)
ART109    Color Theory (3)
ART207    Art History I (3)
ART208    Art History II (3)
EIT100    History of Rock n' Roll (3)
ENG200    Introduction to Creative Writing (3)
ENG210    Introduction to Fiction Writing (3)
HMC210    Classical Mythology & Western Art (3)
HMC250    Humanities in the Western World I (3)
HMC251    Humanities in the Western World II (3)
HNR204    Honors Colloquium I (3)
HNR205    Honors Colloquium II (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 Literature (3) |
| LIT232 | African American Literature (3) |
| LIT233 | American Ethnic Literature (3) |
| LIT234 | United States Latinx Literature and Culture (3) |
| LIT256 | Science Fiction Literature and Film (3) |
| LIT278 | Native American Literature and Culture (3) |
| LIT291 | Children's Literature for Educators (3) |
| MHL100 | Music Appreciation (3) |
| MHL207 | Survey of Jazz/Popular Music (3) |
| PHI101 | Introduction to Philosophy (3) |
| PHI105 | Introduction to Ethics (3) |
| PHI112 | World Religions (3) |
| THE100 | Theater Appreciation (3) |
| THE115 | Introduction to Cinema (3) |
| THE116 | Contemporary Cinema (3) |

## Social and Behavioral Sciences

| | |
|---|---|
| AGS122 | Natural Resources and Conservation (3) |
| AGS204 | Environmental Sustainability (3) |
| AJS101 | Introduction to Administration of Justice (3) |
| AJS123 | Ethics and the Administration of Justice (3) |
| AJS212 | Juvenile Justice Procedures (3) |
| AJS224 | Criminal Justice Administration (3) |
| AJS225 | Criminology (3) |
| AJS230 | The Police Function (3) |
| AJS260 | Procedural Criminal Law (3) |
| AJS270 | Community Relations (3) |
| ANT101 | Physical Anthropology and Archaeology (4) |
| ANT102 | Cultural Anthropology (3) |
| ANT200 | Principles of Archaeology (3) |
| ANT201 | Indians of the Southwest (3) |
| BUS123 | Business Relations (3) |
| BUS190 | Principles of Management and Leadership (3) |
| COM100 | Fundamentals of Human Communication (3) |
| COM101 | Interpersonal Communication (3) |
| COM202 | Small Group Communication (3) |
| COM206 | Public Speaking (3) |
| COM207 | Introduction to Communication Inquiry (3) |
| COM259 | Professional Communication (3) |
| COM263 | Intercultural Communication (3) |
| CPD110 | Transition to College and Career (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/Historical Geography (3) |
| HIS101 | United States History I (3) |
| HIS102 | United States 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) |
| HIS107 | African-American History I (3) |
| HIS108 | Eastern Civilization–Beginning to 1850 (3) |
| HIS201 | Women in United States History (3) |
| HIS208 | Eastern Civilization–1850 to Modern Times (3) |
| DMA101 | Media and Society (3) |
| PEH101 | Personal Health (3) |
| POS101 | American Politics (3) |
| POS104 | Contemporary Issues in World Politics (3) |
| POS220 | United States 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) |
| REC101 | Recreation, Leisure, and the Quality of Life (3) |
| SOC101 | Introduction to Sociology (3) |
| SOC200 | Racial and Ethnic Minorities (3) |
| SOC202 | Contemporary Social Problems (3) |
| SOC203 | Marriage and the Family (3) |
| SOC212 | Gender in Society (3) |
| SWU171 | Introduction to Social Work (3) |
| WGS100 | Introduction to Gender and Women's Studies (3) |

## Physical and Biological Sciences

| | |
|---|---|
| AGS101 | World of Plants (4) |
| AGS104 | Agricultural Environmental Science (4) |
| AGS106 | Entomology (4) |
| AGS221 | Soil Science (4) |
| AGS240 | Plant Biology (4) |
| ANT101 | Physical Anthropology and Archaeology (4) |
| AST101 | Survey of Astronomy (4) |
| BIO100 | Biology Concepts (4) |
| BIO109 | Natural History of the Southwest (4) |
| BIO156 | Introductory Human Biology (4) |
| BIO160 | Introduction to Human Anatomy/Physiology (4) |
| BIO181 | General Biology I (4) |
| BIO182 | General Biology II (4) |
| BIO201 | Human Anatomy and Physiology I (4) |
| BIO202 | Human Anatomy and Physiology II (4) |
| BIO205 | Microbiology (4) |
| CHM130 | Fundamental Chemistry (4) |
| CHM138 | Chemistry for Allied Health with Lab (4) |
| CHM151 | General Chemistry I (4) |
| CHM152 | General Chemistry II (4) |
| CHM235 | General Organic Chemistry I (4) |
| CHM236 | General Organic Chemistry II (4) |
| CUL142 | Applied Food Service (4) |
| ENV101 | Environmental Science (4) |
| GEO111 | Introduction to Physical Geography (4) |

*This catalog was prepared on the basis of the best information available at the time of publication. Catalog information is subject to changes without notice, obligation or liability.*

GLG101    Physical Geology (4)
GLG102    Historical Geology (4)
GLG110    Geological Hazards and Disasters (4)
NTR141    Nutrition and Wellness (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)
PSY290    Research Methods (4)

## Mathematics

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)
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)
MAT242    Elementary Linear Algebra (3)
MAT275    Modern Differential Equations (4)

## Special Awareness Requirements

Courses used in general education areas such as Communication Studies, 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 be used to satisfy more than one Special Requirements category.

### Intensive Writing/Critical Inquiry

AGS122    Natural Resources and Conservation (3)
AJS225    Criminology (3)
COM207    Introduction to Communication Inquiry (3)
ENG201    News Reporting and Writing (3)
HIS106    Mexican-American History (3)
HIS201    Women in United States History (3)
HIS208    Eastern Civilization – 1850 to Modern Times (3)
HNR204    Honors Colloquium I (3) **AND**
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)
LIT232    African American Literature (3)
LIT233    American Ethnic Literature (3)
LIT256    Science Fiction Literature and Film (3)

LIT291    Children's Literature for Educators (3)
PHI105    Introduction to Ethics (3)
PSY200    Social Psychology (3)
PSY203    Developmental Psychology (3)
PSY290    Research Methods (4)
SOC200    Racial and Ethnic Minorities (3)

### Cultural Awareness

AGS235    Principles of Sonoran Horticulture (3)
AJS270    Community Relations (3)
ANT102    Cultural Anthropology (3)
ANT201    Indians of the Southwest (3)
ART207    Art History I (3)
ART208    Art History II (3)
COM100    Fundamentals of Human Communication (3)
COM101    Interpersonal Communication (3)
COM202    Small Group Communication (3)
COM206    Public Speaking (3)
COM207    Introduction to Communication Inquiry (3)
COM259    Professional Communication (3)
COM263    Intercultural Communication (3)
ECE283    Building Family and Community Partnerships (3)
EDU222    Introduction to Special Education (3)
EDU230    Cultural Values in Education (3)
EDU240    Structured English Immersion (3)
GEO101    Introduction to Cultural/Historical Geography (3)
HIS101    United States History I (3)
HIS102    United States 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)
HIS107    African-American History I (3)
HIS108    Eastern Civilization–Beginning to 1850 (3)
HIS201    Women in United States History (3)
HIS208    Eastern Civilization–1850 to Modern Times (3)
HMC210    Classical Mythology & Western Art (3)
HMC250    Humanities in the Western World I (3)
HMC251    Humanities in the Western World II (3)
LIT101    Introduction to Literature (3)
LIT201    American Literature I (3)
LIT202    American Literature II (3)
LIT206    World Literature (3)
LIT232    African American Literature (3)
LIT233    American Ethnic Literature (3)
LIT234    United States Latinx Literature and Culture (3)
LIT278    Native American Literature and Culture (3)
LIT291    Children's Literature for Educators (3)
MHL207    Survey of Jazz/Popular Music (3)
PSY277    Human Sexuality (3)
SLG202    American Sign Language IV (4)
SOC101    Introduction to Sociology (3)
SOC202    Contemporary Social Problems (3)

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SOC203    Marriage and the Family (3)
SOC200    Racial and Ethnic Minorities (3)
SOC212    Gender in Society (3)
WGS100    Introduction to Gender and Women's Studies (3)

### *Global/International Awareness*

AGS122    Natural Resources and Conservation (3)
AGS204    Environmental Sustainability (3)
AJS101     Introduction to Administration of Justice (3)
ANT102    Cultural Anthropology (3)
ANT203    Introduction to the Principles of Human Rights (3)
ART207    Art History I (3)
ART208    Art History II (3)
COM100    Fundamentals of Human Communication (3)
COM202    Small Group Communication (3)
COM206    Public Speaking (3)
COM207    Introduction to Communication Inquiry (3)
COM259    Professional Communication (3)
COM263    Intercultural Communication (3)
GEO101    Introduction to Cultural/Historical Geography (3)
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 Literature (3)
LIT234    United States Latinx Literature and Culture (3)
PHI112    World Religions (3)
POS104    Contemporary Issues in World Politics (3)
SOC101     Introduction to Sociology (3)
SOC202     Contemporary Social Problems (3)
SOC203     Marriage and the Family (3)
SPA201     Intermediate Spanish I(4)
SPA202     Intermediate Spanish II (4)
THE100    Theater Appreciation (3)

### *Historical Awareness*

ANS104    Human and Animal Interrelationships from
          Domestication to Present (3)
ANT201     Indians of the Southwest (3)
ANT203     Introduction to the Principles of Human Rights (3)
ART207     Art History I (3)
ART208     Art History II (3)
GEO101    Introduction to Cultural/Historical Geography (3)
HIS101    United States History I (3)
HIS102    United States History II (3)
HIS104    History of Western Civilization II (3)
HIS105    Arizona History (3)
HIS106    Mexican-American History (3)
HIS108    Eastern Civilization–Beginning to 1850 (3)
HIS201    Women in United States 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)
LIT234    United States Latinx Literature and Culture (3)
MHL100    Music Appreciation (3)
MHL207    Survey of Jazz/Popular Music (3)

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## AGEC Course Designations 2022-2023 † See the Code Legend at the end of this grid.

See AGEC-Web for current information: aztransfer.com.

| Course # | Credit | Course Title | CM | MA | AH | SB | PBS | IW | CU | GI | HI |
|----------|--------|--------------|----|----|----|----|-----|----|----|----|----|
| AGS101 | 4 | World of Plants | | | | | BS | | | | |
| AGS104 | 4 | Agricultural Environmental Science | | | | | BS | | | | |
| AGS106 | 4 | Entomology | | | | | BS | | | | |
| AGS122 | 3 | Natural Resources and Conservation | | | | SB | | IW | | GI | |
| AGS204 | 3 | Environmental Sustainability | | | | SB | | | | GI | |
| AGS221 | 4 | Soil Science | | | | | BS | | | | |
| AGS235 | 3 | Principles of Sonoran Horticulture | | | AH | | | | CU | | |
| AGS240 | 4 | Plant Biology | | | | | BS | | | | |
| AJS101 ◉ | 3 | Introduction to Administration of Justice | | | | SB | | | | GI | |
| AJS123 | 3 | Ethics and the Administration of Justice | | | AH | SB | | | | | |
| AJS212 | 3 | Juvenile Justice Procedures | | | | SB | | | | | |
| AJS224 | 3 | Criminal Justice Administration | | | | SB | | | | | |
| AJS225 | 3 | Criminology | | | | SB | | IW | | | |
| AJS230 | 3 | The Police Function | | | | SB | | | | | |
| AJS260 | 3 | Procedural Criminal Law | | | | SB | | | | | |
| AJS270 | 3 | Community Relations | | | | SB | | | CU | | |
| ANS104 | 3 | Human and Animal Interrelationships | | | AH | | | | | | HI |
| ANT101 | 4 | Physical Anthropology and Archaeology | | | | SB | BS | | | | |
| ANT102 | 3 | Cultural Anthropology | | | | SB | | | CU | GI | |
| ANT200 | 3 | Principles of Archaeology | | | | SB | | | | | |
| ANT201 | 3 | Indians of the Southwest | | | | SB | | | CU | | HI |
| ANT203 | 3 | Introduction to the Principles of Human Rights | | | | | | | | GI | HI |
| ART100 | 3 | Art Appreciation | | | AH | | | | | | |
| ART101 ◉ | 3 | Two-Dimensional Design | | | AH | | | | | | |
| ART102 ◉ | 3 | Three-Dimensional Design | | | AH | | | | | | |
| ART103 | 3 | Beginning Jewelry and Metalwork | | | AH | | | | | | |
| ART104 | 3 | Advanced Jewelry and Metalwork | | | AH | | | | | | |
| ART105 | 3 | Ceramics I | | | AH | | | | | | |
| ART106 | 3 | Ceramics II | | | AH | | | | | | |
| ART107 ◉ | 3 | Drawing I | | | AH | | | | | | |
| ART109 | 3 | Color Theory | | | AH | | | | | | |
| ART207 ◉ | 3 | Art History I | | | AH | | | | CU | GI | HI |
| ART208 ◉ | 3 | Art History II | | | AH | | | | CU | GI | HI |
| AST101 | 4 | Survey of Astronomy | | | | | PS | | | | |
| BIO100 | 4 | Biology Concepts | | | | | BS | | | | |
| BIO109 | 4 | Natural History of the Southwest | | | | | BS | | | | |
| BIO156 | 4 | Introductory Human Biology | | | | | BS | | | | |

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## AGEC Course Designations 2022-2023 † See the Code Legend at the end of this grid

**See AGEC-Web for current information:** aztransfer.com

| Course # | Credit | Course Title | CM | MA | AH | SB | PBS | IW | CU | GI | HI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BIO160 | 4 | Introduction to Human Anatomy- Physiology | | | | | BS | | | | |
| BIO181 | 4 | General Biology I | | | | | BS | | | | |
| BIO182 | 4 | General Biology II | | | | | BS | | | | |
| BIO201 | 4 | Human Anatomy and Physiology I | | | | | BS | | | | |
| BIO202 | 4 | Human Anatomy and Physiology II | | | | | BS | | | | |
| BIO205 | 4 | Microbiology | | | | | BS | | | | |
| BUS123 | 3 | Business Relations | | | | SB | | | | | |
| BUS190 | 3 | Principles of Management and Leadership | | | | SB | | | | | |
| CHM130 | 4 | Fundamental Chemistry | | | | | PS | | | | |
| CHM138 | 4 | Chemistry for Allied Health with Lab | | | | | PS | | | | |
| CHM151 | 4 | General Chemistry I | | | | | PS | | | | |
| CHM152 | 4 | General Chemistry II | | | | | PS | | | | |
| CHM235 | 4 | General Organic Chemistry I | | | | | PS | | | | |
| CHM236 | 4 | General Organic Chemistry II | | | | | PS | | | | |
| COM100 | 3 | Fundamentals of Human Communication | OR | | | SB | | | CU | GI | |
| COM101 | 3 | Interpersonal Communication | OR | | | SB | | | CU | | |
| COM202 | 3 | Small Group Communication | OR | | | SB | | | CU | GI | |
| COM206 | 3 | Public Speaking | OR | | | SB | | | CU | GI | |
| COM207 | 3 | Introduction to Communication Inquiry | OR | | | SB | | IW | CU | GI | |
| COM259 | 3 | Professional Communication | OR | | | SB | | | CU | GI | |
| COM263 | 3 | Intercultural Communication | OR | | | SB | | | CU | GI | |
| CPD110 | 3 | Transition to College and Career | | | | SB | | | | | |
| CUL142 | 4 | Applied Food Service | | | | | PS | | | | |
| DMA101 | 3 | Media and Society | | | | SB | | | | | |
| ECE276 | 3 | Child Development | | | | SB | | | | | |
| ECE283 | 3 | Building Family and Community Partnerships | | | | | | | CU | | |
| ECN200 | 3 | Contemporary Economic Issues | | | | SB | | | | | |
| ECN201 | 3 | Principles of Macroeconomics | | | | SB | | | | | |
| ECN202 | 3 | Principles of Microeconomics | | | | SB | | | | | |
| EDU221 | 3 | Introduction to Education | | | | SB | | | | | |
| EDU222 | 3 | Introduction to Special Education | | | | SB | | | CU | | |
| EDU230 | 3 | Cultural Values in Education | | | | SB | | | CU | | |
| EDU240 | 3 | Structured English Immersion | | | | | | | CU | | |
| EIT100 | 3 | History of Rock n' Roll | | | AH | | | | | | |
| ENG101 | 3 | College Composition I | WR | | | | | | | | |
| ENG102 | 3 | College Composition II | WR | | | | | | | | |
| ENG200 | 3 | Introduction to Creative Writing | | | AH | | | | | | |

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## AGEC Course Designations 2022-2023 † See the Code Legend at the end of this grid

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| Course # | Credit | Course Title | CM | MA | AH | SB | PBS | IW | CU | GI | HI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ENG201 | 3 | News Reporting and Writing | | | | | | IW | | | |
| ENG210 | 3 | Introduction to Fiction Writing | | | AH | | | | | | |
| ENV101 | 4 | Environmental Science | | | | | PS | | | | |
| GEO101 | 3 | Introduction to Cultural/Historical Geography | | | | SB | | | CU | GI | HI |
| GEO111 | 4 | Introduction to Physical Geography | | | | | PS | | | | |
| GLG101 | 4 | Physical Geology | | | | | PS | | | | |
| GLG102 | 4 | Historical Geology | | | | | PS | | | | |
| GLG110 | 4 | Geological Hazards and Disasters | | | | | PS | | | | |
| HIS101 | 3 | United States History I | | | | SB | | | CU | | HI |
| HIS102 | 3 | United States History II | | | | SB | | | CU | | HI |
| HIS103 | 3 | History of Western Civilization I | | | | SB | | | CU | GI | |
| HIS104 | 3 | History of Western Civilization II | | | | SB | | | CU | GI | HI |
| HIS105 | 3 | Arizona History | | | | SB | | | CU | | HI |
| HIS106 | 3 | Mexican-American History | | | | SB | | IW | CU | | HI |
| HIS107 | 3 | African-American History | | | | SB | | | CU | GI | |
| HIS108 | 3 | Eastern Civilization-Beginnings to 1850 | | | | SB | | | CU | GI | HI |
| HIS201 | 3 | Women in United States History | | | | SB | | IW | CU | | HI |
| HIS208 | 3 | Eastern Civilization-1850 to Modern Times | | | | SB | | IW | CU | GI | HI |
| HMC210 | 3 | Classical Mythology & Western Art | | | AH | | | | CU | | |
| HMC250 | 3 | Humanities in the Western World I | | | AH | | | | CU | | HI |
| HMC251 | 3 | Humanities in the Western World II | | | AH | | | | CU | | HI |
| HNR204 | 3 | Honors Colloquium I | | | AH | | | | | | |
| HNR205 | 3 | Honors Colloquium II | | | AH | | | | | | |
| *HNR204+ HNR205 | 6 | Honors Colloquium I and II *(Completed with a grade of C or better)* | | | | | | IW | | | |
| LIT101 | 3 | Introduction to Literature | | | AH | | | | CU | | |
| LIT201 | 3 | American Literature I | | | AH | | | IW | CU | | |
| LIT202 | 3 | American Literature II | | | AH | | | IW | CU | | |
| LIT203 | 3 | English Literature I | | | AH | | | IW | | | |
| LIT204 | 3 | English Literature II | | | AH | | | IW | | | |
| LIT206 | 3 | World Literature | | | AH | | | | CU | GI | |
| LIT232 | 3 | African American Literature | | | AH | | | IW | CU | | |
| LIT233 | 3 | American Ethnic Literature | | | AH | | | IW | CU | | |
| LIT234 | 3 | United States Latinx Literature and Culture | | | AH | | | | CU | GI | HI |
| LIT256 | 3 | Science Fiction Literature and Film | | | AH | | | IW | | | |
| LIT278 | 3 | Native American Literature and Culture | | | AH | | | | CU | | |
| LIT291 | 3 | Children's Literature for Educators | | | AH | | | IW | CU | | |

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| Course # | Credit | Course Title | CM | MA | AH | SB | PBS | IW | CU | GI | HI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAT141 | 4 | College Mathematics, Standard | | MA | | | | | | | |
| MAT151 | 4 | College Algebra, Standard | | MA | | | | | | | |
| MAT162 | 3 | Applied Statistics | | MA | | | | | | | |
| MAT182 | 4 | Trigonometry with Algebra Review | | MA | | | | | | | |
| MAT187 | 5 | Pre-Calculus | | MA | | | | | | | |
| MAT201 | 3 | Math for Elementary Teachers I | | MA | | | | | | | |
| MAT202 | 3 | Math for Elementary Teachers II | | MA | | | | | | | |
| MAT211 | 4 | Brief Calculus, Standard | | MA | | | | | | | |
| MAT215 | 4 | Math for Business Analysis | | MA | | | | | | | |
| MAT221 | 4 | Analytical Geometry and Calculus I | | MA | | | | | | | |
| MAT231 | 4 | Analytical Geometry and Calculus II | | MA | | | | | | | |
| MAT241 | 4 | Analytical Geometry and Calculus III | | MA | | | | | | | |
| MAT242 | 3 | Elementary Linear Algebra | | MA | | | | | | | |
| MAT275 | 4 | Modern Differential Equations | | MA | | | | | | | |
| MHL100 | 3 | Music Appreciation | | | AH | | | | | | HI |
| MHL207 | 3 | Survey of Jazz/Popular Music | | | AH | | | | CU | | HI |
| NTR141 | 3 | Nutrition and Wellness | | | | | BS | | | | |
| PEH101 | 3 | Personal Health | | | | SB | | | | | |
| PHI101 | 3 | Introduction to Philosophy | | | AH | | | | | | |
| PHI105 | 3 | Introduction to Ethics | | | AH | | | IW | | | |
| PHI112 | 3 | World Religions | | | AH | | | | | GI | |
| PHY111 | 4 | College Physics I | | | | | PS | | | | |
| PHY112 | 4 | College Physics II | | | | | PS | | | | |
| PHY121 | 4 | University Physics I: Mechanics | | | | | PS | | | | |
| PHY122 | 4 | University Physics II: Electricity & Magnetism | | | | | PS | | | | |
| POS101 | 3 | American Politics | | | | SB | | | | | |
| POS104 | 3 | Contemporary Issues in World Politics | | | | SB | | | | GI | |
| POS220 | 3 | United States and Arizona Constitutions | | | | SB | | | | | |
| PSY101 | 3 | Introduction to Psychology | | | | SB | | | | | |
| PSY200 | 3 | Social Psychology | | | | SB | | IW | | | |
| PSY203 | 3 | Developmental Psychology | | | | SB | | IW | | | |
| PSY205 | 3 | Personality and Social Adjustment | | | | SB | | | | | |
| PSY277 | 3 | Human Sexuality | | | | SB | | | CU | | |
| PSY290 | 4 | Research Methods | | | | | PS | IW | | | |
| REC101 | 3 | Recreation, Leisure, and the Quality of Life | | | | SB | | | | | |
| SLG202 | 4 | American Sign Language IV | | | | | | | CU | | |

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## AGEC Course Designations 2022-2023 † See Code Legend at the end of this grid

| See AGEC-Web for current information: aztransfer.com | | | Core Areas | | | | | Awareness Areas | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Course # | Credit | Course Title | CM | MA | AH | SB | PBS | IW | CU | GI | HI |
| SOC101 ◉ | 3 | Introduction to Sociology | | | | SB | | | CU | GI | |
| SOC200 ◉ | 3 | Racial and Ethnic Minorities | | | | SB | | IW | CU | | |
| SOC202 ◉ | 3 | Contemporary Social Problems | | | | SB | | | CU | GI | |
| SOC203 | 3 | Marriage and the Family | | | | SB | | | CU | GI | |
| SOC212 | 3 | Gender in Society | | | | SB | | | CU | | |
| SPA201 ◉ | 4 | Intermediate Spanish I | | | | | | | | GI | |
| SPA202 ◉ | 4 | Intermediate Spanish II | | | | | | | | GI | |
| SWU171 | 3 | Introduction to Social Work | | | | SB | | | | | |
| THE100 ◉ | 3 | Theatre Appreciation | | | AH | | | | | GI | |
| THE115 | 3 | Introduction to Cinema | | | AH | | | | | | |
| THE116 | 3 | Contemporary Cinema | | | AH | | | | | | |
| WGS100 | 3 | Introduction to Gender and Women's Studies | | | | SB | | | CU | | |

† **AH**=Arts/Humanities; **BS**=Biological Sciences; **CM**=Communication Studies;
  **CU**=Cultural Awareness (Ethnic/Race/Gender); **GI**=Global/International; **HI**=Historical Awareness;
  **IW**=Intensive Writing; **MA**=Mathematics; **OR**=Oral Communications; **PBS**=Physical/Biological Sciences;
  **PS**=Physical Sciences; **SB**=Social/Behavioral Sciences; ◉=SUN Course; **WR**=Written Communications.
  ***HNR204 + HNR205 earned with grade of C or better fulfills **IW** requirement.

# 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 AAS or AGS 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 Associate Degree which may transfer to the state universities and other higher education institutions.

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 earn a minimum of 3 earned CAC credits numbered 100 or above;

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)

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 College Mathematics, Standard ◉ 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)
ENG101   College Composition I (3) ◉🅐
ENG102   College Composition II (3) ◉🅐

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## Oral Communications (3)
*Select an AGEC course*

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

## Arts and Humanities (6-9)
*Select AGEC courses.*

## Social and Behavioral Sciences (6-9)
*Select AGEC courses.*

## Physical and Biological Sciences (8)
*Select AGEC 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 AA Degree requirements in the CAC catalog, consult an academic advisor, and see the Transfer Guides at aztransfer.com.

## 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 Communication Studies, 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 be used to satisfy more than one Special Awareness Requirements category.

Students must earn a grade of "C" or better in each course.

Students must earn a minimum of 3 earned CAC credits numbered 100 or above.

## Arizona General Education Curriculum for Business (AGEC-B Certificate)
### (35-36 semester credits)
The Arizona General Education Curriculum focused on Business (AGEC-B) is a 35-semester credit block that fulfills +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.

## General Education (35-36)

## 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)
ENG101   College Composition I (3)
ENG102   College Composition II (3)

## Oral Communications (3)
*Select an AGEC course.*

*Students are encouraged to choose coursework from more than one discipline for the Arts and Humanities category.*

## Arts and Humanities (6)
*Select AGEC courses.*

## Social and Behavioral Sciences (6)
*Select AGEC courses.*
ECN201   Principles of Macroeconomics (3)   AND
ECN202   Principles of Microeconomics (3)
are recommended as they are Core Requirements of the Associate of Business (ABus) degree and also fulfill the degree's Social and Behavioral Sciences requirement.

## Physical and Biological Sciences (8)
*Select AGEC courses with a laboratory component.*

## Mathematics (3-4)
MAT211  Brief Calculus (4)   or higher

## Computer Information Systems (3)
CIS120   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 see the Transfer Guides at aztransfer.com.

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## 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 Communication Studies, 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 be used to satisfy more than one Special Awareness Requirements category.

Students must earn a grade of "C" or better in each course.

Students must earn a minimum of 3 earned CAC credits numbered 100 or above.

## Arizona General Education Curriculum for Science (AGEC-S Certificate)

### (35-37 semester credits)
## General Education (29-30)

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)

ENG101    College Composition I (3)
ENG102    College Composition II (3)

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

## Arts and Humanities (6)
*Select AGEC courses*

## Social and Behavioral Sciences (6)
*Select AGEC courses.*

## Physical and Biological Sciences (8)

BIO181    General Biology I (4)    **AND**
BIO182    General Biology II (4)
        **OR**
CHM151    General Chemistry I (4)    **AND**
CHM152    General Chemistry II (4)
        **OR**
GLG101    Physical Geology (4)    **AND**
GLG102    Historical Geology (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 aztransfer.com 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, Nutrition, Physical Geography, Physics, 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 Communication Studies, 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 be used to satisfy more than one Special Awareness Requirements category.

Students must earn a grade of "C" or better in each course.

Students must earn a minimum of 3 earned CAC credits numbered 100 or above.

# 2022-2023 ACADEMIC OFFERINGS BY AREAS OF INTEREST

## Biological/Physical Sciences & Agriculture

## Business & Professional Industries

## Communication & English

## Computer Technology, Engineering, & Math

## Education

## Industrial Technology & Skilled Trades

## Nursing, Health, & Emergency Careers

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## Social/Behavioral Sciences & Public Service

## Visual, Fine, and Performing Arts

*This program is not eligible for federal financial aid (Pell Grant and/or direct loans).

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# BIOLOGICAL/PHYSICAL SCIENCES & AGRICULTURE

## AGRICULTURE GENERAL CERTIFICATE

### 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 agriscience and agribusiness.

### Written Communications (3)

*Select one of the following:*
ENG101    College Composition I (3) 🔴 🅰
ENG121    Applied Technical Writing (3)

### Core Requirements (10)

AGB100    Introduction to Agriculture Business (3)
AGB124    Microcomputers in Agriculture (3)
AGS240    Plant Biology (4) 🅰

### Agriculture Electives (19)

*Select from AGB, AGS, or ANS courses*
*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;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a total of 32 credits.

## AGRICULTURE AA

### Total Credits: 60-61

The Agriculture Associate of Arts Degree is designed for those interested in career/transfer path degrees in animal science, biotechnology, plant science, agriculture business, agriculture education, and other agriculture based programs.

## General Education Requirements
## AGEC-A (35-36)

### Written Communications (6)

ENG101    College Composition I (3) 🔴 🅰
ENG102    College Composition II (3) 🔴 🅰

### Oral Communications (3)

*Select an AGEC COM course.*
COM263 Intercultural Communication (3) 🅰
        *(recommended)*

*Students are encouraged to select coursework from more than one discipline for the **Arts and Humanities** and the **Social and Behavioral Sciences** categories for a total of 15 credits.*

### Arts and Humanities (6-9)

AGS235 Principles of Sonoran Horticulture (3) 🅰
        *(recommended)*
*(Also fulfills Cultural Awareness, and Global International Awareness or Historical Awareness)*
ANS104  Human and Animal Interrelationships from
        Domestication to Present (3) 🅰
*(Also fulfills Global International Awareness or Historical Awareness)*
*Select AGEC courses to complete the 6-9 credits.*

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

AGS122 Natural Resources and Conservation (3) 🅰 *IW*
*(Also fulfills Intensive Writing and Critical Inquiry)*
*Select AGEC courses to complete the 6-9 credits*

### Physical and Biological Sciences (8)

AGS240    Plant Biology (4) 🅰
*Select another AGEC course with a laboratory component.*

### Mathematics (3-4)

MAT141  College Mathematics, Standard (4) 🔴 🅰 or higher
*(Consult an Agriculture Faculty Advisor for guidance on the mathematics requirement)*

### Subject Options (0-6)

Based on your major, review the specific AA Degree requirements in the CAC catalog, consult an academic advisor, and see the Transfer Guides at *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. Recommended: AGS122 Natural Resources and Conservation 🅰*IW*.

## 2022-2023 College Catalog    |    79

2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender) Recommended: AGS235 Principles of Sonoran Horticulture [a].

3. At least three semester credits of coursework emphasizing Global/International Awareness or Historical Awareness. Recommended: ANS104 Human and Animal Interrelationships from Domestication to Present (3) [a]

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 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 and Humanities, Intensive Writing, and a Core Requirement.

## Core Requirements (6)
AGB124    Microcomputers in Agriculture (3)
ANS101    Animal Industry (3)

## Electives (18-19)
Select approved elective courses which transfer as "Elective or better" to at least one of the three Arizona public universities to complete the degree requirements. Consult with an Agriculture Faculty Advisor to determine course selections and course equivalencies at the universities.

## Other AA Degree Requirements
Students must earn:
- a grade of C or better in each required course;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

## AGRICULTURE BUSINESS CERTIFICATE
## Total Credits: 27-28
This certificate provides students with specialized agricultural workplace skills for entry-level agribusiness positions.

## Oral Communications (3)
*Select any AGEC COM course*

## Core Requirements (24-25)
AGB100    Introduction to Agriculture Business (3)
AGB124    Microcomputers in Agriculture (3)
AGB225    Agriculture Business Analysis (3)

*Select two:*
AGB121    Fundamentals of Agriculture and Environmental Economics (3)
AGB213    Introduction to Agricultural Commodity and Food Marketing (3)
ANS110    Horse Event Production (3)

*Select one:*
ACC100    Fundamentals of Accounting (3)
AGB123    Agriculture Accounting (3) *(recommended)*

*Select one:*
BUS101    Business Mathematics (3) *(recommended)*
MAT118    Essential Mathematics (4) or higher

*Select one:*
ENG101    College Composition I (3) [icons]
ENG121    Applied Technical Writing (3)

## Other Requirements
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 27 semester credits.

## AGRIBUSINESS AAS
## Total Credits: 60
This Degree provides students with specialized agricultural workplace skills for entry and mid-level agribusiness positions.

## General Education Requirements (23-24)

### Written Communications (3)
*Select one:*
ENG101    College Composition I (3) [icons]
ENG121    Applied Technical Writing (3)

### Oral Communications (3)
*Select any AGEC COM course*

## Arts and Humanities (3)

ANS104   Human and Animal Interrelationships from Domestication to Present (3) 🅐 *(recommended)*

*OR*

*Select a course numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Art and Humanities AGEC list.*

## Social and Behavioral Science (3)

AGS204   Environmental Sustainability (3) 🅐
        *(recommended)*

*OR*

*Select a course numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

## Physical and Biological Sciences (8)

*Select two:*
AGS101   World of Plants (4)
AGS106   Entomology (4) 🅐
AGS221   Soil Science (4) 🅐
        *(recommended)*
AGS240   Plant Biology (4) 🅐
        *(recommended)*

## Mathematics (3-4)

BUS101   Business Mathematics (3) *(recommended)*
MAT118   Essential Mathematics (4) or higher

## Core Requirements (24)

AGB100   Introduction to Agriculture Business (3)
AGB121   Fundamentals of Agriculture and Environmental Economics (3)
AGB123   Agriculture Accounting (3)
AGB124   Microcomputers in Agriculture (3)
AGB213   Introduction to Agriculture Commodity and Food Marketing (3)
AGB225   Agriculture Business Analysis (3)
AGB234   Agriculture Leadership and Development (3)
ECN201   Principles of Macroeconomics (3) 🅞🅐

## Elective Requirements (12-13)

*Select four:*
ACC100   Fundamentals of Accounting (3)
ACC201   Financial Accounting (3) 🅞
ACC202   Managerial Accounting (3) 🅞
AGS122   Natural Resources and Conservation (3) 🅐*IW*
AGS235   Principles of Sonoran Horticulture (3) 🅐
AGS296   Agriculture Internship (3)
ANS101   Animal Industry (3)
ANS110   Horse Event Production (3)

ANS121   Equine Facility Management (3)
ECN202   Principles of Microeconomics (3) 🅞🅐
ENG102   College Composition II (3) 🅞🅐

*AND*

*Students may need to complete an approved elective course, which transfers as "Elective or better" to at least one of the three Arizona public universities, to complete the required AAS Degree credit requirements.*

## Other Requirements

Students must earn:

- a cumulative grade point average (GPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

# EQUINE MANAGEMENT AND TRAINING CERTIFICATE
## Total Credits: 36

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 AAS Degree.

## Prerequisite

RDG100   College Reading
        **OR**
equivalent reading assessment test score

## Core Requirements (30)

ANS102   Horsemanship I (3)
ANS110   Horse Event Production (3)
ANS121   Equine Facility Management I (3)
ANS122   Equine Facility Management II (3)
ANS131   Equine Behavior and Training I (3)
ANS200   Introduction to Equine Science (3)
ANS202   Horsemanship II (3)
ANS216   Equine Anatomy and Physiology (3)
ANS223   Advanced Equine Training (3)
ANS231   Equine Behavior and Training II (3)

## Electives (6)

*Select two:*
ANS101   Animal Industry (3)
ANS111   Horseshoeing I (3)
ANS211   Advanced Horseshoeing (3)
ANS213   Animal Genetics (3)
ANS226   Feeds and Feeding (3)

*This catalog was prepared on the basis of the best information available at the time of publication. Catalog information is subject to changes without notice, obligation or liability.*

## Other Requirements

Students must earn:

- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 36 semester credits.

## EQUINE MANAGEMENT AND TRAINING AAS

### Total Credits: 61-62

The Equine Management and Training AAS Degree 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 (19-20)

### Written Communications (3)

*Select one:*
ENG101   College Composition I (3) 🔴 🅰
ENG121   Applied Technical Writing (3)

### Oral Communications (3)

COM100   Fundamentals of Human Communication (3) 🔴 🅰
       or higher

### Arts and Humanities (3)

*Select one:*
AGS235   Principles of Sonoran Horticulture (3) 🅰
ANS104   Human and Animal Interrelationships from Domestication to Present (3) 🅰
*Select a course numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)

*Select one:*
AGS122   Natural Resources and Conservation (3) 🅰 🔴 *IW*
AGS204   Environmental Sustainability (3) 🅰
*Select a course numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

### Physical and Biological Sciences (4)

*Select one:*
AGS104   Agricultural Environmental Science (4) 🅰
AGS106   Entomology (4) 🅰
*Or select a 4-credit course with lab numbered 100 or above.*

### Mathematics (3-4)

*Select one*:
BUS101   Business Mathematics (3)
MAT118   Essential Mathematics (4) or higher

### Core Requirements (42)

AGB124   Microcomputers in Agriculture (3)
ANS102   Horsemanship I (3)
ANS110   Horse Event Production (3)
ANS111   Horseshoeing I (3)
ANS121   Equine Facility Management I (3)
ANS122   Equine Facility Management II (3)
ANS131   Equine Behavior and Training I (3)
ANS200   Introduction to Equine Science (3)
ANS202   Horsemanship II (3)
ANS211   Advanced Horseshoeing (3)
ANS216   Equine Anatomy and Physiology (3)
ANS223   Advanced Equine Training (3)
ANS226   Feeds and Feeding (3)
ANS231   Equine Behavior and Training II (3)
OR
*Select courses from Agriculture, Business, Math, Science, or Technology with Agriculture Department approval.*

Students must earn:

- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 61 semester credits.

## BUSINESS & PROFESSIONAL INDUSTRIES

## BUSINESS CERTIFICATE

### Total Credits: 18-19

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 AAS.

## Core Requirements (15)
BUS100    Introduction to Business (3)
BUS101    Business Mathematics (3)
CIS120    Survey of Computer Information Systems (3)

*Select one:*
ACC100    Fundamentals of Accounting (3)
           *(recommended)*
ACC201    Financial Accounting (3)

*Select one:*
ECN200    Contemporary Economic Issues (3)
           *(recommended)*
ECN201    Principles of Macroeconomics (3)
ECN202    Principles of Microeconomics (3)

## Electives (3)
*Complete 3 credits from the following prefixes to total 18 credits (Refer to Business AAS Degree):*
ACC       Accounting
BUS       Business
CBA      Computer Business Applications
CIS       Computer Information Systems
ECN      Economics
HRM     Hospitality Management

**Optional Internship course (1):**
BUS196 Applied Business Internship (1)
 (45-90 hour internship in related industry)

## Other Requirements
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 18 semester credits.

# BUSINESS AAS
## Total Credits: 61
The Business AAS Degree prepares students for entry-level positions in business and provides skills necessary for helping them begin their own business.

## Recommended Proficiencies
A solid background in reading, math, and analytical skills.

## General Education Requirements (19)

## Written Communications (3)
ENG101   College Composition I (3)

## Oral Communications (3)
COM100  Fundamentals of Human Communication (3)
          or higher

## Arts and Humanities (3)
*Select courses numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

## Social and Behavioral Sciences (3)
*Select one:*
ECN200    Contemporary Economic Issues (3)
           *(recommended)*
ECN201    Principles of Macroeconomics (3)
ECN202    Principles of Microeconomics (3)

## Physical and Biological Sciences (4)
*Select a 4-credit course with lab numbered 100 or above from the Biological and Physical Science Lab list.*

## Mathematics (3)
BUS101    Business Mathematics (3)

## 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)

## Elective Requirements (12)
*Select courses numbered 100 or above for a total of 12 credits from the following list:*
ACC       Accounting
ACC100    Fundamentals of Accounting (3)
           *(recommended)*
AGB       Agriculture Business
BUS       Business
BUS190    Principles of Management and Leadership (3)
           *(recommended)*
CBA      Computer Business Applications
CIS       Computer Information Systems
CUL       Culinary Arts

ECN         Economics
HRM         Hospitality Management
*Students may be advised to complete ACC100 prior to enrolling in ACC201 ⊙.*

## Other Requirements

Students must earn:

- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 61 credits.

# ASSOCIATE OF BUSINESS (ABUS) (60-64 Credits)

The Associate of Business (ABus) 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.

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.

## Arizona General Education Curriculum-Business (AGEC-B) (35-36 Credits)

The Associate of Business Degree requires the AGEC-B general education block of 35-36 credits. The AGEC-B satisfies requirements in many business programs and other programs that articulate with the ABus Degree. The AGEC-B requires a minimum of MAT211 Brief Calculus ⊙ plus 32 credits from specific AGEC categories. Select AGEC courses only.

## General Education (35-36)

*For the categories below, if there are no required courses, choose from the recommended courses or select AGEC courses from the equivalent category.*

**Written Communications (6 Credits)**
ENG101    College Composition I (3) ⊙ⓐ
ENG102    College Composition II (3) ⊙ⓐ

**Oral Communications (3 Credits)**
*Select an AGEC COM course.*

**Arts and Humanities (6 Credits)**
*Select AGEC courses.*

*Students are encouraged to choose coursework from more than one discipline for the Arts and Humanities category.*

**Social and Behavioral Sciences (6 Credits)**
*Select AGEC courses.*
*Recommended:*
ECN201 Principles of Macroeconomics (3) ⊙ⓐ and
ECN202 Principles of Microeconomics (3) ⊙ⓐ
*These are Core Requirements of the Associate of Business (ABus) degree and also fulfill the degree's Social and Behavioral Sciences requirement.*

**Physical and Biological Sciences (8 Credits)**
*Select AGEC courses with a laboratory component.*

**Mathematics (3-4 Credits)**
MAT211  Brief Calculus (4) or higher ⊙ⓐ

**Computer Competency (3 Credits)**
CIS120    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 at *aztransfer.com/college/*

## Special Requirements (0-9)

*Select courses from the AGEC list 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 be used to satisfy more than one Special Awareness Requirements category.

## Core Requirements (22-26 Credits)

ACC201    Financial Accounting (3) ⊙
ACC202    Managerial Accounting (3) ⊙
BUS201    Legal Environment of Business (3)
BUS208    Business Statistics (3) ⊙
ECN201    Principles of Macroeconomics (3) ⊙ⓐ

*also fulfills Social/Behavioral Science requirement*

ECN202 Principles of Microeconomics (3) 🔴🟢
*also fulfills Social/Behavioral Science requirement*

MAT215 Math for Business Analysis (4) 🟢

## Electives (0-4)

Select approved elective courses which transfer as "elective or better" to at least one of the three Arizona public universities to complete the required ABus Degree credit requirement. Consult the *Course Equivalency Guide*. Students must complete a total of 60-64 credits to earn the Associate of Business Degree.

## Recommended Business Electives:

ACC121 Income Tax Fundamentals (3)
BUS100 Introduction to Business (3)
BUS260 Applied Business Seminar (3)
CIS123 Introduction to Programming (3)
MAT151 College Algebra, Standard (4) 🔴🟢

## Requirements for ABus Degree

**Computer Competency (3):**

- CIS120 Survey of Computer Information Systems (3) 🔴
  *(Fulfilled by AGEC-B requirements)*

## Other ABus Degree Requirements

Students must earn:

- a grade of "C" or better in each ABus Degree required course;
- a minimum of 3 earned CAC credits numbered 100 or above.

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

## BAKING AND PASTRY CERTIFICATE
## Total Credits: 18

The Baking and Pastry Certificate prepares students for employment in such establishments as retail bakeries, fine dining restaurants and hotels, upscale pastry and bake shops, commercial baking and entrepreneurships. 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 AAS Degree. High school diploma or GED are recommended.

## Core Requirements (14)

CUL105 Food Safety Foundations (1)
CUL160 Baking and Pastry I (3)
CUL260 Baking and Pastry II (3)
CUL268 Special Dietary Baking and Advanced Techniques (3)
CUL elective (1)

*Select one:*
HRM103 Managing Food Service Operations (3)
NTR223 Food Service Management (3)

## Electives (4)

*Select four:*
CUL161 Cake Decorating (1)
CUL162 Cake, Fillings and Frostings (1)
CUL261 Advanced Cake Decorating (1)
CUL262 Specialty and Wedding Cakes (1)
CUL263 Everything Chocolate (1)

## Other Requirements

Students must earn:

- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 18 semester credits.

## CULINARY ARTS I CERTIFICATE
## Total Credits: 16-17

The Culinary Arts I Certificate prepares students to become entry-level culinary professionals within a commercial food service operation. Credits earned may be applied toward the Culinary Arts II Certificate and the Culinary Arts AAS 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)

*Select one:*
HRM103 Managing Food Service Operations (3)
NTR223 Food Service Management (3)

*Select one:*
CUL268    Special Dietary Baking and Advanced
Techniques (3)
**AND** CUL elective (1)

NTR141    Nutrition and Wellness (4) [a]

**Optional Internship course (1):**
BUS196   Applied Business Internship (1)
(45-90 hour internship in related industry)

## Other Requirements
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 16 semester credits.

# CULINARY ARTS II CERTIFICATE
## Total Credits: 25-27
The Culinary Arts Certificate II provides training in basic and advanced culinary skills, concepts related to food sustainability, and culinary math and logistical skills necessary for planning events. Courses within this certificate are also requirements for the Culinary Arts AAS degree. 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)

*Select one:*
HRM103    Managing Food Service Operations (3)
NTR223    Food Service Management (3)

*Select one:*
CUL268    Special Dietary Baking and Advanced
Techniques (3)
**AND** CUL elective (1)

NTR141    Nutrition and Wellness (4) [a]

**Optional Internship course (2):**
CUL290    Commercial Cooking Internship (2)
(45-90 hour internship in related industry)

## Other Requirements
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 25 semester credits.

# CULINARY ARTS AAS
## Total Credits: 60
The Culinary Arts 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
High school diploma or GED

## General Education Requirements (19)

### Written Communications (3)
*Select one:*
ENG101    College Composition I (3) [icons]
ENG121    Applied Technical Writing (3)

### Oral Communications (3)
COM100   Fundamentals of Human
Communication (3) [icons] or higher

### Arts and Humanities (3)
*Select a course numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)
*Select a course numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

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## Physical and Biological Sciences (4)
CUL142    Applied Food Science (4)

## Mathematics (3)
BUS101    Business Mathematics (3)

## Core Requirements (29)
CUL105    Food Safety Foundations (1)
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 Internship (2)

*Select one:*
HRM103    Managing Food Service Operations (3)
NTR223    Food Service Management (3)

*Select three:*
CUL110    Asian Cuisine (1)
CUL112    Italian Cuisine (1)
CUL114    Mexican and Latin American Cuisine (1)
CUL116    French Cuisine (1)

*Select three:*
CUL161    Cake Decorating (1)
CUL162    Cake, Fillings and Frostings (1)
CUL261    Advanced Cake Decorating (1)
CUL262    Specialty and Wedding Cakes (1)
CUL263    Everything Chocolate (1)

## Electives (12)
Students may select electives from categories below to meet the degree credit requirement. Many of the electives are part of the Baking and Pastry, the Culinary Arts, and the Hotel and Restaurant Management ii8. Careful selection of electives makes it possible to earn multiple certificates while earning an AAS degree.

ACC Accounting
BUS Business
CUL Culinary Arts
HRM Hospitality Management
NTR Nutrition

## Other Requirements
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;

- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

## HOTEL AND RESTAURANT MANAGEMENT CERTIFICATE
## Total Credits: 18-19

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. Topics include 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 AAS 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 AAS 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: *ahla.com/*

## Prerequisite
RDG100 College Reading **OR**
equivalent reading assessment test score

## Core Requirements (12)
HRM100    Introduction to Hospitality (3)
HRM101    Facilities Management (3)
HRM102    Management of Guest Services (3)

*Select one:*
HRM145    Convention and Meeting Management (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 Preparation (1)

# 2022-2023 College Catalog    |    87

CUL130    Culinary Principles and Applications I (3)
          **OR**
CUL160    Baking and Pastry I (3)

CUL170    Dining and Beverage Operations (2)
HRM103    Managing Food Service Operations (3)
HRM145    Convention and Meeting Management (3)
  *(If not taken in Core Requirements)*
HRM252    Managing Hospitality Human Resources (3)
  *(If not taken in Core Requirements)*

**Optional Internship course (1):**
BUS196   Applied Business Internship (1)
 (45-90 hour internship in related industry)

## Other Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 18 semester credits.

# HOTEL AND RESTAURANT MANAGEMENT AAS
## Total Credits: 65-67

The Hotel and Restaurant Management AAS Degree includes hospitality industry certified courses, university-level business courses and the Arizona General Education Curriculum (AGEC-A). The AGEC-A requirements in this AAS Degree fulfill university transfer with remaining courses to be evaluated on a course-by-course basis. Note: Students should complete a graduation application for both the AGEC-A Certificate and the AAS degree.

## General Education Requirements
## AGEC-A (35-36)

### Written Communications (6)
ENG101    College Composition I (3)
ENG102    College Composition II (3)
### Oral Communications (3)
COM263    Intercultural Communication (3)
*(also fulfills Cultural Awareness requirement)*

*Students are encouraged to select coursework from more than one discipline for the **Arts and Humanities** and the **Social and Behavioral Sciences** categories.*

### Arts and Humanities (6)
*Select AGEC courses.*

### Social and Behavioral Sciences (9)
*Select two:*
BUS123    Business Relations (3)
BUS190    Principles of Leadership and Management (3)
ECN201    Principles of Macroeconomics (3)
ECN202    Principles of Microeconomics (3)
PEH101    Personal Health (3) *(recommended)*

*Select one:*
GEO101    Introduction to Cultural and Historical
          Geography (3)
*(also fulfills Global/International or Historical Awareness and Cultural Awareness requirements)*

PSY101    Introduction to Psychology (3)
SOC101    Introduction to Sociology (3)

### Physical and Biological Sciences (8)
*Select two:*
BIO100    Biology Concepts (4)
CHM130    Fundamental Chemistry (4)
CUL142    Applied Food Science (4) *(recommended)*
*(also fulfills Core requirement)*
ENV101    Environmental Science (4)
NTR141    Nutrition and Wellness (4)

### Mathematics (3-4)
MAT141   College Mathematics, Standard (4)
         or higher

## Subject Options (0-6)
Based on your major, review the specific AA Degree requirements in the CAC catalog, consult an academic advisor, and see the Arizona Transfer website at *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) *(Fulfilled by COM263 )*

3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness *(May be fulfilled by GEO101 )*

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 be used to satisfy more than one Special Awareness Requirements category.

## Core Requirements (30-31)
CUL105    Food Safety Foundations (1)
CUL170    Dining and Beverage Operations (2)
HRM100    Introduction to Hospitality (3)
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)
REC101    Recreation, Leisure and Quality of Life (3) 🅰

*Select one:*
ACC100    Fundamentals of Accounting (3)
ACC201    Financial Accounting (3) 🔶

*Select one:*
CUL130    Culinary Principles and Applications I (3)
CUL160    Baking and Pastry I (3)
CUL142    Applied Food Science (4) 🅰
*(Fulfills Physical and Biological Sciences requirement)*

## Other Requirements
Students must earn:
- a grade of C or better in each AGEC-A course;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 65 semester credits.

## LOGISTICS AND SUPPLY CHAIN MANAGEMENT CERTIFICATE
## Total Credits: 18
The Logistics and Supply Chain Management Certificate emphasizes the fundamental principles of logistics and transportation, including skills in inventory control and warehouse management.

## Required Courses (18)
BUS111    Principles of Logistics and Supply Chain Management (3)
BUS124    Inventory Control (3)
BUS216    Transportation and Traffic Management (3)
BUS227    Introduction to Purchasing and Supply Management (3)
BUS292    Fundamentals of Logistics – Organizational Management (3)
CIS120    Survey of Computer Information Systems (3) 🔶

## Other Requirements
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 18 semester credits.

## MANAGEMENT CERTIFICATE
## Total Credits: 24
The Management Certificate focuses on communication, computer skills, finances, and human resources and includes basic marketing and management principles that develop leadership and supervision skills used in general or retail management. This certificate qualifies for sponsorship by the Retail Management Certificate Program with the Western Association of Food Chains (*WAFC.com*) or WAFC national partnership. See *centralaz.edu/business*

## Recommended Proficiencies
RDG100  College Reading 𝓡

## Core Requirements (24)
BUS123  Business Relations (3) 🅰
BUS180  Introduction to Marketing (3)
BUS190  Principles of Management and Leadership (3) 🅰
BUS207  Business Communications (3)
BUS220  Retail Management (3)
HRM252  Managing Hospitality Human Resources (3)

*Select one:*
ACC100  Fundamentals of Accounting (3)
ACC201  Financial Accounting (3) 🔶

*Select one:*
CIS110    Fundamentals of Computer Literacy (3)
CIS120    Survey of Computer Information Systems (3) 🔶

## Other Requirements
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 24 semester credits.

# RECREATION MANAGEMENT CERTIFICATE
## Total Credits: 18

The Recreation Management 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 (18)

HRM100  Introduction to Hospitality (3)
HRM145  Convention and Meeting Management (3)
REC101  Recreation, Leisure, and the Quality of Life (3) 🅰
REC108  Recreation Practicum (3)
REC203  Leisure Delivery Systems (3)
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;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 18 semester credits.

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# COMMUNICATION & ENGLISH

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# COMMUNICATION SKILLS FOR THE PROFESSIONAL CERTIFICATE
## Total Credits: 18

This certificate emphasizes the use of communication technologies in the workplace and is complemented by a breadth of course offerings in the area of communication, along with two specified electives in an area of interest. Through the completion of these courses, this certificate equips students with competencies including: critical thinking and problem solving, team-work and collaboration, oral and written communication, professionalism and work ethic, global and multicultural fluency, and leadership and digital technology.

## Prerequisites

ENG100 Introduction to Composition II
**OR**
ENG121 Applied Technical Writing

## Core Requirements (15)

COM259  Professional Communication (3) 🅰
COM275  Communication Studies Capstone (3)

*Select three:*
COM100  Fundamentals of Human Communication (3) 🌀🅰
COM101  Interpersonal Communication (3) 🌀🅰
COM202  Small Group Communication (3) 🌀🅰
COM206  Public Speaking (3) 🅰
COM263  Intercultural Communication (3) 🅰

## Electives (3)

Select a college-level course numbered 100 or above.

## Other Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 18 semester credits.

*This catalog was prepared on the basis of the best information available at the time of publication. Catalog information is subject to changes without notice, obligation or liability.*

## COMMUNICATION STUDIES CERTIFICATE
## Total Credits: 15

The Communication Studies Certificate prepares students with effective communication skills applicable in a wide variety of interpersonal, intercultural, small group, public communication and employment situations. The communication skills-building courses required for this certificate also prepares students for continued education and advanced degrees in communication studies. This certificate may also be used to enhance areas of interest in other fields of study.

### Prerequisite
ENG100   Introduction to Composition II

### Core Requirements (15)
COM100   Fundamentals of Human
              Communication (3)
COM275   Communication Studies Capstone (3)

*Select three:*
COM101   Interpersonal Communication (3)
COM202   Small Group Communication (3)
COM206   Public Speaking (3)
COM207   Introduction to Communication Inquiry(3) *IW*
COM259   Professional Communication (3)
COM263   Intercultural Communication (3)

For a relational approach to communication, please consider these suggested courses: COM101, COM202, COM263.

For a public communication approach, please consider these suggested courses: COM202, COM206, COM259.

For a cultural diversity approach to communication, please consider these suggested courses: COM101, COM259, COM263.

### Other Requirements
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2. 0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 15 semester credits.

## COMPUTER TECHOLOGY, ENGINEERING & MATH

## NETWORKING TECHNOLOGIES AAS
## Total Credits: 61-62

**Previously two separate degrees: Network Systems Administration AAS and Cyber Security AAS**
The Network Technologies AAS offers two areas of emphasis: Network Administration and Cyber Security, This dynamic program features state of the art technology to provide the skills necessary to prepare students for a career in the fast-growing information technology industry or to transfer to a 4-year college or university. Many of the courses in both emphasized areas offer regionally or nationally recognized certifications.

Network Administration concentrates on building, configuring, and troubleshooting networks.

Cyber security concentrates on protecting computers and network systems from various intrusions.

### General Education Requirements (19-20)

### Written Communications (3)
*Select one*
ENG101 College Composition I (3)
ENG121 Applied Technical Writing (3)

### Oral Communication (3)
COM259 Professional Communication (3)
              *(recommended)*
OR
Any Communications AGEC course

### Arts and Humanities (3)
Any Arts and Humanities Course AGEC Course

### Social and Behavioral Sciences (3)
*Select one:*
ECN200   Contemporary Economic Issues (3) *(recommended)*
ECN201   Principles of Macroeconomics (3)
ECN202   Principles of Microeconomics (3)

### Physical and Biological Sciences (4)
*Select a 4-credit courses with lab numbered 100 or above from the Biological and Physical Science Lab list. Students*

*may also select a course from the Biological and Physical Lab Science AGEC list.*

## Mathematics (3-4)

*Select one:*

Cyber Security Emphasis:
MAT151   College Algebra, Standard (4) 🔘 Ⓐ or higher

Networking Administration Emphasis:
*Select one:*
BUS101   Business Mathematics (3)
MAT121   Intermediate Algebra, Standard (4) or higher

## Core and Elective Requirements (42)

CIS119   Set-up and Maintenance of Personal Computers (3)
CIS120   Survey of Computer Information Systems (3) 🔘
CIS121   Windows Operating System Fundamentals (3)
CIS123   Introduction to Programming (3)
CIS130   Networking Essentials (3)
CIS150   Windows Server (3)
CIS153   Network Security (3)
CIS210   Cloud Computing (3)
CIS213   Linux Server (3)
CIS225   Practical Applications in Cybersecurity (3)
CIS252   Windows Network Infrastructure (3)
CIS263   Cloud Operations (3)

Cyber Security Emphasis (6)
CIS275   Computer Forensics and Investigation (3)
CIS273   Network Defense (3)

Networking Administration Emphasis (6)
CIS215   CISCO Routers (3)
CIS253   Windows Server Identity (3)

## Other Requirements

For students transferring to the University of Arizona BAS Network Administration program, SPA101 🔘 and SPA102 🔘 or proficiency at that level are required.

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 61 semester credits.

# COMPUTER PROGRAMMING CERTIFICATE

## Total Credits: 25

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 Oracle Certified Java Programmer.

## Recommended Proficiencies

RDG100 College Reading (3) 𝓡

## Core Requirements (25)

CIS112   Web Design Fundamentals with HTML (3)
CIS120   Survey of Computer Information Systems (3) 🔘
CIS121   Windows Operating System Fundamentals (3)
CIS123   Introduction to Programming (3)
CIS162   Comparative Programming Languages (3)
CIS176   Python Programming (3)
CIS178   Database Fundamentals and Programming (3)
CIS216   Java Programming (4)

## Other Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 25 semester credits.

# SOFTWARE DEVELOPMENT AAS

## Total Credits: 60-62

**Previously two separate degrees combined to create this degree: Computer Programming AAS and Web Development AAS**

The Software Development AAS has two areas of emphasis: Computer Programming and Web Development. Both tracks focus on the programming skills necessary to prepare students for a career in the fast-growing software industry or to transfer to a 4-year college or university.

Computer Programming concentrates on analysis and design of algorithms through a variety of programming languages.

Web Development concentrates on the creation of web pages. ADA compliance, and website performance.

## General Education Requirements (22-23)

### Written Communications (6)
ENG101 College Composition I (3)
ENG102 College Composition II (3)

### Oral Communication (3)
COM263   Intercultural Communication (3)

### Arts and Humanities (3)
PHI105    Introduction to Ethics (3) *IW*

### Social and Behavioral Sciences (3)
*Select one:*
ECN201   Principles of Macroeconomics (3)
ECN202   Principles of Microeconomics (3)

### Physical and Biological Sciences (4)
*Select a 4-credit courses with lab numbered 100 or above from the Biological and Physical Science Lab list. Students may also select a course from the Biological and Physical Lab Science AGEC list.*

### Mathematics (3-4)
Web Development Emphasis
BUS101     Business Mathematics (3)
                **OR**
Computer Programming Emphasis
MAT151     College Algebra, Standard (4)  or higher

## Core and Elective Requirements (38-39)
CIS112     Web Design Fundamentals with HTML (3)
CIS113     E-Commerce and Social Media (3)
CIS120     Survey of Computer Information Systems (3)
CIS123     Introduction to Programming (3)
CIS176     Python Programming (3)
CIS178     Database Fundamentals and Programming (3)
CIS216     Java Programming (4)
CIS218     C++ Programming (4)
CIS233     Web Application Development Using PHP (3)

Web Development Emphasis
CIS114     Web Development Tools (3)
CIS170     JavaScript Programming (3)
CIS232     Advanced Web Development (3)

Computer Programming Emphasis
CIS121     Windows Operating System Fundamentals (3)
CIS162     Comparative Programming Languages (3)
CIS231     Object Oriented Programming and Data
                Structures (4)

## Other Requirements
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 61 semester credits.

## EDUCATION

### EARLY CHILDHOOD EDUCATION AA
### Total Credits: 60-61
The Associate of Arts in Early Childhood Education (AA ECE) Degree is appropriate for students working in early childhood environments who want to increase their knowledge, practical, and professional skills in the field, and for students who want to pursue advanced degrees in Early Childhood Education teacher certification.

### 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 sciences, fine arts, humanities). The AGEC-A requires a minimum of MAT141 or higher, and 32 credit hours in other general education disciplines. 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 six categories select the recommended course(s) or an AGEC course from the equivalent category:*

### Written Communications (6)
ENG101    College Composition I (3)
ENG102    College Composition II (3)

### Oral Communications (3)
*Select an AGEC course.*

*Students are encouraged to select coursework from more than one discipline for the **Arts and Humanities** and the **Social and Behavioral Sciences** categories.*

## Arts & Humanities (6)
*Select two courses from the Arts and Humanities AGEC course list.*

## Social and Behavioral Sciences (9)
ECE276   Child Development (3) 🅰
         *(Also fulfills Core Requirement)*
*Select additional courses from the Social and Behavioral Sciences AGEC course list.*

## Physical and Biological Sciences (8)
*Select AGEC courses with a laboratory component.*

## Mathematics (3-4)
MAT141   College Mathematics, Standard (4) 🔶🅰
         or higher

## Special Awareness Requirements (0-9)
*Select AGEC course courses to fulfill these requirements.*
1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry.
   LIT291 Children's Literature for Educators (3) 🅰 *IW*
   *(recommended)*
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender).
   ECE283 Building Family and Community Partnerships (3) 🅰 *(Also fulfills Core Requirement)*
   **OR**
   EDU230 Cultural Values in Education (3) 🅰
   *(recommended)*
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness.
   *Select an AGEC course*

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 be used to satisfy more than one Special Awareness Requirements category.

## Core Requirements (16)
ECE105   Foundations of Early Childhood Education (3)
ECE216   Early Childhood Observation and Assessment (3)
ECE229   Early Childhood Practicum (4)
ECE276   Child Development (3) 🅰
         *(Fulfills Social and Behavioral Sciences AGEC Requirement)*
ECE278   Early Childhood Curriculum Development (3)
ECE283   Building Family and Community Partnerships (3) 🅰

*(Fulfills Special Awareness Requirement, Cultural Awareness)*

## Subject Options (9)
Based on your major and transfer pathway, consult an academic advisor in the ECE Department, review the specific AA degree requirements in the CAC catalog, and see the Transfer Guides at aztransfer.com/college/

Select additional courses to meet the degree's requirements.

## Other Requirements
Students must earn:
- a grade of C or better in each required course;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

## EARLY CHILDHOOD EDUCATION CERTIFICATE
### Total Credits: 21
**Formerly known as Early Childhood Education Preschool Certificate**
The Early Childhood Education Certificate prepares competent early childhood professionals for working with young children and families in early childhood settings. The certificate prepares students for entry level positions by providing opportunities to gain broad knowledge and practice application of skills.

## Core Requirements (21)
ECE105   Foundations of Early Childhood Education (3)
ECE110   Health, Safety, and Nutrition (3)
ECE116   Effective Interactions and Guidance (3)
ECE216   Early Childhood Observation and Assessment (3)
ECE271   Creating Early Childhood Environments (3)
ECE276   Child Development (3) 🅰
ECE283   Building Family and Community Partnerships (3) 🅰

Students must earn:
- a grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 21 semester credits.

# EARLY CHILDHOOD EDUCATION AAS

## Total Credits: 60-61

**Formerly known as Early Childhood Education Preschool AAS**

The Early Childhood Education AAS Degree prepares competent early childhood professionals for working with young children and families. Students are provided opportunities to gain specialized knowledge and implement best practices in early childhood settings.

The Early Childhood Education AAS Degree is accredited by the National Association for the Education of Young Children (NAEYC) Commission on the Accreditation of Early Childhood Education Higher Education Programs located at 1313 L Street NW, Suite 500, Washington, DC 20005-4101. 202-232-8777: *naeyc.org*

## General Education Requirements (22-23)

### Written Communications (3)
*Select one:*
ENG101    College Composition I (3)
ENG121    Applied Technical Writing (3)

### Oral Communications (3)
COM100   Fundamentals of Human
                    Communication (3)  or higher

*Students are encouraged to select coursework from more than one discipline for the **Arts and Humanities** and the **Social and Behavioral Sciences** categories.*

### Arts and Humanities (3)
*Select a course numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences  (6)
ECE276 Child Development (3)
             *(Also fulfills a Core Requirement)*
*Select another course numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

### Physical and Biological Sciences (4)
*Select a 4-credit course with lab numbered 100 or above.*

### Mathematics (3-4)
*Select one:*
BUS101    Business Mathematics (3)
MAT118    Essential Mathematics (4) or higher

## Core and Elective Requirements (25)
ECE105    Foundations of Early Childhood Education (3)
ECE110    Health, Safety, and Nutrition (3)
ECE116    Effective Interactions and Guidance (3)
ECE216    Early Childhood Observation and Assessment (3)
ECE229    Early Childhood Practicum (4)
ECE271    Creating Early Childhood Environments (3)
ECE276    Child Development (3)
                    *(Fulfills Social and Behavioral Requirement)*
ECE278    Early Childhood Curriculum Development (3)
ECE283    Building Family and Community
                    Partnerships (3)

## Elective Requirements (12-13)
Select Elective courses numbered 100 or above to complete the total number of credits required for this AAS degree.

*Recommended:*
ECE124   Active Learning in Math and Science (3)
ECE254   Emergent Language and Literacy (3)
ECE280  Inclusion of Children with Special Needs (3)

Based on your major, consult an academic advisor in the ECE Department, review the specific AAS degree requirements in the CAC catalog, and see the Transfer Guides at aztransfer.com/college.

## Other Requirements
Students must earn:
- a grade of C or better in all Core and Elective Requirements;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

# EARLY CHILDHOOD EDUCATION INFANT-TODDLER CERTIFICATE

## Total Credits: 24

The Early Childhood Education Infant Toddler Certificate prepares competent early childhood professionals for working with young children and families in early childhood settings. The certificate prepares students for entry level positions by providing opportunities to gain broad knowledge and practice application of skills.

## Core Requirements (24)
ECE105    Foundations of Early Childhood Education (3)
ECE110    Health, Safety, and Nutrition (3)
ECE116    Effective Interactions and Guidance (3)
ECE204    Infant and Early Childhood Mental Health (3)
ECE215    Infant and Toddler Observation and
                    Assessment (3)

ECE276     Child Development (3) [a]
ECE277     Responsive Curriculum and Environments for
           Infants and Toddlers (3)
ECE283     Building Family and Community
           Partnerships (3) [a]

## Other Requirements

Students must earn:

- a grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 24 semester credits.

# EARLY CHILDHOOD EDUCATION INFANT-TODDLER AAS

## Total Credits: 60-61

The Early Childhood Education Infant Toddler AAS Degree 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 (22-23)

### Written Communications (3)
*Select one:*
ENG101   College Composition I (3) [o][a]
ENG121   Applied Technical Writing (3)

### Oral Communications (3)
COM100  Fundamentals of Human
        Communication (3) [o][a] or higher

*Students are encouraged to select coursework from more than one discipline for the **Arts and Humanities** and the **Social and Behavioral Sciences** categories.*

### Arts and Humanities (3)
*Select a course numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (6)
ECE276     Child Development (3) [a]
*Select a course numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

### Physical and Biological Sciences (4)
*Select a 4-credit course with lab numbered 100 or above.*

### Mathematics (3-4)
*Select one:*
BUS101     Business Mathematics (3)
MAT118     Essential Mathematics (4) or higher

## Core and Elective Requirements (28)
ECE105     Foundations of Early Childhood Education (3)
ECE110     Health, Safety and Nutrition (3)
ECE116     Effective Interaction and Guidance (3)
ECE204     Infant and Early Childhood Mental Health (3)
ECE215     Infant and Toddler Observation and
           Assessment (3)
ECE229     Early Childhood Practicum (4)
ECE271     Creating Early Childhood Environments (3)
ECE276     Child Development (3) [a]
           (Also fulfills the Social and Behavioral
           Sciences requirement)
ECE277     Responsive Curriculum and Environments for
           Infants and Toddlers (3)
ECE283     Building Family and Community
           Partnerships (3) [a]

## Elective Requirements (10)

Select Elective courses numbered 100 or above to complete the total number of credits required for this AAS degree.

Based on your major and intended career path, consult an academic advisor in the ECE Department, review the specific AAS degree requirements in the CAC catalog, and see the Transfer Guides at aztransfer.com/college/ to select additional elective credits.

## Other Requirements

Students must earn:

- a grade of C or better in all Core and Elective Requirements;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

# EARLY CHILDHOOD EDUCATION PROFESSIONAL DEVELOPMENT CERTIFICATE*

## Total Credits: 12
## (CLOSED ENROLLMENT)

*This program is not eligible for federal financial aid (Pell Grant and/or direct loans).

The Early Childhood Education Professional Development Certificate prepares early childhood professionals for working with young children and families in early childhood settings. The certificate prepares high school students for entry level positions by providing opportunities to gain introductory knowledge and skills; it also provides for transition to college's ECE program for degree completion.

This is a closed enrollment program. Students must be enrolled in an approved high school program.

## Recommended Proficiencies

Although not required, these proficiencies would contribute to the student's success:
Entry level -
NAEYC Standards for Early Childhood Professional Preparation
CDA Subject Area Competencies
AZ Workforce Knowledge and Competencies
AZ Early Childhood CTE Standards
AZ CTE Examination

## Core Requirements (12)

ECE105    Foundations of Early Childhood Education (3)
ECE110    Health, Safety and Nutrition (3)
ECE116    Effective Interactions and Guidance (3)
ECE271    Creating Early Childhood Environments (3)

## Other Requirements

This is a closed enrollment program.

Students must earn:
- a grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 12 semester credits.

# ELEMENTARY EDUCATION AAEE
## Total Credits: 60

The Associate of Arts in Elementary Education (AAEE) 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.

## Recommended Proficiencies

College level English, math, and reading courses or placement test scores to demonstrate proficiency.

## AGEC-A (35-36 Credits)

The AGEC-A Certificate fulfills the lower division general education requirements of this Associate of Arts degree. The AGEC-A satisfies many liberal arts programs and other programs that articulate with the AA Degree. The AGEC-A requires a minimum of MAT141 College Mathematics, Standard🔘 or higher plus 32 credits from specific AGEC categories. The AGEC block transfers to any Arizona public or tribal community college and to the three Arizona public universities. AGEC courses are transferable to all three Arizona public universities provided students earn a grade of C or better. Select AGEC courses only and refer to the AGEC Courses List in the current CAC catalog or at aztransfer.com/generaleducation. Contact an academic advisor for assistance.

## General Education Requirements (36)

*Select the recommended AGEC course or an AGEC course from the equivalent AGEC category.*

## Written Communications (6)

ENG101    College Composition I (3) 🔘🅰
ENG102    College Composition II (3) 🔘🅰

## Oral Communications (3)

*Select an AGEC course.*

## Arts and Humanities (9)

LIT291    Children's Literature for Educators (3) 🅰*IW*
          *(recommended)*
*(Also fulfills AGEC Intensive Writing Requirement)*
          **AND**
*Select AGEC courses*

## Social and Behavioral Sciences (6)

HIS101    United States History I (3) 🔘🅰
*(Also fulfills AGEC Global Awareness Requirement)*
          **AND**

POS220      United States and Arizona Constitution (3) a
        (recommended)

*Note: POS220 is required to meet the Arizona State Department of Education United States Constitution and Arizona Government requirements for teaching certification.*

<div align="center">OR</div>

Any Social and Behavioral Sciences AGEC Course
*Core courses may not be used to fulfill Social and Behavioral Sciences General Education category.*

## Biological/Life Lab Sciences (4)
*Select one of the following AGEC Courses*

AGS101    World of Plants (4) a
AGS104    Agricultural Environmental Science (4) a
AGS106    Entomology (4) a
AGS221    Soil Science (4) a
AGS240    Plant Biology (4) a
BIO100    Biology Concepts (4) a
BIO156    Introductory Human Biology (4) a
BIO160    Introduction to Human Anatomy/Physiology (4) a
BIO181    General Biology I (4) a
BIO182    General Biology II (4) a
BIO201    Human Anatomy and Physiology I (4) a
BIO202    Human Anatomy and Physiology II (4) a
BIO205    Microbiology (4) a
NTR141    Nutrition and Wellness (4) a

## Physical Lab Sciences (4)
*Select one of the following AGEC Courses*

AST101    Survey of Astronomy (4) a
CHM130    Fundamental Chemistry (4) a
CHM151    General Chemistry I (4) a
CHM152    General Chemistry II (4) a
CHM235    General Organic Chemistry I (4) a
CHM236    General Organic Chemistry II (4) a
ENV101    Environmental Science (4) a
GLG101    Physical Geology (4) a
GLG102    Historical Geology (4) a
GLG110    Geological Hazards and Disasters (4) a
PHY111    College Physics I (4) a
PHY112    College Physics II (4) a
PHY121    University Physics I: Mechanics (4) a
PHY122    University Physics II: Electricity and Magnetism (4) a

## Mathematics (4-5 Credits)
*Select one*

MAT141    College Mathematics, Standard (4) a
MAT151    College Algebra, Standard (4) a
MAT182    Trigonometry with Algebra Review (4) a
MAT187    Pre-Calculus (5) a
MAT211    Brief Calculus, Standard (4) a
MAT215    Math for Business Analysis (4) a

MAT221    Analytical Geometry and Calculus I (4) a
MAT231    Analytical Geometry and Calculus II (4) a
MAT241    Analytical Geometry and Calculus III (4) a
MAT275    Modern Differentia Equations (4) a

## Subject Options (0-6)
Based on your major, review the specific AA Degree requirements in the CAC catalog, consult an academic advisor, and see the Transfer Guides at *aztransfer.com/college/*

## Special Awareness Requirements (0-9)
Fulfilled as indicated below:
1. Intensive Writing/Critical Inquiry (3)
   LIT291    Children's Literature for Educators (3) a *IW*
   *(Also fulfills AGEC Arts and Humanities Requirement)*
2. Cultural Awareness (Ethnic/Race/Gender) (3)
   EDU230    Cultural Values in Education (3) a
   *(Also fulfills Core Requirement)*
3. Global/International/Historical Awareness (3)
   HIS101    United States History I (3) a
   *(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, or Specialty Area, may also be used to satisfy the three (3) Special Awareness Requirements categories. A course may be used to satisfy more than one Special Awareness Requirements category.

## Core Requirements (24)
EDU221    Introduction to Education (3) a
EDU222    Introduction to Special Education (3) a
EDU230    Cultural Values in Education (3) a
 *(Also fulfills AGEC Cultural Awareness Requirement)*
EDU240    Structured English Immersion (SEI) (3) a
 *(Fulfills course requirement for SEI Endorsement on Arizona Teacher Certification)*
EDU271A The Science of Reading (Phonological Awareness, Phonics, Fluency, Vocabulary, Comprehension) (3)
EDU271B Structured Literacy: Investigating Instruction, Assessment, Intervention and Dyslexia (3)
MAT201    Math for Elementary Teachers I (3) a
MAT202    Math for Elementary Teachers II (3) a

## Optional (Recommended)
EDU225    Relationships in the Classroom (3)
EDU228    Behavior Management (3)

*Core courses may not be used to fulfill Social and Behavioral Sciences General Education category.*

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## 2022-2023 College Catalog   |   98

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Consult a CAC academic advisor and/or the director of the elementary education division for additional guidance and information.

## Other Requirements

Students must earn:

- a grade of C or better in each required course;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

# ELEMENTARY EDUCATION POST BACCALAUREATE PROGRAM EPP CERTIFICATE
## Total Credits: 39-45
### (CLOSED ENROLLMENT)
**(Educator Preparation Program (EPP) includes Teacher in Residence (TIR) and Traditional tracks)**

The Teacher in Residence (TIR) program provides students holding a baccalaureate degree in any content area to obtain an employment contract with a district and engage in the practice of classroom teacher under the auspice of the EPP program supervisor and school supervising practitioners. EPP students simultaneously complete EPP coursework in earning full and official state teacher certification. The post baccalaureate EPP Teacher in Residence Program is approved by the Arizona Department of Education and utilizes the Alternative Teaching Certificate (formally known as the Intern Teaching Certificate) affording employment and teacher placement in the classroom concurrently with coursework. Contracted teaching position must be in a general education K-8 classroom.

Students in the TIR program must provide proof of district employment as a contracted teacher, provide a current IVP fingerprint card and appropriate NES passing score documents for elementary education and the subject knowledge exam.

If teaching in an English Language Development (ELD) classroom, EPP students must complete and show proof of an ADE approved Structured English Immersion (SEI) workshop or course. For students needing to provide proof of completion of an SEI course to the employer, CAC offers an EDU240 Structured English Immersion during the first semester of EPP coursework. CAC's EDU240 Structured English Immersion course is on the ADE list of approved SEI coursework for teacher certification endorsement.

A Traditional pathway with traditional student teaching experience is available and includes the same coursework with intentional field internship experience of 90 hours over the duration of the program. In addition to the 90 hours practicum field experience a traditional 12-week student teaching placement experience is required during the last block of the program.

Upon completion of the post baccalaureate program the CAC EPP program supervisor will provide the candidate's name to the Arizona Department of Education (ADE) with an institutional recommendation for obtaining Arizona state teacher certification. Institutional recommendation does not automatically grant the candidate state teacher certification. The student must personally apply for teacher certification with ADE.

Pre-Program Requirements
1. Students must make application for entrance to the post-baccalaureate EPP elementary education program to include a personal interview with one of the EPP staff.
2. Applicants must hold a Baccalaureate degree from a regionally accredited institution.
3. Baccalaureate degree official transcripts are required for Formal Admission.
4. TIR applicants are required to hold an Arizona Department of Education Alternative Teaching Certificate. The employing district can guide the applicant through this procedure.
5. Completion of two letters of recommendation is submitted with the application.
6. All program participants must obtain an IVP Fingerprint clearance card through the Arizona Department of Public Safety per Arizona Revised Statue 15-106. Information can be obtained on the DPS website.
7. EDU courses must meet an overall GPA of 3.0 to move from semester to semester. Courses transferred into the post-baccalaureate elementary education program are included in this calculation.
8. Courses earning a grade of "D" or "F" must be retaken regardless of GPA.
9. Proof of employment verification from an approved school district, public, charter, or private school must accompany application materials.
10. Students will be required to pass the Arizona Educator Proficiency Exams (Elementary Education Subtest I, Elementary Education Subtest II, and Assessment of Professional Knowledge, Elementary) prior to engaging in the capstone student teaching experience and the granting of Institutional Recommendation.
11. All application information must be complete and accurate at the time of application to the program.

## Core Requirements (39-45)

EDU221 Introduction to Education (3) ⓐ
EDU222 Introduction to Special Education (3)
EDU228 Behavior Management (3)
EDU258 Educational Psychology EPP (3)
EDU271A The Science of Reading (Phonological Awareness, Phonics, Fluency, Vocabulary, Comprehension) (3)
EDU271B Structured Literacy: Investigating Instruction, Assessment, Intervention and Dyslexia (3)
EDU272 Elementary Math Methods Educator Preparation Program (EPP) (3)
EDU273 Science and Social Studies Methods Educator Preparation Program (EPP) (3)

### AND

EDU240 Structured English Immersion (3) ⓐ
*This is only required if teaching in an ELD classroom*
POS220 U.S. and Arizona Constitution (3)
*Student may test out through NES Testing Service and must show proof of passing score*

### AND

### For Teacher in Residence Track (15)

EDU287A Master Teacher Seminar Teacher in Residence Educator Preparation Program (EPP) (3)
EDU293A Teacher in Residence (TIR) Student Teaching Educator Preparation Program (EPP) (8)
EDU296A Teacher in Residence (TIR) Practicum/ Internship Educator Preparation Program (EPP) (2)
*(Must be taken two times for credit for a total of 4 credits.)*

### OR

### For Traditional Track (15)

EDU287B Master Teacher Seminar Traditional Educator Preparation Program (EPP) (3)
EDU293B Traditional Student Teaching Educator Preparation Program (EPP) (8)
EDU296B Traditional Practicum/Internship Educator Preparation Program (EPP) (2)
*(Must be taken two times for credit for a total of 4 credits.)*

## Other Requirements

This is a closed enrollment program.
Students must earn:
-a grade of a C or better in each required class;
-a cumulative grade point average (CGPA) of at least a 3.0 on a 4.0 scale for institutional recommendation;
-a minimum of 3 earned CAC credits numbered 100 or above;
-a minimum of 39 semester credits.

## INDUSTRIAL TECHNOLOGY & SKILLED TRADES

### AUTOMATED INDUSTRIAL TECHNOLOGY I CERTIFICATE
### Total Credits: 16

The Certificate of Completion (CCL) in Automated Industrial Technology I prepares students to troubleshoot, maintain, and repair a variety of automated electro-mechanical, product assembly, and product distribution systems that use other methodologies to accomplish system management. These systems include mechanical, hydraulic, pneumatic, electrical, and electronic devices. Through this certificate, graduates will gain the skills to define, install, and maintain complex production systems.

### Recommended Proficiencies

High school diploma or GED

### Core Requirements (16)

AIT100    Industrial Safety (1)
AIT105    Modern Maintenance Operations (3)
AIT110    Mechanical Power Transmission Systems (3)
AIT115    Hydraulic Systems (3)
AIT120    Pneumatic Systems (3)
AIT125    DC and AC Components and Circuits (3)

### Other Requirements

Students must earn:
- a grade of C or better in all required courses;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 16 semester credits.

### AUTOMATED INDUSTRIAL TECHNOLOGY II CERTIFICATE
### Total Credits: 16

The Certificate of Completion (CCL) in Automated Industrial Technology II prepares students to troubleshoot, maintain, and repair a variety of automated electro-mechanical, product assembly, process control, and product distribution systems that use programmable controls and other methodologies to accomplish system management. These systems include robotic, mechanical, hydraulic, pneumatic, electrical, and electronic devices. Through this certificate, graduates will gain the skills to define, integrate, install, program, and maintain complex control systems.

## Core Requirements (16)

| | | |
|---|---|---|
| AIT205 | Power Electronics and Variable Frequency Drives (3) | |
| AIT210 | Programmable Logic Controller Programming and Troubleshooting (3) | |
| AIT215 | Process Control Systems (4) | |
| AIT225 | Industrial Motors and Motor Control (3) | |
| AIT270 | Robotics I (3) | |

## Other Requirements

Students must earn:
- a grade of C or better in all required courses;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 16 semester credits.

# AUTOMATED INDUSTRIAL TECHNOLOGY AAS

## Total Credits: 61-65

The Associate in Applied Science (AAS) in Automated Industrial Technology prepares students to troubleshoot, maintain and repair a variety of automated electro-mechanical, product assembly, process control, and product distribution systems that use programmable controls and other methodologies to accomplish system management. These systems include robotic, mechanical, hydraulic, pneumatic, electrical, and electronic devices. Through this degree, graduates will gain the skills to define, integrate, install, program, and maintain complex control systems. Additionally, students will gain the communication, problem-solving and professional skills needed to be successful in this field. The Automated Industrial Technology courses are designed to prepare students for industry recognized certifications. Certificates of Completion (CCL) in Automated Industrial Technology I and II are also available.

## Recommended Proficiencies

Fundamental computer skills

## General Education Requirements (19-20)

## Written Communications (3)

*Select one:*
ENG101    College Composition I (3) 🔴🅰
ENG121    Applied Technical Writing (3)

## Oral Communications (3)

COM100    Fundamentals of Human Communication (3) 🔴🅰 or higher

## Arts and Humanities (3)

*Select a course numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

## Social and Behavioral Sciences (3)

*Select a course numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

## Physical and Biological Sciences (4)

*Select a 4-credit course with lab numbered 100 or above.*

## Mathematics (3-4)

MAT106    Technical Math I (3) or higher

## Core Requirements (35)

| | | |
|---|---|---|
| AIT100 | Industrial Safety (1) | |
| AIT105 | Modern Maintenance Operations (3) | |
| AIT110 | Mechanical Power Transmission Systems (3) | |
| AIT115 | Hydraulic Systems (3) | |
| AIT120 | Pneumatic Systems (3) | |
| AIT125 | DC and AC Components and Circuits (3) | |
| AIT205 | Power Electronics and Variable Frequency Drives (3) | |
| AIT210 | Programmable Logic Controller Programming and Troubleshooting (3) | |
| AIT215 | Process Control Systems (4) | |
| AIT225 | Industrial Motors and Motor Control (3) | |
| AIT270 | Robotics I (3) | |

AIT250 Automated Industrial Technology Capstone (3)
OR
AIT291 Automated Industrial Technology Internship (3)

## Core Electives (5-6)

Students should work with their program advisor to select 6 credits from courses that align with the academic/career goals and further their development in the areas of controls, mechanical tech, electrical/electronic, or power systems. Courses from required courses area may not be used.

Any AIT, ELC, MET, WLD courses except courses used to satisfy Core Requirements. Students may also choose courses from the following focus areas.

## Controls Emphasis

AIT220    Fanuc Operations and Programming (3)

AIT230    Robot Vision (3)
AIT275    Robotics II (3)
CIS105    Survey of Computer Information Systems (3)

### Mechanical Tech Emphasis

AIT130    Maintenance Piping (3)
DFT130    Advanced Computer Aided Drafting (CAD)
          Applications (1)
MET232    Solid Modeling Solidworks (3)
WLD121    Shielded Metal Arc Welding (3)
Any WLD course

### Electrical/Electronic Emphasis

Any ELC Course

Students must earn:
- a grade of C or better in all required courses;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 61 semester credits.

## COMMERCIAL ELECTRICIAN INSTALLER CERTIFICATE
## Total Credits: 18

The Commercial Electrician-Installer Certificate prepares individuals for an entry-level position in the commercial electrician field. The program focuses on fundamental knowledge attained in accordance with National Center for Construction Education and Research (NCCER) standards. Options within the certificate allow individuals to tailor their career pathway with additional skill sets. This certificate also offers the opportunity to obtain national certification from the NCCER.

### Core Requirements (18)

BCT100    NCCER Core (5)
BCT150    Industrial Safety and OSHA 30 (3)
ELC121    Electrical Level 1 (5)
ELC212    Electrical Level 2 (5)

### Other Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above,
- a minimum of 18 semester credits.

## WILSON ELECTRIC APPRENTICESHIP CERTIFICATE
## Total Credits: 40
## (CLOSED ENROLLMENT)

The Wilson Electric Apprenticeship Certificate is a Commercial Electrician apprenticeship training sponsored by Wilson Electric. All students must be registered apprentices in pursuit of journeyman standards and certification. The student must be sponsored by Wilson Electric to enroll in this program..

### Core Requirements (40)

BCT100 NCCER Core (5)
ELC121 Electrical Level 1 (5)
ELC212 Electrical Level 2 (5)
ELC213 Electrical Level 2 Apprenticeship 2B (5)
ELC224 Electrical Level 3 (5)
ELC225 Electrical Level 3 Apprenticeship 3B (5)
ELC226 Electrical Level 4 (5)
ELC227 Electrical Level 4 Apprenticeship 4B (5)

### Other Requirements

This is a closed enrollment program.

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above,
- a minimum of 40 semester credits.

## COMPUTER AIDED DRAFTING CERTIFICATE
## Total Credits: 25

The Computer Aided Drafting (CAD) Certificate offers preparation for entry-level positions in computer aided design and drafting.

### Core Requirements (12)

DFT127    Autocad I (3)
DFT128    Autocad II (3)
DFT131    Autocad III (3)

*Select one (3):*
COM100    Fundamentals of Human Communication (3)
ENG121    Applied Technical Writing (3)
ENG101    College Composition I (3)

### Electives (13)

*Select 13 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**
MAT106  Technical Math I (3) or higher

### Other Requirements

Students must earn:

- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 25 semester credits.

## DIESEL TECHNOLOGY II CERTIFICATE

## Total Credits: 46

The Diesel Technology II Certificate prepares students for employment as diesel 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 Technology II Certificate is accredited by the Associated Equipment Distributors Foundation (AEDF) located at 600 22nd Street Suite 220 Oak Brook, IL 60523; 630-574-0650; *aedfoundation.org/*

### Prerequisites

Students must be admitted to DIE TECH Cohort; current and valid driver license; or instructor consent.

### Core Requirements (46)

DIE116 Introduction to Diesel Technology (3)
DIE118 Computer Systems for Equipment Technicians (3)
DIE132 Diesel Engines and Fuel Systems (8)
DIE133 Diesel Power Trains (8)
DIE215 Diesel Electrical/Electronic Systems (8)
DIE216 Diesel Hydraulic Systems (8)
DIE222 Mobile Refrigeration (3)

*Select one*:
HEO100  Introduction to Heavy Equipment Operations (5)
HEO121  Heavy Equipment Operations Core (5)

### Other Requirements

Students must earn:

- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 46 semester credits.

## DIESEL TECHNOLOGY AAS

**Formerly known as Diesel and Heavy Equipment Technology AAS**

## Total Credits: 65-66

The Diesel Technology AAS Degree prepares students for employment as diesel 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 Technology Degree is accredited by the Associated Equipment Distributors Foundation (AEDF) located at 600 22nd Street Suite 220 Oak Brook, IL 60523; 630-574-0650;
*aedfoundation.org/*

### Prerequisites

Students must be admitted to DIE TECH cohort and hold current and valid driver license, or instructor consent.

### General Education Requirements (19)

### Written Communications (3)

*Select one:*
ENG101    College Composition I (3)
ENG121    Applied Technical Writing (3)

### Oral Communications (3)

*Select an AGEC course.*

### Arts and Humanities (3)

*Select a course numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course rom the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)

*Select a course numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

## 2022-2023 College Catalog | 103

## 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 one:*
BUS101    Business Mathematics (3)
MAT106    Technical Math I (3)
MAT118    Essential Mathematics (4) or higher

## Core Requirements (46)

DIE116    Introduction to Diesel Technology (3)
DIE118    Computer Systems for Equipment
              Technicians (3)
DIE132    Diesel Engines & Fuel Systems (8)
DIE133    Diesel Power Trains (8)
DIE215    Diesel Electrical/Electronic Systems (8)
DIE216    Diesel Hydraulic Systems (8)
DIE222    Mobile Refrigeration (3)

*Select one*:
HEO100  Introduction to Heavy Equipment Operations (5)
HEO121  Heavy Equipment Operations Core (5)

## Other Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 65 semester credits.

## CAREER AND TECHNICAL EDUCATION HEAVY EQUIPMENT OPERATOR CERTIFICATE
## Total Credits: 20
## (CLOSED ENROLLMENT)

This certificate prepares individuals for an entry-level position in the residential/commercial construction field. The program focuses on fundamental knowledge attained in accordance with National Center for Construction Education and Research (NCCER) standards. Options within the certificate allow individuals to tailor their career pathway with additional skill sets. This certificate also offers the opportunity to obtain national certification from the NCCER.

This is a closed enrollment program. Students must be enrolled in an approved high school program.

## Core Requirements (20)

HEO121 Heavy Equipment Operations Core (5)
HEO122 Heavy Equipment Operations I (5)
HEO127 Heavy Equipment Reconditioning (5)
HEO128 Diesel Equipment Service and Repair (5)

## Other Requirements

This is a closed enrollment program.

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 20 semester credits.

## HEAVY EQUIPMENT OPERATOR LEVEL I CERTIFICATE
## Total Credits: 16-18

The Heavy Equipment Operator Level I Certificate focuses on the operation, maintenance, and service of heavy equipment. This certificate covers NCCER core curriculum and general maintenance of heavy equipment.

## Core Requirements (16-18)

*Select one:*
CET125    Introduction to Earthmoving Methods and
              Operations (3)
CET221    Basic Surveying and Grade Staking (4)

*Select one:*
HEO121    Heavy Equipment Operations Core (5)
HEO122    Heavy Equipment Operations I (5)

*Select one:*
HEO127    Heavy Equipment Reconditioning (5)
HEO128    Diesel Equipment Service and Repair (5)

*Select one:*
BUS101    Business Mathematics (3)
MAT106    Technical Math I (3)
MAT118    Essential Mathematics (4) or higher

## Other Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 16 semester credits.

# HEAVY EQUIPMENT OPERATOR LEVEL II CERTIFICATE

## Total Credits: 30

The Heavy Equipment Operator Level II 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 Level II Certificate is accredited by the National Center for Construction Education and Research (NCCER), 13614 Progress Boulevard, Alachua, FL 32615; 888-622-3720; *nccer.org*

## Core Requirements (27)

CET125    Introduction to Earthmoving Methods and Operations (3)
CET221    Basic Surveying and Grade Staking (4)
HEO121   Heavy Equipment Operations Core (5)
HEO122   Heavy Equipment Operations I (5)
HEO127   Heavy Equipment Reconditioning (5)
HEO128   Diesel Equipment Service and Repair (5)

## Elective Requirement (3)

Select any AGEC course 100 level or above (3)

## Other CAC Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 30 semester credits.

# HEAVY EQUIPMENT OPERATOR AAS

## Total Credits: 60

The Heavy Equipment Operator AAS 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; *nccer.org*

## General Education Requirements (19-20)

### Written Communications (3)

*Select one:*
ENG101    College Composition I (3)
ENG121    Applied Technical Writing (3)

### Oral Communications (3)

COM100   Fundamentals of Human Communication (3) or higher

### Arts and Humanities (3)

*Select courses numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)

*Select courses numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences category.*

### Physical and Biological Sciences (4)

*Select one:*
AGS221    Soil Science (4)
GLG        Any Geology course (4)

### Mathematics (3-4)

*Select one:*
BUS101    Business Mathematics (3)
MAT106   Technical Math I (3)
MAT118   Essential Mathematics (4) or higher

### Core Requirements (37)

CET125    Introduction to Earthmoving Methods and Operations (3)
CET221    Basic Surveying and Grade Staking (4)
HEO121   Heavy Equipment Operations Core (5)
HEO122   Heavy Equipment Operations I (5)
HEO127   Heavy Equipment Reconditioning (5)
HEO128   Diesel Equipment Service and Repair (5)
HEO221   Heavy Equipment Operations II (5)
HEO222   Heavy Equipment Operations III (5)

### Elective Requirements (4)

*Select from the following courses*
BUS        Any Business course (3)
COM202   Small Group Communication (3)
DIE196    Diesel Equipment Technology and HEO Internship I (3)
DIE222    Mobile Refrigeration (3)
DIE296    Diesel Equipment Technology and HEO Internship II (3)
HEO100   Introduction to Heavy Equipment (5)

*This catalog was prepared on the basis of the best information available at the time of publication. Catalog information is subject to changes without notice, obligation or liability.*

WLD        Any Welding course (3)

**AND**

AGB124 Microcomputers in Agriculture (3)
**OR**
CIS120 Survey of Computer Information Systems (3)
*(Recommended for students transferring to NAU)*

## Other Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

## INDUSTRIAL CARPENTRY CERTIFICATE
## Total Credits: 16

The Industrial Carpentry Certificate prepares individuals for an entry-level position in the construction carpentry field. The program focuses on fundamental knowledge attained in accordance to NCCER standards. Options within the certificate allow individuals to tailor his or her career pathway with additional skill sets. This certificate is upward compatible with a stackable certificate in advanced industrial construction or advanced concrete carpentry.

## Core Requirements (16)

BCT100     NCCER Core (5)
BCT121     Industrial Carpentry (5)
BCT180     Communication for the Trades (3)
HEO130      Rigging, Trenching, and Foundations (3)

## Other Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 16 semester credits.

## ADVANCED INDUSTRIAL CARPENTRY CERTIFICATE
## Total Credits: 32

The Advanced Industrial Carpentry Certificate prepares individuals for an advanced entry position in the construction carpentry field. The program focuses on advancing knowledge attained in accordance to NCCER

standards. Options within the certificate allow individuals to tailor his or her career pathway with additional skill sets. This certificate is the second stackable certificate in industrial construction carpentry.

## Core Requirements (32)

BCT100     NCCER Core (5)
BCT121     Industrial Carpentry (5)
BCT141     Industrial Concrete (5)
BCT150     Industrial Safety and OSHA 30 (3)
BCT180     Communication for the Trades (3)
BCT221     Advanced Industrial Carpentry (5)
HEO130     Rigging, Trenching, and Foundations (3)
MAT106     Technical Math I (3)

## Other Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 32 semester credits.

## CAREER AND TECHNICAL EDUCATION WELDING CERTIFICATE
## Total Credits: 14

### (CLOSED ENROLLMENT)
*This program is not eligible for federal financial aid (Pell Grant and/or direct loans).

The Career and Technical Education Welding Certificate prepares students for additional Welding Program certificates and degrees during their high school junior and senior years, while also preparing students for employment as an entry level welder with an array of career opportunities within the industry. Topics include: survey of welding processes, Welding NCCER Core, Gas Metal Arc Welding, Thermal Cutting Processes, and use of engine driven welding machines used in the construction industry. A typical graduate seeks employment in mining, steel fabrication, and steel erection industries. After completion of this certificate, students may continue on to the Structural or Pipe Welding Technology AAS.

This is a  closed enrollment program. Students must be enrolled in an approved high school program.

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## Core Requirements (14)
WLD110 Survey of Welding Processes (3)
WLD115 Welding NCCER Core (5)
WLD120 Thermal Cutting Processes (3)
WLD222 Gas Metal Arc Welding (3)

## Other Requirements
This is a closed enrollment program.

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 14 semester credits.

# FUNDAMENTALS OF PIPE WELDING CERTIFICATE
## Total Credits: 16

The Fundamentals of Pipe Welding Certificate prepares students for employment as an entry level welder and welder/pipefitter helper. After completion of this certificate, students may continue on to pursue the Pipe Welding/Pipefitting Certificate or the Pipefitting/Pipe Welding Technology AAS Degree.

## Arts and Humanities (3)
ART103    Beginning Jewelry and Metalwork (3) 🅰
            *(recommended)*
*Or select a course numbered 100 or above from the following: ART, HLC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

## Mathematics (3)
MAT106   Technical Math I (3)

## Core Requirements (10)
WLD115    Welding NCCER Core (5)
WLD125    Pipe Welding I (5)

## Other Requirements
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 16 semester credits.

# PIPEFITTING/PIPE WELDING CERTIFICATE
## Total Credits: 17

The Pipefitting/Pipe Welding Certificate prepares students for employment as an entry level pipe welder/fitter with an array of career opportunities within the industry. Topics include pipefitting techniques and tools as well as welding processes for shielded metal arc welding, gas metal arc welding, gas tungsten arc welding, pipe fabrication, and trade math. A typical graduate seeks employment in power generation, cross-country pipeline, pressure vessel fabrication, process piping, and related maintenance and construction industries. After completion of this certificate, students may continue on towards an AAS in Pipefitting/Pipe Welding Technology.

## Social and Behavioral Sciences (3)
PEH101    Personal Health (3) *(recommended)*
Or
select a course numbered 100 or above from the following: ASB, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.

## Core Requirements (14)
WLD128   Introduction to Structural Drawings
            and CAD (4)
WLD143   Pipefitting I (5)
WLD243   Pipefitting II (5)

## Other Requirements
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- at minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 17 semester credits.

# PIPEFITTING/PIPE WELDING TECHNOLOGY AAS
## Total Credits: 61

The Pipefitting/Pipe Welding AAS prepares students for employment as a pipe welder/fitter with an array of career opportunities within the industry. Topics include advanced pipefitting, specialty tools as well as welding processes of shielded metal arc welding, gas metal arc welding, gas tungsten arc welding, pipe fabrication, and trade math. A typical graduate seeks employment in power generation, cross-country pipeline, pressure vessel fabrication, process

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piping, and related maintenance and construction industries.

## General Education Requirements (19)

### Written Communications (3)
*Select one:*
ENG101    College Composition I (3) 🟠🅰
ENG121    Applied Technical Writing (3)

### Oral Communications (3)
Select one:
COM259    Professional Communication (3)🅰
            *(recommended)*
Any COM course number 100 or above (3)

### Arts and Humanities (3)
ART103    Beginning Jewelry and Metalwork (3) 🅰
            *(recommended)*

OR

*Select courses numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)
PEH101    Personal Health (3) *(recommended)*
OR
*Select courses numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

### Physical and Biological Sciences (4)
Select one:
AGS221    Soil Science (4) 🅰 *(recommended)*
AGS240    Plant Biology (4) 🅰 *(recommended)*
Select a 4-credit course with lab numbered 100 or above.

### Mathematics (3)
MAT106    Technical Math I (3) *(recommended)* or higher

### Core and Elective Requirements (42)
WLD115    Welding NCCER Core (5)
WLD125    Pipe Welding I (5)
WLD128    Introduction to Structural Drawings
            and CAD (4)
WLD143    Pipefitting I (5)
WLD243    Pipefitting II (5)
WLD246    Pipefitting III (5)
WLD247    Pipefitting IV (5)
WLD255    Advanced Pipe Welding II (8)

## Other Requirements
Students must earn:
- a grade of C or better in all required courses;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 61 semester credits.

## FUNDAMENTALS OF STRUCTURAL WELDING CERTIFICATE
## Total Credits: 16
The Fundamentals of Structural Welding Certificate prepares students for employment as an entry level welder and welder helper. Topics include such welding skills as Flux Cored Arc Welding, Shielded Metal Arc Welding, Gas Metal Arc Welding, industrial safety, thermal cutting processes, interpretation of structural drawings, and introduction to fabrication. A typical graduate seeks employment in mining, steel fabrication, steel erection, and manufacturing industries. After completion of this certificate, students may continue on to an Advanced Structural Welding and Fabrication Certificate, or an AAS in Structural Welding Technology.

### Core Requirements (16)
MAT106    Technical Math I (3) *(recommended)* or higher
WLD118    Physical Characteristics and Mechanical
            Properties of Metals (1)
WLD130    Intro to Flux Cored Arc Welding
            and Fabrication (6)
WLD230    Advanced Flux Cored Arc Welding (6)

### Other Requirements
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 16 semester credits.

## ADVANCED STRUCTURAL WELDING AND FABRICATION CERTIFICATE
## Total Credits: 16
The Advanced Structural Welding and Fabrication Certificate prepares students for employment as an entry level welder/fabricator with an array of career opportunities within the industry. Topics include: quality control; reading detail drawings and CAD; thermal cutting processes; Flux Cored Arc Welding with gas (FCAW-G);

Flux Cored Arc Welding without gas (FCAW-S); using engine driven welding machines with portable semi-automatic wire feeders. Students will learn structural fabrication, thermal cutting processes, and Shielded Metal Arc Welding. A typical graduate seeks employment in mining, steel fabrication, and steel erection industries. After completion of this certificate, students may continue on to the Structural Welding Technology AAS.

## Core Requirements (16)

WLD128    Introduction to Structural Drawings and CAD (4)
WLD129    Intro to Shielded Metal Arc Welding and Thermal Cutting Processes (6)
WLD229    Advanced Shielded Metal Arc Welding (6)

## Other Requirements

Students must earn:

- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 16 semester credits.

# STRUCTURAL WELDING TECHNOLOGY AAS
## Total Credits: 63-64

The Structural Welding Degree prepares students for employment as a welder/fabricator with an array of career opportunities within the industry. Topics include Shielded Metal Arc Welding, Flux Cored Arc Welding, Gas Tungsten Arc Welding, Gas Metal Arc Welding, welding design and fabrication, detail drawing and CAD skills. A typical graduate finds employment in mining, steel fabrication, steel erection, aerospace, manufacturing and other industries.

## General Education Requirements (19-20)

### Written Communications (3)

*Select one:*
ENG101    College Composition I (3) 🅐🅐
         *(recommended)*
ENG121    Applied Technical Writing (3)

### Oral Communications (3)

*Select one:*
COM100    Fundamentals of Human Communication (3) 🅐🅐 or higher
COM259    Professional Communication (3)🅐
         *(recommended)*

### Arts and Humanities (3)

*Select one*
ART103    Beginning Jewelry and Metalwork (3) 🅐
         *(recommended)*
*Select courses numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)

*Select one*
PEH101    Personal Health (3) *(recommended)*
*Select courses numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

### Physical and Biological Sciences (4)

AGS221    Soil Science (4) 🅐 *(recommended)*
AGS240    Plant Biology (4) 🅐 *(recommended)*
*Select a 4-credit course with lab numbered 100 or above.*

### Mathematics (3-4)

*Select one:*
MAT106    Technical Math I (3) *(recommended)* or higher

## Core and Elective Requirements (44)

WLD130    Intro to Flux Cored Arc Welding and Fabrication (6)
WLD230    Advanced Flux Cored Arc Welding (6)
WLD129    Intro to Shielded Metal Arc Welding and Thermal Cutting Processes (6)
WLD229    Advanced Shielded Metal Arc Welding (6)
WLD110    Survey of Welding Processes (3)
WLD118    Physical Characteristics and Mechanical Properties of Metals (1)
WLD128    Introduction to Structural Drawings and CAD (4)
WLD221    Gas Tungsten Arc Welding (3)
WLD222    Gas Metal Arc Welding (3)
WLD228    Welding Inspection Technology (3)
IRW130    Structural Steel Erection I (3)

## Other Requirements

Students must earn:

- a grade of C or better in all required courses;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 63 credits.

# SUNDT CONSTRUCTION OPERATOR'S APPRENTICESHIP CERTIFICATE
## Total Credits: 29
## (CLOSED ENROLLMENT)

The SUNDT Construction Operator's Apprenticeship Certificate is a heavy equipment operator's apprenticeship training sponsored by SUNDT Construction for operation of heavy equipment to journeyman standards and certified plus training. The student must be sponsored by SUNDT Construction to enroll in this program.

## Prerequisites
Students must be sponsored by SUNDT Construction.

## Core Requirements (29)
HEO121 Heavy Equipment Operations Core (5)
HEO122 Heavy Equipment Operations I (5)
HEO221 Heavy Equipment Operations II (5)
HEO222 Heavy Equipment Operations III (5)
HEO225 Preventive Maintenance (2)
CET125 Introduction to Earthmoving Methods and Operations (3)
CET221 Basic Surveying and Grade Staking (4)

## Other Requirements
This is a closed enrollment program.

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 29 semester credits.

# NURSING, HEALTH & EMERGENCY CAREERS

# PHLEBOTOMY CERTIFICATE
## Total Credits: 6
*This program is not eligible for federal financial aid (Pell Grant and/or direct loans).

Preparation of competent entry-level clinical laboratory assistants who 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;

## Pre-Program Requirements
Students must apply for admission to the Phlebotomy Certificate portion of the CLA program with the Professor of Clinical Lab.

Current First Aid card and Healthcare Provider level CPR (AHA or ASHI) card are required during practicums and must be taken prior to the first term practicum. All Phlebotomy students will be required to complete a criminal history background, provide proof of immunization, and take a drug test.

## Core Requirements (6)
CLA155 Introduction to Phlebotomy (3)
CLA255 Phlebotomy Practicum (3)

## Other Requirements
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a grade of C or better in each required course;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 6 semester credits.

# CLINICAL LABORATORY ASSISTANT CERTIFICATE
## Total Credits: 28

Prepares competent entry-level clinical laboratory assistants who 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;
- Students must apply for admission to the Clinical Laboratory Assistant Certificate (CLA) program.
- Set up a meeting with the Program Director before the first course.

## Core Requirements (28)
BIO181    General Biology I (4)
BIO205    Microbiology (4)
CIS120    Survey of Computer Information Systems(3)
CLA155    Introduction to Phlebotomy (3)
CLA255    Phlebotomy Practicum (3)
CLA169    Clinical Laboratory Assistant Basics I (4)
CLA170    Clinical Laboratory Assistant Basics II (4)
CLA175    Clinical Laboratory Assistant Practicum (3)

## Other Requirements
All certificate courses must be successfully completed with a grade of C or better before enrolling in CLA175.

Current First Aid card and Healthcare Provider level CPR (AHA or ASHI) card are required during practicums and must be taken prior to the first term practicum. All CLA students will be required to complete a criminal history background, provide proof of immunization, and take a drug test.

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a grade of C or better in each required course;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 28 semester credits.

## COMMUNITY HEALTH WORKER CERTIFICATE
### Total Credits: 18
### (CLOSED ENROLLMENT)

The Community Health Worker Certificate provides the opportunity for individuals to develop skills as a frontline public health worker who is a trusted member of and/or has a close understanding of the community they serve. This relationship enables the CHW to serve as a liaison between health services and the community. A CHW builds health understanding and self-sufficiency in individuals within the community through a range of activities such as: outreach, community education, informal counseling, social support and advocacy. Prerequisites: Acceptance into the program required; recommend HS diploma or GED.

## Recommended Proficiencies
Good communication and written skills. Willingness to help individuals and communities in a variety of areas of public health, including but not limited to: disease

prevention, wellness and chronic disease management. HS diploma or GED recommended.

## Prerequisites
Acceptance into the program required.

## Program Requirements
Students must live in the State of Arizona and must complete a 90 hour internship. Prior to beginning CPH196, students must submit to a background check, drug screen, TB skin test and have up to date immunizations. These will be completed at the student's expense.

## Core Requirements (18)
CPH160    Introduction to Community Health Worker (3)
CPH178    Personal Health and Community Wellness (3)
CPH180    Chronic Disease Management (3)
CPH185    Health Communication (3)
CPH196    Community Health Worker Internship (2)
CPH200    Community and Public Health (3)
HCC103    Introduction to Medical Terminology (1)

## Other Requirements
This is a closed enrollment program.

Students must earn:
- a grade of C or better in each required course;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 18 semester credits.

## DRIVER OPERATOR CERTIFICATE*
### Total Credits: 8
*This program is not eligible for federal financial aid (Pell Grant and/or direct loans).

The Fire Service Driver Operations Certificate 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. 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 testing for certification

### Prerequisites
EMS125    Emergency Medical Technician (9)
FSC129    Hazardous Materials Awareness/Operations (2)
FSC140    Firefighter I and II (11)
Complete the above or Program Director consent.

### Core Requirements (8)
FSC111    Driver Operator (2)
FSC117    Apparatus/Equipment (3)
FSC118    Hydraulics (3)

### Other Requirements
Students must earn:
- a grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 8 semester credits.

## FIRE OFFICER I CERTIFICATE
### 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 Consult your 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 (9)
FSC129    Hazardous Materials Awareness/ Operations (2)
FSC140    Firefighter I and II (11)
FSC255    Fire Instructor I (3)
*Complete the above or seek Program Director consent.*

### Core Requirements (18)
FSC108    Fundamentals of Fire Prevention (3)
FSC119    Fire Service Ethics (3)
FSC204    Firefighter Tactics and Strategy (3)
FSC206    Health and Safety Officer (3)
FSC208    Building Construction for the Fire Service (3)

FSC220    Fire Officer Leadership (3)

### Other Requirements.
Students must earn:
- a grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 18 semester credits.

## FIREFIGHTER OPERATIONS CERTIFICATE
### Total Credits: 17
The Firefighter Operations Certificate 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.

Upon successful completion of the fire academy (FSC140), students sit for the State proctored written and practical skills examinations; successful students will be awarded State of Arizona certification through the Arizona Center for Fire Service Excellence Fire Service Accreditation.

### 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
*All the following must be earned with a grade of C or better:*
EMS125    Emergency Medical Technician (9)
FSC129    Hazardous Materials Awareness/ Operations (2)
FSC134    Fitness and Conditioning for Firefighters (3)
*Complete the above or seek Program Director consent.*

### Core Requirements (17)
FSC106    Introduction to Emergency Services (3)
FSC140    Firefighter I & II (11)
FSC180    Wildland Fire, Module I (3)

## Other Requirements

Students must earn:
- a grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 17 semester credits.

# WILDLAND FIREFIGHTER I CERTIFICATE*

## Total Credits: 13

*This program is not eligible for federal financial aid (Pell Grant and/or direct loans).

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 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 Awareness/Operations (2)
FSC180    Wildland Fire, Module 1 (3)
*Complete the above or seek 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    NWCG L-280 Followership to Leadership (1)
FSC203    Fire Operations in the Wildland/Urban Interface (S-215) (2)

## Other Requirements

Students must earn:
- a grade of C or better in each required course including the prerequisites;

- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 13 semester credits.

# FIRE SCIENCE TECHNOLOGY AAS

## Total Credits: 62-63

The Fire Science Technology AAS Degree offers advanced training for professional firefighters, including practical firefighting, hazardous materials, related operations, history and theory and fire service management.

## Prerequisite

EMS125    Emergency Medical Technician (9) or equivalent, IEMT or Paramedic or Director Approval

## General Education Requirements (19-20)

### Written Communications (3)
*Select one:*
ENG101    College Composition I (3)
ENG121    Applied Technical Writing (3)
          *(recommended)*

### Oral Communications (3)
*Select one:*
COM100    Fundamentals of Human Communication (3) or higher
COM206    Public Speaking (3) *(recommended)*

### Arts and Humanities (3)
*Select courses numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)
*Select one:*
SOC101    Introduction to Sociology (3)
          *(recommended)*
*Or select courses numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

### Physical and Biological Sciences (4)
*Select a 4-credit course with lab numbered 100 or above.*

### Mathematics (3-4)
*Select one:*
BUS101    Business Mathematics (3)

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MAT118  Essential Mathematics (4) or higher

## Core and Elective Requirements (43)

FSC106    Introduction to Emergency Services (3)
FSC108    Fundamentals of Fire Prevention (3)
FSC109    Fire Protection Systems (3)
FSC110    Firefighter Safety and Survival (3)
FSC117    Fire Apparatus and Equipment (3)
FSC129    Hazardous Materials Awareness/Operations (2)
FSC134    Fitness Conditioning for Firefighters (3)
FSC140    Firefighter I & II (11)
FSC180    Wildland Fire, Module I (3)
FSC208    Building Construction for the Fire Service (3)

*Select two elective courses (6) from the following list:*
FSC119    Fire Service Ethics (3)
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

Requirements for EMS125 Basic EMT, EMS208 AEMT and EMS272 Paramedic are regulated by the Arizona Department of Health Services and are not negotiable.

Some courses require:
- State of Arizona, (AZCFSE) Certification(s) State of Arizona Fire Marshal Certification(s)
- State of Arizona Department of Health Services Certification(s)
- American Heart, Red Cross, or other certifying agency course completion in CPR
- IFSAC (International Fire Service Accreditation Congress) certification

Students must earn:
- a grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above.;
- a minimum of 62 semester credits.

## HEALTH INFORMATION MANAGEMENT AAS
### Total Credits: 64-65

The Health Information Management (HIM) AAS Degree prepares students with the knowledge and technical skills necessary for managing and improving the quality of information within the healthcare delivery system with an emphasis on Data Management or Revenue Management.

The degree focal points are the American Health Information Management Association (AHIMA) entry-level competencies.

The Health Information Management Degree is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM); graduates from this program are eligible to sit for the Registered Health Information Technician (RHIT) credentialing exam.

## Prerequisites

High School Diploma or GED; BIO181; CIS120

## Admission Requirements

In addition to the CAC admission requirements, applicants must meet the current requirements established by the HIM department. These requirements include, but are not limited to:

1. Competence in English, math, and reading
2. Competence in BIO181 with a final grade of C or higher within five years of application to the HIM program
3. Completion of CIS120 within three years of application to the HIM program
4. Eligibility to register for MAT118
5. Eligibility to register for ENG101
6. Completion of an HIM program application indicating desired emphasis of Data Management or Revenue Management
7. Completion of HIM information session with HIM program director

## General Education Requirements (23-24)

### Written Communications (3)
ENG101    College Composition I (3)

### Oral Communications (3)
COM100  Fundamentals of Human Communication (3) or higher
COM259  Professional Communication (3) *(recommended)*

### Arts and Humanities (3)
*Select one:*
PHI101   Introduction to Philosophy (3) *IW (recommended)*

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*Or select a course numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

## Social and Behavioral Sciences (3)
*Select one:*
PSY101   Introduction to Psychology (3) 🟠🟩
       *(recommended)*
*Or select a course numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

## Physical and Biological Sciences (8)
BIO201   Human Anatomy and Physiology I (4) 🟠🟩
AND
BIO202   Human Anatomy and Physiology II (4) 🟠🟩

## Mathematics (3-4)
MAT118   Essential Mathematics (4) or higher

## Core Requirements (41)
Completion of HIM courses requirements within three (3) years of acceptance into the HIM program required

HCC116   Medical Terminology (3)
HCC174   Pathopharmacology for Health Occupations (5)
HIM115   Health Information Management I (2)
HIM117   Health Information Management II (3)
HIM121   Legal Aspects of Health Information (3)
HIM138   ICD Coding (3)
HIM158   CPT Coding (3)
HIM160   Health Data Management (2)
HIM200   Introduction to Revenue Cycle Management (2)
HIM205   Healthcare Statistics and Research (2)
HIM210   Leadership, Supervision and Quality (3)
HIM215   Health Information Systems (3)

HIM220   Advanced Revenue Management (3)
      **OR**
HIM230   Advanced Data Management (3)

HIM296   Health Information Management Practicum (4)

## Other Requirements
Students must earn:
- a grade of C or better in all required courses;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 64 semester credits.

# MASSAGE THERAPY CERTIFICATE
## 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.

Central Arizona College requires all students on an international visa to complete the TOEFL (Test of English as a Foreign Language) with a score of 450 paper test or 133 computer test (see Admission of International Students in College Catalog). The Arizona Board of Massage Therapy additionally requires all students whose first language is not English to also pass a TOEFL test as a part of the licensure process. Please consult with the Massage Therapy Program Director for questions and assistance with this process prior to enrolling in the program.

## Prerequisites
RDG100 College Reading or equivalent reading
      assessment test score

## Pre-Program Requirements:
Apply for admission to the certificate program with the Massage Therapy Program Director before enrolling in the specialty requirements.

## Core Requirements (39-43)
BIO160   Introduction to Human Anatomy and
      Physiology (4) 🟩
      **OR**
BIO201   Human Anatomy and Physiology I (4) 🟠🟩
      **AND**
BIO202   Human Anatomy and Physiology II (4) 🟠🟩

LMT136   Business Skills for Massage Therapy (3)
LMT150   Chiropractic Assistant Training (2)
LMT151   Study of Acupuncture for Healthcare
      Professionals (1)
LMT152   Physical Modalities for the Chiropractic
      Assistant (1)
LMT154   Complementary and Alternative Medicine (3)
LMT160   Applied Anatomy for Massage Therapy (3)
HCC173   Pathophysiology (3)
LMT175   Practicum – Massage Therapy, Relaxation
      Massage (1)
LMT176   Practicum – Massage Therapy, Therapeutic
      Massage (1)

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LMT177  Practicum – Massage Therapy for Special
        Populations (1)
LMT178  Practicum – Massage Therapy, Spa Treatments
        and Hydrotherapy (1)
LMT180  Therapeutic Massage I (3)
LMT181  Therapeutic Massage II (3)
LMT280  Therapeutic Massage III (3)
LMT281  Therapeutic Massage IV (3)
LMT282  Therapeutic Massage V (3)

## 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 each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 39 semester credits.

# MASSAGE THERAPY AAS
## Total Credits: 60-65

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.

Central Arizona College requires all students on an international visa to complete the TOEFL (Test of English as a Foreign Language) with a score of 450 paper test or 133 computer test (see Admission of International Students in College Catalog). The Arizona Board of Massage Therapy additionally requires all students whose first language is not English to also pass a TOEFL test as a part of the licensure process.  Please consult with the Massage Therapy Program Director for questions and assistance with this process prior to enrolling in the program.

## Prerequisites
High School Diploma or GED; RDG100 College Reading

## Pre-Program Requirements
Students must apply for admission to the degree program with the Massage Therapy Director before enrolling in the degree specialty requirements.

## General Education Requirements (19-24)

### Written Communications (3)
*Select one:*
ENG101  College Composition I (3)
ENG121  Applied Technical Writing (3)

### Oral Communications (3)
*Select one:*
COM100  Fundamentals of Human Communication (3)
        or higher

### Arts and Humanities (3)
*Select a course numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)
PSY101  Introduction to Psychology (3)
*Or select a course numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

### Physical and Biological Sciences (4)
BIO160  Introduction to Human Anatomy and Physiology (4)
        **OR**
BIO201  Human Anatomy and Physiology I (4)
        **AND**
BIO202  Human Anatomy and Physiology II (4)

### Mathematics (3-4)
*Select one:*
BUS101  Business Mathematics (3)
MAT118  Essential Mathematics (4) or higher

### Core and Elective Requirements (41)
HCC100  Introduction to Health Care (3)
HCC116  Medical Terminology (3)
HCC173  Pathophysiology (3)
LMT136  Business Skills for Massage Therapy (3)
LMT150  Chiropractic Assistant Training (2)
LMT151  Study of Acupuncture for Healthcare

Professionals (1)

LMT152    Physical Modalities for the Chiropractic
          Assistant (1)
LMT154    Complementary and Alternative Medicine (3)
LMT160    Applied Anatomy for Massage Therapy (3)

*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.*

LMT175    Practicum – Massage Therapy, Relaxation
          Massage (1)
LMT176    Practicum – Massage Therapy, Therapeutic
          Massage (1)
LMT177    Practicum – Massage Therapy for Special
          Populations (1)
LMT178    Practicum – Massage Therapy, Spa Treatments
          and Hydrotherapy (1)
LMT180    Therapeutic Massage I (3)
LMT181    Therapeutic Massage II (3)
LMT280    Therapeutic Massage III (3)
LMT281    Therapeutic Massage IV (3)
LMT282    Therapeutic Massage V (3)

## Electives (0-3)

Select any college-level course numbered 100 or higher to meet the minimum total number of 60 credits for this AAS degree.

## Other Requirements

Students must earn:
- a grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

# MEDICAL ASSISTANT CERTIFICATE
## Total Credits: 34

This certificate prepares competent entry-level Medical Assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains as established by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of the Medical Assisting Education Review Board (MAERB). The certificate prepares individuals to perform administrative and clinical procedures in ambulatory settings, including physicians' offices, clinics, and group practices.

Prior to enrollment, consult the program director for

specific mandatory requirements. Prior to enrollment in MDA174, core requirements must be successfully completed. Healthcare Provider CPR and First Aid certification is required before enrolling in MDA174 and must be current for at least 6 months after the start of MDA174.

## Prerequisites

High School Diploma or GED

## Pre-Program Requirements

Apply for admission to the program with the Medical Assisting Program Director before enrollment in the degree program.

## Core Requirements (16)

BIO160    Introduction to Human Anatomy and
          Physiology (4)
HCC116    Medical Terminology (3)
MDA139    Fundamentals of Medical Assisting (4)
MDA140    Medical Assisting Skills I (5)

## Specialty Requirements (18)

HCC174    Pathopharmacology for Health Occupations (5)
MDA141    Medical Assisting Skills II (5)
MDA171    Administrative Medical Procedures (4)
MDA174    Medical Assistant Certificate Practicum (4)

## Other Requirements

Students must earn:
- a grade of C or better in each required course;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 34 semester credits.

# MEDICAL ASSISTANT AAS
## Total Credits: 60

The Medical Assistant AAS Degree prepares entry-level Medical Assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains as established by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Medical Assisting Education Review Board (MAERB). The 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.

Prior to enrollment, consult the program director for specific mandatory requirements. Prior to enrollment in MDA175, Core Requirements must be successfully

completed. Healthcare Provider CPR and First Aid certification is required before enrolling in MDA175 and must be current for at least 6 months after the start of MDA175.

## Prerequisites

1. High School Diploma or GED;
2. Complete Preprogram Requirement courses with a 2.0 GPA
3. Attendance at a Medical Assisting Program Information session within the past year
4. Successful completion of the HESI Entrance Test at CAC (within 2 attempts, 30 days apart; may repeat after one year)

## Pre-Program Requirements

After the above requirements, students must be approved for admission to the program by the Program Director before enrolling in courses requiring Director Approval.

## General Education Requirements (20)

### Written Communications (3)
*Select one:*
ENG101   College Composition I (3)
ENG121   Applied Technical Writing (3)

### Oral Communications (3)
COM100   Fundamentals of Human Communication (3)
         or higher

### Arts and Humanities (3)
*Select a course numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)
PSY101   Introduction to Psychology (3)
         or higher

### Physical and Biological Sciences (4)
BIO160   Introduction to Human Anatomy & Physiology (4)

### Mathematics (3-4)
MAT118   Essential Mathematics (4) or higher

## Core Requirements (15)
CIS120   Survey of Computer Information Systems (3)
HCC100   Introduction to Healthcare (3)
HCC116   Medical Terminology (3)
HCC174   Pathopharmacology for Health Occupations (5)
NTR255   Nutrition Medical Terminology, Labs, & Food Drug Interaction (1)
         *(Contact Medical Assistant Program Director prior to enrolling)*

## Specialty Requirements (25)
HIM131  Introduction to Insurance & Insurance Billing I (3)
MDA139  Fundamentals of Medical Assisting (4)
MDA140  Medical Assisting Skills I (5)
MDA141  Medical Assisting Skills II (5)
MDA171  Administrative Medical Procedures (4)
MDA175  Medical Assistant Degree Practicum (4)

## Other Requirements
Students must earn:

- a grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

## MEDICAL LABORATORY TECHNICIAN AAS
### Total Credits: 64-65

The Medical Laboratory Technician AAS prepares a graduate for employment in a clinical/medical laboratory. The graduate will perform routine lab testing for blood, urine, cultures, and other body fluids under the supervision of a medical laboratory scientist. Other responsibilities include performing test/instrument quality control and maintenance on a daily basis, as well as evaluating test results.

### Pre-Program Requirements

1. Current immunization records are required to apply to the program. Student must pay for and pass a background check and urine drug screen. A current 2 part TB skin test, or chest X-Ray or negative blood test for tuberculosis required.

2. High School Diploma or GED

3. CLA155 Introduction to Phlebotomy
   AND
   CLA255 Phlebotomy Practicum

OR

Phlebotomy certificate

## General Education Requirements (19-20)

### Written Communications (3)
ENG101    College Composition I (3)

### Oral Communications (3)
COM100   Fundamentals of Human Communication (3)
            or higher

### Arts and Humanities (3)
*Select a course numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)
*Or select a course numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

### Physical and Biological Sciences (4)
BIO181   General Biology I (4)
*(Fulfilled in Core Requirements)*

### Mathematics (3-4)
MAT121  Intermediate Algebra, Standard (4) or higher

## Core Requirements (45)
BIO205   Microbiology (4)
CHM130 Fundamental Chemistry (4) or higher
HCC116  Medical Terminology (3)
MLT210  Clinical Laboratory Operations (2)
MLT220  Clinical Hematology and Hemostasis (7)
MLT230  Clinical Urinalysis and Body Fluids Analysis (4)
MLT240  Clinical Immunohematology & Immunology (7)
MLT250  Clinical Chemistry (7)
MLT275  Clinical Microbiology (7)

## Other Requirements
Students must earn:
- a grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 64 semester credits.

# PRACTICAL NURSING CERTIFICATE
## Total Credits: 33
The Practical Nursing (PN) Certificate program in practical nursing provides an option for wishing to gain licensure as a practical nurse or for the AAS Nursing student who wishes to exit the RN program and gain employment as a Practical Nurse. Upon successful completion of the PN program requirements, the graduate receives a certificate of proficiency and is eligible to take the National Council Licensure Examination for Practical Nursing (NCLEX-PN). When the graduate passes the NCLEX-PN, they will be eligible to practice as a Licensed Practical Nurse (LPN) in the state of Arizona.

## Admission Requirements
In addition to the CAC admission requirements, applicants must meet the current requirements established by the Nursing Division faculty. These requirements include, but are not limited to:
1. Competence in math, English, and reading.
2. Completion of BIO201, BIO202. (For students who need a prerequisite for BIO201; the recommendation for nursing is BIO181.)
3. LNA from the Arizona State Board of Nursing must be included in the application to the CAC Practical Nurse program. (Request LNA License early to allow shipping and processing time.)
4. Attendance at a nursing information session within the past year.
5. Eligibility to register for MAT141 or higher MAT course.
6. Eligibility to register for ENG101.
7. Successful completion of the HESI Entrance Test at CAC (within 3 attempts 30 days apart).
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 Practical Nurse Application and Information Packet. Admission to the Nursing program is selective and based on a point system (specific established criteria). Acceptance to CAC does not guarantee acceptance into the practical nursing program. Further information may be obtained at URL: *centralaz.edu/Home/Academics/Divisions_and_Programs/ Nursing_Division.htm*.

## General Education Requirements (13)

### Written Communications (6)
ENG101 College Composition I (3)
ENG102 College Composition II (3)

## Social and Behavioral Sciences (3)
PSY101 Introduction to Psychology (3) 🔴🟢

## Mathematics (4)
MAT141 College Mathematics, Standard (4) 🔴🟢
    or higher *(excluding MAT201 and MAT202)*

## Core Requirements (20)
NUR121A  Nursing Transitions Introduction (4)
NUR121B  Fundamentals of Health/Illness Transitions (4)
NUR125  Nursing Psychiatric Care and Developmental Transitions (4)
NUR126A  Introduction to Principles and Application of Drug Dosage Calculations (1)
NUR135  Nursing in Obstetric and Pediatric Transitions (4)
NUR145A  Introduction to Pathopharmacology (2)
NUR200  Advanced Medical Terminology for Clinical Nurses (1)

## Other Requirements
Students must earn:

- a grade of C or better in each required course;
- a grade of C is at least 78% didactic or higher in the NUR courses prior to other assignment points being added;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 33 semester credits.

# NURSING AAS
## Total Credits: 60
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 CAC Nursing Program is approved by the Arizona State Board of Nursing, 1740 W. Adams St., Suite 2000, Phoenix, AZ 85007; 602-771-7803; *www.azbn.gov*  and accredited by the Accreditation Commission for Education in Nursing, 3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326; 404-975-5000; *acenursing.org*

Current nursing students may sit for the Practical Nurse Licensing Examination (NCLEX-PN) after completing the general education requirements listed in the Master Academic Plan (MAP) for Block I and II, NUR121, NUR122 and NUR150 immediately following Semester 2. Students can also sit for the NCLEX-PN following successful completion of the third semester in the program.

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 CAC admission requirements, applicants must meet the current requirements established by the Nursing Division faculty. These requirements include, but are not limited to:

1. Competence in math, English, and reading.
2. Completion of BIO201🔴, BIO202🔴. (For students who need a prerequisite for BIO201🔴/BIO205🔴; recommendation for nursing is BIO181🔴.)
3. LNA or LPN License from the Arizona State Board of Nursing must be included in the application to the CAC Nursing program. (Request LNA License early to allow shipping and processing time.)
4. Attendance at a nursing information session within the past year.
5. Eligibility to register for MAT141🔴 or higher MAT course.
6. Eligibility to register for ENG101🔴.
7. Successful completion of the HESI Entrance Test at CAC (within 3 attempts 30 days apart).
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 to CAC does not guarantee acceptance into the nursing program.
Further information may be obtained at URL:
*centralaz.edu/Home/Academics/Divisions_and_Programs/Nursing_Division.htm*.

Concurrent Enrollment Programs (CEP) are available for those who wish to consider obtaining their Baccalaureate Degree by taking classes along with AAS courses. Please schedule an information session for more information by visiting the URL:
*centralaz.edu/Home/Academics/Divisions_and_Programs/Nursing_Division.htm*

## Recommended Proficiencies
Competence in math, English and reading.

## Prerequisites (8)
BIO201  Human Anatomy and Physiology I (4)🔴🟢
BIO202  Human Anatomy and Physiology II (4)🔴🟢

*(Must be taken within five years of application to the Nursing Program)*
Arizona Licensed Nursing Assistant (LNA) or LPN and acceptance into Nursing program.

## General Education Requirements (20)

### Written Communications (6)
ENG101    College Composition I (3)
ENG102    College Composition II (3)

### Arts and Humanities (3)
*Select courses numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)
PSY101    Introduction to Psychology (3)

### Physical and Biological Sciences (4)
BIO205    Microbiology (4)

### Mathematics (4)
MAT141   College Mathematics, Standard (4)
         or higher *(excluding MAT201 and MAT202)*

## Core Requirements (40)
NUR121A  Nursing Transitions Introduction (4)
NUR121B  Fundamentals of Health/Illness Transitions (4)
NUR125    Nursing Psychiatric Care and Developmental Transitions (4)
NUR126A  Introduction to Principles and Application of Drug Dosage Calculations (1)
NUR126C  Advanced Principles and Application of Drug Dosage Calculations (1)
NUR135    Nursing in Obstetric and Pediatric Transitions (4)
NUR145A  Introduction to Pathopharmacology (2)
NUR145B  Advanced Pathopharmacology (2)
NUR200    Advanced Medical Terminology for Clinical Nurses (1)
NUR201    Advanced Nursing in Health/Illness Transitions (8)
NUR222    Nursing Organizational Transitions (8)
NUR223    Transition to the Nursing Workforce (1)

## Other Requirements
Students must earn:
- a grade of C or better in each required course;
- a grade of C is at least 78% didactic or higher in the NUR courses prior to other assignment points being added;

- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

## DIETARY MANAGER TRAINING
## Total Credits: 7*
**Previously known as Certified Dietary Manager, Certified Food Protection Professional Certificate**
*This program is not eligible for federal financial aid (Pell Grant and/or direct loans).

The Dietary Manager Training Certificate is an Association of Nutrition & Foodservice Professionals (ANFP) approved training program and Pathway III(b) Verified. The certificate provides a fast track for experienced food service workers and/or supervisors with roles in health care facilities and various other food service establishments. Upon completion of the certificate, students are eligible to sit for the national Certified Dietary Manager, Certified Food Protection Professional certification exam through the Certifying Board for Dietary Managers.

## Prerequisite
CAC requires no prerequisites; however, a minimum of two years of institutional food service management experience that meets the eligibility requirements of Certifying Board for Dietary Managers Pathway III(b) is required to take the CDM Credentialing Exam.

## Core Requirements (7)
NTR105    ServSafe Preparation (1)
          No certification, preparation only
NTR223    Food Service Management (3)
NTR240    Clinical Nutrition (3)

Students must earn:
- a grade of C or better in each required course;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 7 semester credits.

## COMMUNITY NUTRITION WORKER CERTIFICATE
## 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. This certificate is embedded in the Nutrition and Dietetic

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Technician AAS Degree. Students interested in working towards this degree are encouraged to contact the Nutrition and Dietetic Technician advisor at diettechadvisor@centralaz.edu.

## 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)
NTR201  Nutrition Literacy (1)
NTR219  Community Nutrition (3)
NTR232A Food and Culture (1)

*Select one:*
NTR104  Nutrition (3)
NTR200  Human Nutrition (3)
*(Recommended when considering completion of the Nutrition and Dietetic Technician AAS degree)*

## Other Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 16 semester credits.

## DIABETES CARE AND EDUCATION CERTIFICATE*

## Total Credits: 14

*This program is not eligible for federal financial aid (Pell Grant and/or direct loans).

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

## Core Requirements (14)

NTR131  Introduction to Diabetes (3)
NTR137  Carbohydrate Counting (1)
NTR191  Nutrition Counseling Skill Development (3)
NTR201  Nutrition Literacy (1)
NTR232A  Food and Culture (1)

NTR247  Weight Management Theory (1)
NTR255  Medical Terminology, Labs & FDI (1)

*Select one:*
NTR104  Nutrition (3)
NTR200  Human Nutrition (3)
*(Recommended when considering completion of the Nutrition and Dietetic Technician AAS degree)*

## Other Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 14 semester credits.

## NUTRITION AND FOODSERVICE PROFESSIONAL TRAINING PROGRAM CERTIFICATE

## Total Credits: 11

**Previously known as Dietary Manager Training Program Certificate**

The Nutrition and Foodservice Professional Training Program Certificate prepares food service workers and/or supervisors for management roles in health care facilities and various other food service establishments. This training program has been approved by the Association of Nutrition and Foodservice Professionals (ANFP). 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).

## Core Requirements (11)

NTR105  ServSafe Preparation (1)
NTR196  Dietary Manager Internship (4)
NTR223  Food Service Management (3)
NTR240  Clinical Nutrition (3)

## Other Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 11 semester credits.

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# NUTRITION AND HEALTH PROMOTION CERTIFICATE
## Total Credits: 18

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.

This certificate also meets some of the requirements for the Nutrition and Dietetic Technician (NDT) AAS Degree. Students interested in working towards a NDT AAS degree are encouraged to contact the NDT advisor at *diettechadvisor@centralaz.edu*.

## Recommended Proficiencies

High school diploma or GED

## Core Requirements (18)

NTR123    Nutrition throughout the Life Cycle (3)
NTR150    Overview of Nutrition Professions (1)
NTR191    Nutrition Counseling Skill Development (3)
NTR200    Human Nutrition (3)
NTR219    Community Nutrition (3)
NTR222    Nutrition Assessment and Medical Nutrition Therapy (3)
NTR232A Food and Culture (1)
NTR247    Weight Management Theory (1)

## Other Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 18 semester credits.

# NUTRITION AND DIETETIC TECHNICIAN AAS
## Total Credits: 65-70

The Nutrition and Dietetic Technician (NDT) AAS Degree is designed for highly motivated individuals who would like to work in healthcare, schools, and wellness. Students successfully completing the coursework and internship are eligible to take the National Registration Examination for Nutrition and Dietetic Technicians (NDTR) offered by the Commission on Dietetic Registration (CDR), the credentialing agency for the Academy of Nutrition and Dietetics. This program is approved by the Accreditation Council for Education in Nutrition and Dietetics

(ACEND) located at 120 S. Riverside Plaza, Suite 2190, Chicago, IL 60606-6995; 1-800-877-1600 or 312-899-0040, ext. 5400.

Students earn three certifications as they progress through the NDT AAS Degree: Community Nutrition Worker, Diabetes Care and Education, and Nutrition and Health Promotion. It is important to contact the NDT advisor at *diettechadvisor@centralaz.edu* for degree mapping.

Note: Application for admission to the Nutrition Dietetic Technician Program is required. See prerequisites below. CAC recommends that students work in a nutrition-related field which is desirable for obtaining a supervised practice site.

## Recommended Proficiencies

High school diploma or GED.

## Prerequisites

Acceptance for admission to the Dietetic Technician Program is required if entering the program Fall 2015 or after. Applications for admission to the Nutrition and Dietetic Technician program are accepted from February 1st to June 15th. Application information can be found at centralaz.edu.

Before applying to the program, the courses with the following general education prefixes must be completed with a C or better. BIO, CHM, ENG, and MAT. Completion of required Chemistry (CHM) course within the last (5) years.

## General Education Requirements (23-28)

### Written Communications (3)
*Select one:*
ENG101    College Composition I (3) 🔴🅐
ENG121    Applied Technical Writing (3)

### Oral Communications (3)
COM100   Fundamentals of Human Communication (3)🔴🅐 or higher

### Arts and Humanities (3)
*Select a course numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)
*Select a course numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

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## Physical and Biological Sciences (8-12)

*Select one group that includes both biology and chemistry:*

BIO160  Introduction to Human Anatomy/Physiology (4) a
**AND**
CHM130  Fundamentals of Chemistry (4) a or higher

**OR**

BIO160  Introduction to Human Anatomy/Physiology (4) a
**AND**
CHM138  Chemistry for Allied Health (4) a or higher

**OR**

BIO201  Human Anatomy and Physiology I (4) a
**AND**
BIO202  Human Anatomy and Physiology II (4) a
**AND**
CHM130  Fundamentals of Chemistry (4) a or higher

**OR**

BIO201  Human Anatomy and Physiology I (4) a
**AND**
BIO202  Human Anatomy and Physiology II (4) a
**AND**
CHM138  Chemistry for Allied Health (4) a or higher

## Mathematics (3-4)

*Select one:*
BUS101  Business Mathematics (3)
MAT118  Essential Mathematics (4) or higher

## Core Requirements (42)

NTR123  Nutrition throughout the Life Cycle (3)
NTR127  Breastfeeding/Human Lactation (1)
NTR131  Introduction to Diabetes (3)
NTR134  Healthy Weight for Kids (1)
NTR137  Carbohydrate Counting (1)
NTR142  Applied Food Science (3)
NTR150  Overview of Nutrition Professions (1)
NTR157  Foundations of Dietetic Technician Internship (2)
NTR163  Orientation to the Dietetic Technician Program (1)
NTR191  Nutrition Counseling Skill Development (3)
NTR200  Human Nutrition (3)
NTR201  Nutrition Literacy (1)
NTR219  Community Nutrition (3)
NTR222  Nutrition Assessment and Medical Nutrition Therapy (3)
NTR223  Food Service Management (3)
NTR232A Food and Culture (1)
NTR247  Weight Management Theory (1)
NTR255  Nutrition Medical Terminology, Labs, & Food Drug Interaction (1)

NTR295  Dietetic Technician Professional Practice Internship (1)
NTR296  Dietetic Technician Internship (6)

## Other Requirements

Completion of NTR course requirements within three (3) years of beginning the program.
Meet all ACEND requirements.
With assistance from NTR157 Foundations of Dietetic Technician Internship faculty, students set up their own internship sites and preceptors.

Students must earn:
- a grade of C (70%) or better in all required courses for this AAS Degree;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 65 semester credits.

## BASIC EMT CERTIFICATE*

### Total Credits: 9.5

*This program is not eligible for federal financial aid (Pell Grant and/or direct loans).

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 grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 9.5 semester credits.

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# CRITICAL CARE FOR PARAMEDICS CERTIFICATE*

## Total Credits: 6.5

*This program is not eligible for federal financial aid (Pell Grant and/or direct loans).

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 (13.5)
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 (6.5)

EMS275   Critical Care Emergency Medical Transport
            Program (CCEMTP) (5.5)
EMS240   Advanced Cardiac Life Support (ACLS) (1)

## Other Requirements

Students must earn:
- a grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;

- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 6.5 semester credits.

# PARAMEDICINE CERTIFICATE

## Total Credits: 50.5

The Paramedicine Certificate prepares students to work as paramedics with the knowledge and skills required for emergency care, stabilization, and immobilization of victims of illness and injury.

## Prerequisites

*All of the following must be earned with a grade of C or better:*
EMS100   CPR for Professionals (.5)
            or current CPR certification
EMS125   Emergency Medical Technician (9)
            *(Arizona Department of Health Services EMT Certified for 1 year)*
FSC129   Hazardous Materials Awareness/Operations (2)
*Complete the above or seek Program Director consent.*

## Recommended Proficiencies

Students must meet eligibility requirements established by the Arizona Department of Health Services, Bureau of EMS.

## Core Requirements (50.5)

BIO160   Anatomy and Physiology (4) 
EMS190   Pediatric Advanced Life Support (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 (13.5)
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

Students must earn:
- a grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;

- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 50.5 semester credits.

# PARAMEDICINE AAS
## Total Credits: 65.5 – 66.5

The Paramedicine AAS 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 (.5) | |
| | *(or current CPR certification)* | |
| EMS125 | Emergency Medical Technician (9) | |
| | *(Arizona Department of Health Services EMT Certified for 1 year)* | |
| FSC129 | Hazardous Materials Awareness/Operations (2) | |

OR Director Consent

## 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)
*Select one:*
ENG101 College Composition I (3) 
ENG121 Applied Technical Writing (3)
*(recommended)*

### Oral Communications (3)
COM100 Fundamentals of Human Communication (3)  or higher

### Arts and Humanities (3)
*Select courses numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)
*Select one:*
PSY101 Introduction to Psychology (3) 
SOC101 Introduction to Sociology (3) 
*Or select courses numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

### Physical and Biological Sciences (4)
BIO160 Introduction to Human Anatomy and Physiology (4) 

### Mathematics (3-4)
*Select one:*
BUS101 Business Mathematics (3)
MAT118 Essential Mathematics (4) or higher

### Core and Elective Requirements (46.5)

| | | |
|---|---|---|
| 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 (13.5) | |
| 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
Students must earn:

- a grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 65.5 semester credits.

The Central Arizona College Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP)."

Commission on Accreditation of Allied Health Education Programs
25400 U.S. Highway 19 North, Suite 158
Clearwater FL 33763
727-210-2350
*www.caahep.org*

Committee on Accreditation of Educational Programs for the Emergency Medical Services Programs
8301 Lakeview Parkway Suite 111-312
Rowlett, TX 75088
Phone: 214.703.8445
Fax: 214.703.8992

*www.coaemsp.org*

CoAEMSP | Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions
*www.coaemsp.org*

# PHARMACY TECHNICIAN CERTIFICATE
## Total Credits: 25-26

The Pharmacy Technician Certificate prepares entry-level Pharmacy Technicians by emphasizing medical and pharmaceutical terminology, calculations, record keeping, pharmaceutical techniques, law, and ethics. Most core requirements are offered as an online option.

The CAC Pharmacy Technician Certificate is approved by a collaboration between the American Society of Health-System Pharmacists and the Accreditation Council for Pharmacy Education (ASHP/ACPE),
4500 East-West Highway, Suite 900, Bethesda, MD 20814
866-279-0681
*ashp.org*

## Prerequisites

High School Diploma or GED

## Pre-Program Requirements

Apply for admission to the program with the Program Director before enrollment in the program. Pay for and pass a background check and urinalysis following acceptance into the program.

## Core Requirements (25-26)

BIO160      Intro to Human Anatomy and Physiology (4)
PHT101      Introduction to Pharmacology (6)
PHT102      Advanced Pharmacy Technician Concepts (6)
PHT150      Pharmacy Calculations (3)
PHT175      Practicum – Pharmacy Technician (4)
*Select one*
COM263      Intercultural Communication (3)
HCC112      Interpersonal Skills (2)

## Other Requirements

Students must earn:
- a grade of C or better in each required course;
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 25 semester credits.

# RADIOLOGIC TECHNOLOGY AAS
## Total Credits: 78-79

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 75% 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*

## 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

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- 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(s)

## General Education Requirements (23-24)

## Written Communications (3)
*Select one:*
ENG101　College Composition I (3)
ENG121　Applied Technical Writing (3)

## Oral Communications (3)
COM100　Fundamentals of Human
　　　　　Communication (3) or higher

## Arts and Humanities (3)
*Select courses numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

## Social and Behavioral Sciences (3)
*Select courses numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

## Physical and Biological Sciences (8)
BIO201　Human Anatomy and Physiology I (4)
BIO202　Human Anatomy and Physiology II (4)

## Mathematics (3-4)
MAT121　Intermediate Algebra, Standard (4) or higher

## Core and Elective Requirements (55)
RAD100　　Fundamentals of Radiologic Science and
　　　　　　Healthcare (1)
RAD110　　Radiographic Positioning I Lecture (2)
RAD110LB Radiographic Positioning I Lab (2)
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 Lecture (2)

RAD160LB Radiographic Positioning II Lab (2)
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
Students must earn:
- a grade of C or better in each required course;
- a grade of C is at least 75% in RAD courses;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 78 semester credits.

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# SOCIAL/BEHAVIORAL SCIENCES & PUBLIC SERVICE

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## ADMINISTRATION OF JUSTICE STUDIES CERTIFICATE
## Total Credits: 25

This certificate introduces students to Administration of Justice Studies (AJS) focusing on some AJS courses and at the same time ensuring that students acquire some general academic experiences. This certificate prepares students for continued study in Administration of Justice, or some students may find the certificate useful for promotion or a limited number of entry-level occupations.

### Written Communications (3)
ENG101 College Composition I (3)

### Oral Communications (3)
*Select an AGEC course.*

### Arts and Humanities (3)
AJS123 Ethics and the Administration of Justice (3)

### Social and Behavioral Sciences (3)
AJS101 Introduction to Administration of Justice (3)

### Physical and Biological Sciences (4)
*Select an AGEC course with a laboratory component.*

### Core Requirements (9)
AJS200  Current Issues in Administration of Justice (3)
AJS230  The Police Function (3)
AJS240  The Corrections Function (3)

### Other Requirements
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 25 semester credits.

## CORRECTIONS CERTIFICATE
## Total Credits: 21

Students earning this certificate will have acquired the knowledge, skills and abilities necessary to perform the duties of the Correctional Officer in the State of Arizona.

### Social and Behavioral Sciences (3)
AJS101 Introduction to Administration of Justice (3)

### Core Requirements (18)
Correctional Officer Training Academy* (18)

### Other Requirements
*For the award of COTA credit, the student must present his or her COTA certificate to the registrar's office. The certificate must indicate that at least 280-hours of training was completed.

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or higher;
- a minimum of 21 semester credits.

## JUSTICE STUDIES AAS
## Total Credits: 61-63
## (CLOSED ENROLLMENT)

**Previously two separate degrees: Corrections AAS and Administration of Justice AAS**
This degree is designed to upgrade the skills and knowledge of correctional officers or peace officers who are currently working in the field.

This is a closed enrollment degree and has special admission requirements. Students must be currently employed as a correctional officer or full-authority peace officer in the State of Arizona.

### General Education Requirements (22-23)

### Written Communications (6)
ENG101  College Composition I (3)
ENG102  College Composition II (3)

### Oral Communications (3)
*Select an AGEC course.*

### Arts and Humanities (3)
AJS123   Ethics and the Administration of Justice (3) 🄰

### Social and Behavioral Sciences (3)
AJS101 Introduction to Administration of Justice  (3)🄿🄰

### Physical and Biological Sciences (4)
*Select a 4-credit course with lab numbered 100 or above.*

### Mathematics (3-4)
MAT141   College Mathematics, Standard (4) 🄿🄰 or higher

### Select One Emphasis:

### Law Enforcement Emphasis (39)
AZ POST Certification-minimum 585 hour academy (30)
AJS200 Current Issues in Administration of Justice (3)
AJS270 Community Relations (3) 🄰

*Select one:*
AJS224 Criminal Justice Administration (3) 🄰
AJS275 Criminal Investigations (3)

### Corrections Emphasis (39-40)
COTA Certification-minimum 280 hour academy (18)
PSY101   Introduction to Psychology (3) 🄿🄰
PSY200   Social Psychology (3) 🄰*IW*
PSY202   Psychology of Abnormality (3)
PSY205   Personality and Social Adjustment (3) 🄰
AJS225   Criminology (3) 🄰 *IW*

*Select one:*
AJS224   Criminal Justice Administration (3) 🄰
AJS275   Criminal Investigations (3)

*Select one:*
AJS212   Juvenile Justice Procedures (3) 🄰
SPA101   Elementary Spanish I (4) 🄿

### Other Requirements
This is a closed enrollment program.

For law enforcement or corrections credit to be awarded, students must present a copy of the COTA or AZ POST certification to the admissions office for review and approval. Credit will be awarded only as Applied Credit.

Students cannot "double-dip" by seeking credit for COTA or POST certification along with academic credit previously awarded at CAC or elsewhere for coursework that led to that COTA or POST certification.

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 61 semester credits.

## VISUAL, FINE & PERFORMING ARTS

### FINE ARTS AA
### Total Credits: 60-61
The Fine Arts AA Degree prepares students to transfer to a university BA, BFA, or Bachelors of Teaching in Fine Arts degree programs. Students may select the Studio Art Emphasis or Music Emphasis. Those planning to continue on at the university level may benefit by taking additional foreign language courses to apply to a future degree.

### General Education Requirements (35-36)

### Written Communications (6)
ENG101    College Composition I (3) 🄿🄰
ENG102    College Composition II (3) 🄿🄰

### Oral Communications (3)
*Select an AGEC course.*

### Arts and Humanities (9)
**For Studio Art Emphasis**
ART100 Art Appreciation (3)🄰
ART101 Two-Dimensional Design (3)🄿🄰
ART207 Art History I (3)🄿🄰

**For Music Emphasis**
*Select one:*
MHL100   Music Appreciation (3) 🄰
MHL207   Survey of Jazz and Popular Music (3) 🄰
THE100   Theater Appreciation (3) 🄿🄰

*Students are encouraged to choose coursework from more than one discipline for the Social and Behavioral Science category.*

### Social and Behavioral Sciences (6)
*Select Social and Behavioral Sciences AGEC courses*

### Physical and Biological Sciences (8)
*Select Physical and Biological Sciences AGEC courses with a laboratory component.*

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## Mathematics (3-4)
MAT141  College Mathematics, Standard (4) ⊙ⓐ
         or higher

## Subject Options (0-6)
Based on your major, review the specific AA Degree requirements in the CAC catalog, consult an academic advisor, and see the Transfer Guides at *aztransfer.com/college/*.

## Special Awareness Requirements (0-9)
*Select courses from the AGEC list 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) (*Fulfilled by the Core or General Education Requirement*)
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness (*Fulfilled by the Core or General Education Requirement*)

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.

## Studio Art Emphasis Core (15)
ART102  Three-Dimensional Design (3) ⊙ⓐ
ART107  Drawing I (3) ⊙ⓐ
ART109  Color Theory (3) ⓐ
ART208  Art History II (3) ⊙ⓐ
DMA101  Media in Society (3) ⓐ

## Studio Art Emphasis Electives (9-10)
*Select three courses from the following:*
ART103  Beginning Jewelry and Metalwork (3) ⓐ
         (*recommended*)
ART104  Advanced Jewelry and Metalwork(3) ⓐ
ART105  Ceramics I (3) ⓐ
ART106  Ceramics II (3) ⓐ
ART108  Intermediate Drawing (3)
ART201  Painting I (3)
ART202  Painting II (3)
DMA122  Intro to Web Design (3)
AND
*Student may need to complete an approved elective course, which transfers as "Elective or Better" to at least one of the three Arizona public universities, to complete the required AA Degree credit requirement.*

## Music Emphasis Core (22)
MTC102  Integrated Music Theory I (4)
MTC106  Integrated Music Theory II (4)
MTC202  Integrated Music Theory III (4)
MTC206  Integrated Music Theory IV (4)
MUP110  Piano Class* (1)
*Complete 4 times for a total of (4) credit hours*
AND
*Select one of the following to be completed twice for a total of (2) credit hours*
MUP109B  Private Instruction: Brass (1)
MUP109D  Private Instruction: Percussion (1)
MUP109G  Private Instruction: Guitar/Bass (1)
MUP109P  Private Instruction: Piano Keyboard (1)
MUP109S  Private Instruction: Orchestral Strings (1)
MUP109V  Private Instruction: Voice (1)
MUP109W  Private Instruction: Woodwinds (1)

## Music Emphasis Electives (3)
*Select from the following to complete a total of (3) credit hours:*
MTC100  Music Fundamentals (3)
MTC101  Aural Fundamentals (.5)
MUP104  Concert Choir (1)
MUP105  Voice Class (1)
MUP107  Band (1)
MUP108  Orchestra (1)
MUP109B  Private Instruction: Brass (1)
MUP109D  Private Instruction: Percussion (1)
MUP109G  Private Instruction: Guitar/Bass (1)
MUP109P  Private Instruction: Piano Keyboard (1)
MUP109S  Private Instruction: Orchestral Strings (1)
MUP109V  Private Instruction: Voice (1)
MUP109W  Private Instruction: Woodwinds (1)
MUP111  Guitar Ensemble (1)
*Private Instruction courses may be taken four times for credit.*

## Other Requirements
Students must earn:
- a grade of C or better in each required course;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

# GRAPHIC DESIGN CERTIFICATE
## Total Credits: 30
The Graphic Design Certificate provides individuals seeking to advance design skills for the development of personal interests, and for those already employed in this field to upgrade skills as well as providing the creative and

technical skills required for employment in entry-level positions.

## Recommended Proficiencies
RDG100    College Reading *R*

## Core Requirements (30)
ART101    Two-Dimensional Design (3) 🔴🅰
ART107    Drawing I (3) 🔴🅰
DMA115   Digital Imaging (3)
DMA120   Graphic Design and Adobe InDesign (3)
DMA122   Introduction to Web Design (3)
DMA125   Introduction to Illustrator (3)
DMA205   Portfolio Development (3)
DMA210   Publications & Packaging Design (3)
DMA220   Advanced Graphic Design (3)
DMA223   Designing with Type (3)

## Other Requirements
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 30 semester credits.

# DIGITAL MEDIA ARTS AAS
## Total Credits: 61-62

**Previously known as Graphic Design AAS**
The Digital Media Arts AAS provides the creative, technical, and visual communication skills required for employment in a variety of entry-level positions, as well as an in-depth understanding of the principles and foundations of digital media technologies and interactive communications. Topics include: graphic design, Web design, digital photography, and digital video production. The program also prepares students for entry into a 4-year college or degree program.

## General Education Requirements (22-23)

## Written Communications (3)
ENG101    College Composition I (3) 🔴🅰

## Oral Communications (3)
COM100   Fundamentals of Human
          Communication (3) 🔴🅰 or higher

## Arts and Humanities (6)
*Select two:*
ART100    Art Appreciation (3) 🅰
ART207    Art History I (3) 🔴🅰
ART208    Art History II (3) 🔴🅰

## Social and Behavioral Sciences (3)
*Select a course numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC category.*

## Physical and Biological Sciences (4)
*Select a 4-credit course with lab numbered 100 or above from the Biological and Physical Science Lab list. Students may also select a course from the Biological and Physical Lab Science AGEC list.*

## Mathematics (3-4)
*Select one:*
BUS101    Business Mathematics (3)
MAT118   Essential Mathematics (4) or higher

## Core Requirements (18)
ART107    Drawing I (3) 🔴🅰
ART109    Color Theory (3) 🅰
DMA101    Media and Society (3) 🅰
DMA115    Digital Imaging (3)
DMA122    Introduction to Web Design (3)
DMA205    Portfolio Development (3)

## Select one Emphasis:

## Graphic Design Emphasis (21)
ART101    Two-Dimensional Design (3)🔴🅰
ART102    Three-Dimensional Design (3) 🔴🅰
DMA120    Graphic Design and Adobe InDesign (3)
DMA125    Introduction to Illustrator (3)
DMA210    Publications & Packaging Design (3)
DMA220    Advanced Graphic Design (3)
DMA223    Designing with Type (3)

## Digital Photography and Video Production Emphasis (21)
DMA130    Digital Photography I (3)
DMA132    Digital Video I (3)
DMA135    Lighting for Photography and Video (3)
DMA230    Digital Photography II (3)
DMA232    Digital Video II (3)
DMA245    Independent Projects – Photography/Video (3)
THE115     Introduction to Cinema (3) 🅰

## Other Requirements

Students must earn:

- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 61 semester credits.

# LIVE AUDIO AND LIGHTING CERTIFICATE
## Total Credits: 35

The Live Audio and Lighting Certificate prepares individuals for entry-level positions in the entertainment industry by providing the knowledge and skills necessary to work with touring entertainers and live sound and stage lighting companies in the set-up operation of live concert productions.

## 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) | |
| EIT140 | Introduction to Lighting (3) | |
| EIT151 | Digital Audio Workstation (3) | |
| EIT203 | Entertainment Capstone Project (2) | |
| EIT231 | Live Audio Production II (3) | |
| EIT232 | Equipment Maintenance (3) | |
| EIT241 | Concert Lighting (3) | |
| EIT242 | Rigging (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;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 35 semester credits.

# LIVE AUDIO AND LIGHTING AAS
## Total Credits: 60-61

The Live Audio and Lighting AAS Degree prepares individuals for entry-level positions in the entertainment industry by providing the knowledge and skills necessary to work with touring entertainers and live sound and stage lighting companies in the set up and operation of live concert productions.

## General Education Requirements (19-20)

### Written Communications (3)

*Select one:*
ENG101   College Composition I (3) *(recommended)*
ENG121   Applied Technical Writing (3)

### Oral Communications (3)

COM100   Fundamentals of Human Communication (3) or higher

### Arts and Humanities (3)

*Select one:*
EIT100   History of Rock n' Roll (3) *(recommended)*
*Or select courses numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)

*Select one:*
PSY101   Introduction to Psychology (3) *(recommended)*
*Or select courses numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

### Physical and Biological Sciences (4)

*Select a 4-credit course with lab numbered 100 or above from the Biological and Physical Science Lab list. Students may also select a course from the Biological and Physical Lab Science AGEC list.*

### Mathematics (3-4)

*Select one:*
BUS101   Business Mathematics (3)
MAT118   Essential Mathematics (4) or higher

## Core Requirements (41)

| | | |
|---|---|---|
| BUS122 | Small Business Management (3) | |
| DMA122 | Introduction to Web Design (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) | |
| 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) | |

## Other Requirements

Students must earn:

- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

# POPULAR MUSIC PERFORMANCE CERTIFICATE
## Total Credits: 31-33

The Popular Music Performance Certificate prepares individuals for entry-level positions in the entertainment industry by providing the knowledge and skills necessary for becoming a confident and charismatic live music performer for the concert stage environment, including skills for professional songwriting and modern live popular music performance and production.

## Core Requirements (31)

| 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) |
| EIT171 | Songwriting I (2) |
| EIT203 | Entertainment Capstone Project (2) |
| EIT221 | Entertainment Marketing and Promotion (3) |
| EIT272 | Songwriting II (2) |

EIT170    Performance Skills (1)
*(Must complete two (2) times for a total of 2 credits)*

*Must complete two credits by selecting any combination of the following (the following courses may be repeated up to four (4) times for credit):*
MUP105    Voice Class (1)
MUP109V Private Instruction: Voice (1)
MUP109D Private Instruction: Percussion (1)
MUP109G Private Instruction: Guitar/Bass Guitar (1)
MUP109P Private Instruction: Piano Keyboard (1)
MUP110    Piano Class (1)

## Other Requirements

Students must earn:

- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 31 semester credits.

# POPULAR MUSIC PERFORMANCE AAS
## Total Credits: 60-61

The Popular Music Performance AAS Degree prepares individuals for entry-level positions in the entertainment industry by providing the knowledge and skills necessary for becoming a confident and charismatic live music performer for the concert stage environment, including skills for professional songwriting and modern live popular music performance and production.

## General Education Requirements (19-20)

### Written Communications (3)

*Select one:*
ENG101   College Composition I (3) 🔶ⓐ *(recommended)*
ENG121   Applied Technical Writing (3)

### Oral Communications (3)

COM100  Fundamentals of Human Communication (3) 🔶ⓐ
　　　　　or higher

### Arts and Humanities (3)

*Select one:*
EIT100    History of Rock n' Roll (3) ⓐ *(recommended)*
*Or select a course numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

### Social and Behavioral Sciences (3)

*Select one:*
PSY101   Introduction to Psychology 🔶ⓐ
　　　　　*(recommended)*
*Or select a course numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

### Physical and Biological Sciences (4)

*Select a 4-credit course with lab numbered 100 or above from the Biological and Physical Lab Science list. Students may also select a course from the Biological and Physical Lab Science AGEC list.*

### Mathematics (3-4)

*Select one:*
BUS101    Business Mathematics (3)
MAT118    Essential Mathematics (4) or higher

### Core and Elective Requirements (41)

BUS122    Small Business Management (3)
DMA122   Introduction to Web Design (3)

*This catalog was prepared on the basis of the best information available at the time of publication. Catalog information is subject to changes without notice, obligation or liability.*

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)
EIT171      Songwriting I (2)
EIT203      Entertainment Capstone Project (2)
EIT221      Entertainment Marketing and Promotion (3)
EIT272      Songwriting II (2)

EIT170      Performance Skills (1)
*(Must complete four (4) times for a total of 4 credits)*
*Select one:*
ENG200     Introduction to Creative Writing (3) 🅰
          **OR**
ENG210     Introduction to Fiction Writing (3) 🅰

*Must complete four credits by selecting any combination of the following (the following courses may be repeated up to four (4) times for credit):*
MUP105     Voice Class (1)
MUP109V   Private Instruction: Voice (1)
MUP109D   Private Instruction: Percussion (1)
MUP109G   Private Instruction: Guitar/Bass Guitar (1)
MUP109P   Private Instruction: Piano Keyboard (1)
MUP110     Piano Class (1)

## Other Requirements

Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 semester credits.

## RECORDING ENGINEERING CERTIFICATE
## Total Credits: 35

The Recording Engineering Certificate prepares individuals for entry-level positions in the entertainment industry by providing the knowledge and skills necessary to operate a recording studio, including recording, editing, arranging, mixing, mastering, and producing commercial quality audio recordings.

## 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;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 35 semester credits.

## RECORDING ENGINEERING AAS
## Total Credits: 61-62

The Recording Engineering AAS Degree prepares individuals for entry-level positions in the entertainment industry by providing the knowledge and skills necessary to operate a recording studio, including recording, editing, arranging, mixing, mastering, and producing commercial quality audio recordings.

## General Education Requirements (19-20)

## Written Communications (3)

*Select one:*
ENG101      College Composition I (3)🔄🅰 *(recommended)*
ENG121      Applied Technical Writing (3)

## Oral Communications (3)

COM100   Fundamentals of Human Communication (3) 🔄🅰
          or higher

## Arts and Humanities (3)

*Select one:*
EIT100    History of Rock n' Roll (3) 🅰 *(recommended)*
*Or select courses numbered 100 or above from the following: ART, HMC, LIT, MHL, PHI, and THE. Students may also select any course from the Arts and Humanities AGEC list.*

## Social and Behavioral Sciences (3)

*Select one:*
PSY101   Introduction to Psychology (3) 🔄🅰
          *(recommended)*
*Or select courses numbered 100 or above from the following: ANT, ECN, GEO, HIS, POS, PSY, and SOC. Students may also select any course from the Social and Behavioral Sciences AGEC list.*

## Physical and Biological Sciences (4)

*Select a 4-credit course with lab numbered 100 or above from*

*the Biological and Physical Science Lab list. Students may also select a course from the Biological and Physical Lab Science AGEC list.*

## Mathematics (3-4)

*Select one:*
BUS101    Business Mathematics (3)
MAT118    Essential Mathematics (4) or higher

## Core Requirements (42)

DMA122    Introduction to Web Design (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)
EIT171    Songwriting I (2)
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)
EIT272    Songwriting II (2)
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;
- a minimum of 3 earned CAC credits numbered;
- a minimum of 61 semester credits.

# Course Descriptions

## Course Delivery

Central Arizona College offers classes in a variety of modalities and formats including face-to-face, online, live streaming, and hybrid. While assignments and methods vary, all classes, regardless of modality or format, hold students to the same rigorous, high academic standards. The Class Schedule indicates the delivery format of a class. Students are responsible for understanding the methods and expectations of the format for each course prior to the first day of class.

Face-to-Face (F2F) = Face-to-Face classes meet at designated dates, times, and locations as indicated in the Class Schedule.

Online = Online classes meet virtually online using a Learning Management System (LMS) such as Blackboard. Totally online classes do NOT meet at designated dates, times, or locations.

Live Streaming = Live Streaming classes meet virtually online at designated dates and times as indicated in the Class Schedule, but they do NOT meet at specific locations. These classes meet via live streaming using a Learning Management System (LMS) such as Blackboard.

Hybrid = Hybrid classes meet using a combination of Face-to-Face (F2F), Online, and/or Live Streaming modalities. Examples include:
- Hybrid: F2F/Online
  - F2F/Online classes meet at designated dates, times, and locations as indicated in the Class Schedule, plus students complete additional coursework online.
- Hybrid: Live Streaming/Online
  - Live Streaming/Online classes meet via live streaming at designated dates and times as indicated in the Class Schedule, plus students complete additional coursework online.
- Hybrid: F2F/Live Streaming
  - F2F/Live Streaming classes meet at designated days, times, and locations; plus, they meet via live streaming at designated days and times as indicated in the Class Schedule.

## Courses for Programs with Special Requirements

Courses for programs with special requirements are not included in the CAC Academic Catalog. Students may find these courses via the CAC website in the online schedule. Students should contact the Advising Department for information about courses required for degrees and certificates with special requirements.

## 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. Some courses carry a requirement of *prerequisite or corequisite* which may be met prior to the course OR concurrently with the 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 CAC approved assessment.

"*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 Course Information: Times for Credit, Grading Options, Typically Offered, Credit Breakdown

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.

If a course is consistently offered only for a specific semester, this information will be indicated at the end of the course description. Students should contact the Advising Department or check the course schedule to confirm whether a course will be offered during the semester they plan to enroll.
Each course description will indicate the credit value for a course and how those credits break down. If a course credit value is reflected by practicum or internship credits, the credit breakdown will indicate how many contact hours may be expected for that course.

## Special Courses

### 078/088/098/198/298 Selected Topics
*Credit Varies*
Courses numbered as 078, 088, 098, 198 or 298, also known as Selected Topics, offer experimental curriculum on a short-term basis. Learning competencies vary based on the level of the course and the subject matter. Selected Topics can be offered in

any discipline with appropriate approvals; however, they may not transfer and are degree applicable only with special approval. They are valid for one academic year and ineligible for financial aid.

## 080-099 College Foundations
*Credit Varies*
Courses between 080 and 099 are considered college foundations, offering pre-college level learning competencies. They may be ineligible for financial aid.

## 196/296 Internships
*Credit Varies*
Offering hands-on application of skills in a work experience environment outside the college setting, courses numbered 196 or 296 are professionally supervised internships.

## Arizona General Education Curriculum (AGEC)
The [a] icon indicates a course is approved to fulfill one or more Arizona General Education Curriculum (AGEC) categories. The Intensive Writing *IW* icon specifically indicates a course is approved as an Intensive Writing AGEC course.

The AGEC allows students attending any Arizona public community college or tribal postsecondary institution to build a general education curriculum that is transferable upon completion to another Arizona public community college, tribal postsecondary institution, or state university. The AGEC has three forms: the **AGEC-A** (35-36 credits), **AGEC-B** (35-36 credits) and **AGEC-S** (35-37 credits).

Arizona community and tribal colleges are obligated to accept AGEC coursework from other Arizona community or tribal colleges. CAC accepts AGEC approved courses from Arizona colleges and universities and applies them toward CAC AGEC requirements.

The certified CAC **AGEC Certificate** (35 credits) is transferable from one Arizona public community college or tribal postsecondary institution to another Arizona public community college, tribal postsecondary institution, or Arizona public university.

## 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 requirement. Students must provide evidence of fulfilling the Intensive Writing AGEC requirement.

## Cross Listed Courses
Courses indicated as cross listed with another course are identical in content. Students will only receive credit for one of the two courses. Students should consult an academic advisor to determine the best course to achieve their academic goal.

## RDG100 College Reading
A course showing a "Reading Required" $\mathcal{R}$ icon indicates that the specified course requires RDG100 or an equivalent reading assessment score as a prerequisite or corequisite.

## Shared Unique Number System [SUN#]
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 public and tribal community colleges. You will find a complete list of SUN courses on the AZTransfer website: https://aztransfer.com/sun/. For specific course transferability status consult the Course Equivalency Guide (**CEG**) on the AZTransfer website: https://aztransmac2.asu.edu/cgi-bin/WebObjects/CEG.

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**ICON LEGEND:**     **AGEC:** [a]     **Intensive Writing:** *IW*     **Reading Required: RDG100:** $\mathcal{R}$     **SUN Course:**

# 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 for guidance to efficiently and effectively complete your academic goals.

## COURSES - TABLE OF CONTENTS

**ICON LEGEND:**  **AGEC:** 🅰  **Intensive Writing:** *IW*  **Reading Required: RDG100:** *R*  **SUN Course:** ◎

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# ACCOUNTING (ACC)

## ACC100 Fundamentals of Accounting

*3 Credits (3 Lectures)* R

The basics of accounting for a small business with emphasis on recording transactions, posting to the general ledger, preparing financial statements, recording the payroll, accounting for inventory, and accrual accounting. *Prerequisite or corequisite: RDG100.*

## ACC121 Income Tax Fundamentals

*3 Credits (3 Lectures)* R

Theory, rules, and procedures used in preparing federal income tax returns for individuals. *Prerequisite: RDG100. Recommendations: ACC100 or ACC201* ◎ *or previous accounting experience.*

## ACC201 Financial Accounting

*3 Credits (3 Lectures)* ◎ *ACC 2201* R

Theory and practice of accounting applicable to the accumulation, reporting, and uses of financial information for corporations. *Recommended: Students who struggle with numerical data may best be advised to first complete ACC100 which places heavy concentration on the mechanics of accounting. Prerequisite: RDG100.*

## ACC202 Managerial Accounting

*3 Credits (3 Lectures)* ◎ *ACC 2202*

Selection and analysis of accounting information for internal organization use by management. *Prerequisite: ACC201* ◎.

## ACC222 Payroll Accounting

*3 Credits (3 Lectures)*

Functions and practical operation of payroll accounting, with examinations of current payroll tax laws, methods of computing wages and salaries, timekeeping methods and microcomputer software for payroll systems. *Prerequisite: ACC100 OR ACC201* ◎.

## ACC226 Accounting with QuickBooks Pro®

*3 Credits (3 Lectures)*

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)*

Practical application of accounting concepts utilizing Sage 50 Complete® (formerly Peachtree®). This course covers: accounts payable, accounts receivable, payroll, inventory, job costing, fixed assets, financial statements, and time and billing features of Sage 50 Complete®. *Prerequisite: ACC100 OR ACC201* ◎. *Note: Students with accounting experience may request an instructor waiver.*

# AGRICULTURE BUSINESS (AGB)

## AGB100 Introduction to Agriculture Business

*3 Credits (2 Lectures, 3 Labs)* R

Entrepreneurship in agribusiness, including marketing, budgeting, financial statements, purchasing, business structure, customer relations and inventory control. *Prerequisite or corequisite: RDG100.*

## AGB121 Fundamentals of Agricultural and Environmental Economics

*3 Credits (3 Lectures)* R

An introductory analysis of the agriculture economy addressing economic principles, farm management and marketing of agriculture products. *Prerequisite: RDG100.*

## AGB123 Agriculture Accounting

*3 Credits (3 Lectures)*

Agriculture accounting principles and practices.

## AGB124 Microcomputers in Agriculture

*3 Credits (2 Lectures, 3 Labs)* R

Introduction to the operation and capabilities of microcomputers in agriculture applications. Simple programming, data analysis, graphical display, spreadsheets and word processing are included. *Prerequisite: RDG100.*

## AGB213 Introduction to Agricultural Commodity and Food Marketing

*3 Credits (3 Lectures)* R

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: RDG100.*

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**ICON LEGEND:**   **AGEC:** ⓐ   **Intensive Writing:** *IW*   **Reading Required: RDG100:** R   **SUN Course:** ◎

## AGB225 Agriculture Business Analysis
*3 Credits (3 Lectures)*
Covers the development of a modern agribusiness to include a business plan in detail including: Executive Summary, Mission Statement/Business Description, Business Environment, Marketing Plan, Operations Plan, Management Team, Financial Plan, Legal/Insurance Section, Critical Risks, Assumptions/Conclusions, and Harvest Strategy. *Prerequisite: AGB100*

## AGB234 Agricultural Leadership Development
*3 Credits (3 Lectures)* ℛ
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: RDG100.*

# AGRICULTURE SCIENCE (AGS)

## AGS101 World of Plants
*4 Credits (3 Lectures, 3 Labs)* 🅰ℛ
The structure, function and use of plants in the living world and scientific experiences relating to the plant kingdom and the plant environment. *Prerequisite or corequisite: RDG100.*

## AGS104 Agricultural Environmental Science
*4 Credits (3 Lectures, 3 Labs)* 🅰ℛ
Science-based approaches to understanding the environmental concepts of ecosystems, population dynamics and agricultural sustainability. *Prerequisite: RDG100.*

## AGS106 Entomology
*4 Credits (3 Lectures, 3 Labs)* 🅰ℛ
Identification, classification, control and management of insects and other land arthropods affecting humans and their environment. *Prerequisite: RDG100.*

## AGS122 Natural Resources and Conservation
*3 Credits (3 Lectures)* 🅰 *IW*
The conservation and multiple use of natural resources, including recreation, water, forestry, range, soils, wildlife, fossil and alternative fuels. *Prerequisite: ENG101*◎.
*Prerequisite or corequisite: ENG102*◎.

## AGS195A Careers in Environmental Science
*1 Credit (.5 Lecture, 2 Labs)* ℛ
An introduction to the various careers and industries associated with the environmental science field. Students build industry network relationships. *Field trip required.*
*Corequisite: RDG100.*

## AGS196 Agriculture Internship
*1 Credit (1 Internship)* ℛ
Students work in agriculture internship placements tailored to the students' academic program, interests and skills. *May be taken more than four times for credit. Prerequisites: RDG100 and instructor consent.*

## AGS204 Environmental Sustainability
*3 Credits (3 Lectures)* 🅰ℛ
Understanding the Earth's environment and the important challenges facing humanity, including climate change, pollution, loss of biodiversity, and water shortages. *Students must attend at least one local governmental environmental science forum. Prerequisite: RDG100.*

## AGS221 Soil Science
*4 Credits (3 Lectures, 3 Labs)* 🅰ℛ
Fundamental principles of soil science, including the origin, nature and classification of soils; emphasizing the chemical, physical and biological properties in relation to plant growth and nutrition of plants. Also emphasized are non-plant uses of soils and soils in the environment. *Prerequisite: RDG100.*

## AGS235 Principles of Sonoran Horticulture
**Previously known as AGS235 Principles of Horticulture**
*3 Credits (2 Lectures, 3 Labs)* 🅰ℛ
A comprehensive study of southwestern horticulture including the five Indian nations and their traditional native plants. 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. Also covered are design techniques for native landscape planning, gardening and construction. *Prerequisite: RDG100.*

## AGS240 Plant Biology
*4 Credits (3 Lectures, 3 Labs)* 🅰ℛ
A study of the origin, evolution, anatomy, function and ecology of land plants. Genetics, cellular structure, reproduction and the anatomy of stems, roots, leaves, flowers and fruits are described. Includes aspects of plant physiology, photosynthesis, respiration, transpiration, integrated pest

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**ICON LEGEND:**   **AGEC:** 🅰   **Intensive Writing:** *IW*   **Reading Required: RDG100:** ℛ   **SUN Course:** ◎

management, and plant soil-water relationships. *Prerequisite: RDG100.*

## AGS296 Agriculture Internship
*3 Credit (3 Internships)* ℛ
Students work in agriculture internship placements tailored to the students' academic program, interests and skills. *May be taken two times for credit. Prerequisites: RDG100 and instructor consent. Note: Students may serve as an intern for a local agricultural company more than one semester during their CAC enrollment.*

# AUTOMATED INDUSTRIAL TECHNOLOGY (AIT)

## AIT100 Industrial Safety
*1 Credit (1 Lecture)*
Introductory course in workplace safety training, including an overview of critical safety policies, procedures, and practices that help prevent injuries and keep the workplace safe and productive.

## AIT105 Maintenance Operations
*3 Credits (2 Lectures, 3 Labs)*
Introductory course into the practice of modern maintenance operations. Includes: safely and correctly using maintenance tools (e.g., hand tools, power tools), measuring instrumentations (e.g., tape, caliper, micrometer) and reading various engineering documents (e.g., blueprints, flowcharts, parts diagrams).  Use and convert units in SI and imperial.  Basic discussion of industrial safety procedures, machine operations, troubleshooting, failure analysis, modern maintenance principles, rigging, workplace organization, and records keeping.

## AIT110 Mechanical Power Transmission Systems
*3 Credits (2 Lectures, 3 Labs)*
Introductory course in how to transmit, measure, calculate, and work safely with rotational mechanical equipment. Hands-on assembly, alignment, maintenance, and troubleshooting of mechanical power transmission systems and components e.g., belts, bearings, chains, dynamometers, gears, pulleys, couplings, bushings, and sprockets.   Introduction to lubricant and grease types, their standards, safety, and application.

## AIT115 Hydraulic Systems
*3 Credits (2 Lectures, 3 Labs)*
Introductory course in the principles of hydraulic system operation, components construction, maintenance,

troubleshooting, and operation, as well as the role of the individual components in an operating hydraulic system. Includes hydraulic fitting and seals, accumulators, cylinders, directional control valves (DVC), relief valves, check valves, pumps, filters, hoses, and a variety of hydraulic control circuits.

## AIT120 Pneumatic Systems
*3 Credits (2 Lectures, 3 Labs)*
Introductory course in the principles of pneumatic system operation, components construction, maintenance, troubleshooting, and operation, as well as the role of the individual components of an operating pneumatic system. Includes pneumatic fitting, seals, accumulators, actuator/cylinders, directional control valves (DVC), manifolds, relief valves, check valves, pumps, filters, regulators, dryers, and common pneumatic control circuits.

## AIT125 DC and AC Components and Circuits
*3 Credits (2 Lectures, 3 Labs)*
An introductory course in Alternating Current (AC) and Direct Current (DC) electric theory. Includes electric circuits using resistors, capacitors and inductors. Also includes solenoids, relays, transformers, basic DC and AC motors, circuit protection devices and a variety of switches.

## AIT130 Maintenance Piping
*3 Credits (2 Lectures, 3 Labs)*
Overview of the area of maintenance of piping systems for manufacturing or industrial facilities. *Prerequisite or corequisite: AIT100.*

## AIT205 Electronic Control Systems 1
*3 Credits (2 Lectures, 3 Labs)*
Introductory course in AC and DC power electronic theory. Includes power supplies, power conditioning, solid-state power devices, and power control circuits. Also includes proximity sensors, analog thermal sensors, control feedback loops, and the setup and operation of Variable Frequency Drives (VFDs). *Prerequisite or corequisite: AIT125.*

## AIT210 Programmable Logic Controller Programming and Troubleshooting
*3 Credits (2 Lectures, 3 Labs)*
Introductory course in Programmable Logic Controller (PLC) Ladder Logic programming and troubleshooting PLC connected components and systems.  Also includes basic Human Machine Interface (HMI) navigation, connecting to a PLC, and program downloading.  *Prerequisite: AIT125.*

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**ICON LEGEND:**   **AGEC:** 🅰   **Intensive Writing:** *IW*   **Reading Required: RDG100:** ℛ   **SUN Course:** 🔘

## AIT215 Process Control Systems

*4 Credits (3 Lectures, 3 Labs)*

Introductory course in Process Control Systems design, operation, and tuning of Proportional, Integral, Derivative (PID) controllers for regulating flow, temperature, pressure, and level of industrial process variables. Includes manual control, feedback control, automated controls, analysis process setup, operate, and troubleshooting processes of control systems. Also includes typical Pipe and Instrument Diagram (P&IDs) symbols and tags along with the development of a basic P&ID drawing. *Prerequisite: AIT125.*

## AIT220 Fanuc Operations and Programming

*3 Credits (2 Lectures, 3 Labs)*

This course is for a technician, engineer, or programmer who must setup and troubleshoot programs on a HandlingTool software package. The course covers the Robot Operations outline intermixed with the tasks required to set up the HandlingTool application; test, run, and refine the program; and production setup.

## AIT225 Industrial Motors and Motor Control

*3 Credits (2 Lectures, 3 Labs)*

An introductory course in DC, single-phase AC, and 3-phase AC electric motors and motor control circuits. Includes electric motor control circuit components, motor control circuit applications, sequence circuits, and timer circuits. *Prerequisite or corequisite: AIT125.*

## AIT230 Robot Vision

*3 Credits (2 Lectures, 3 Labs)*

This course covers the basic tasks and procedures required for an operator, technician, engineer, or programmer to setup, teach, test, and modify iRVision applications on an R-30iB Robot Controller. *Prerequisite: Instructor Consent.*

## AIT250 Automated Industrial Technology Capstone

*3 Credits (3 Lectures)*

An examination of the integration of mechanical, hydraulic, pneumatic, electrical, piping, electronic control, and process control systems. Experience in designing, building, maintaining, troubleshooting, and repairing such integrated systems will be gained. *Prerequisite: Instructor Consent.*

## AIT270 Robotics I

*3 Credits (2 Lectures, 3 Labs)*

Fundamental principles of working safely with robots, and applications of and trends in industrial robotics. Includes types of robots, axes and coordinate systems, programming and operating robots. Also includes end effectors and collaborative robots. *Prerequisite: Instructor Consent.*

## AIT275 Robotics II

*3 Credits (2 Lectures, 3 Labs)*

Continuation of AIT270. Fundamental principles of working safely with robots; robot auxiliary, subsystems, and components. Also includes robot maintenance, troubleshooting, repair, and a basic robot design project. *Prerequisite: AIT270.*

## AIT291 Automated Industrial Technology Internship

*1 Credit (3 Labs)*

Supervised work experience in production environments. Includes experiences in maintenance, troubleshooting, repair of production environment and specific manufacturing processes. Also includes experiences in problem solving; working as a team; soft skills; time and resource management; and exposure to specific manufacturing processes. *Prerequisite: Instructor Consent.*

# ADMINISTRATION OF JUSTICE (AJS)

## AJS101 Introduction to Administration of Justice

*3 Credits (3 Lectures)* ◎*AJS1101* ⓐ *R*

History, philosophy, and structure of criminal justice systems. Topics covered include organization and jurisdiction of law enforcement, the courts, and corrections. Also covered are career opportunities and qualifying requirements, justice-related terminology and an introduction to law. *Prerequisite or corequisite: RDG100.*

## AJS123 Ethics and the Administration of Justice

*3 Credits (3 Lectures)* ⓐ*R*

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: RDG100.*

## AJS200 Current Issues in Administration of Justice

*3 Credits (3 Lectures)*

An in-depth study of current justice issues with all areas of the criminal justice system open to investigation. Topics may include capital punishment, mass shootings, immigration, hate crimes, terrorism, use of force by police, gun control, cyber-crime, and human trafficking. Global, transnational, and

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**ICON LEGEND:**    **AGEC:** ⓐ    **Intensive Writing:** *IW*    **Reading Required: RDG100:** *R*    **SUN Course:** ◎

*This catalog was prepared on the basis of the best information available at the time of publication. Catalog information is subject to changes without notice, obligation or liability.*

national issues will be examined. *Prerequisite: AJS101 or SOC101; ENG101.*

## AJS209 Substantive Criminal Law
*3 Credits (3 Lectures)*
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.*

## AJS212 Juvenile Justice Procedures
*3 Credits (3 Lectures)* a
History and development of juvenile justice theories, procedures, and institutions. *Prerequisites: ENG101; AJS101 or SOC101.*

## AJS224 Criminal Justice Administration
**Previously known as AJS224 Police Administration**
*3 Credits (3 Lectures)* a
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. *Prerequisites: AJS101 and ENG101.*

## AJS225 Criminology
*3 Credits (3 Lectures)* a *IW*
Theories of criminality and the economic, social and psychological impact of crime, victimization and relationships between statistics and crime trends. *Prerequisite: AJS101 or SOC101. Prerequisite or corequisite: ENG102.*

## AJS230 The Police Function
*3 Credits (3 Lectures)* a
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)*
History and development of correctional theories and institutions. *Prerequisite: AJS101.*

## AJS260 Procedural Criminal Law
*3 Credits (3 Lectures)* a
Introduction to procedural criminal law, focusing on court holdings, the procedural requirements, and effect on the daily operations of law enforcement. *Prerequisites: AJS101 and ENG101.*

## AJS270 Community Relations
*3 Credits (3 Lectures)* a
Recognition and understanding of community problems, police role in the community, methods of resolving crisis situations, victimology, ethnic and minority cultures, gender issues, and cooperating with personnel in community action programs and local police operations. *Prerequisites: AJS101 and ENG101.*

## AJS275 Criminal Investigations
*3 Credits (3 Lectures)*
Theory of criminal investigation, crime scene procedures, case preparation, interviewing and basic investigative techniques. *Prerequisites: AJS101 and ENG101.*

# ANIMAL SCIENCE (ANS)

## ANS101 Animal Industry
*3 Credits (2 Lectures, 3 Labs)* R
Fundamental principles of animal, dairy, equine and poultry science focusing on production, marketing and distribution. *Prerequisite: RDG100.*

## ANS102 Horsemanship I
*3 Credits (1 Lecture, 6 Labs)*
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. May be taken two times for credit.*

## ANS104 Human and Animal Interrelationships from Domestication to Present
*3 Credits (3 Lectures)* a R
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 or corequisite: RDG100.*

## ANS110 Horse Event Production
*3 Credits (2 Lectures, 3 Labs)*
Horse event production for future equine professionals including organizing shows, events or clinics related to the equine industry. *Prerequisite: ANS200.*

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**ICON LEGEND:** **AGEC:** a  **Intensive Writing:** *IW*  **Reading Required: RDG100:** R  **SUN Course:**

## ANS111 Horseshoeing I
*3 Credits (2 Lectures, 3 Labs)*
Fundamentals for the beginning horseshoer, including horse anatomy and physiology relative to the proper shoeing of horses.

## ANS121 Equine Facility Management I
*3 Credits (2 Lectures, 3 Labs)*
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
*3 Credits (2 Lectures and 3 Labs)*
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 Equine Behavior and Training I
**Previously known as ANS131 Training the Roping Horse**
*3 Credits (1 Lecture, 6 Labs)*
Fundamentals of starting a horse in roping events including the many stages of roping, from starting the horse in the pen through finishing the horse out of a roping box. The emphasis is 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: ANS121.*

## ANS172 Introduction to Western Horsemanship
*3 Credits (2 Lectures, 3 Labs)*
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)*
An introduction to the various careers and industries associated with the veterinary science field. Students build industry network relationships.

## ANS200 Introduction to Equine Science
*3 Credits (3 Lectures)* $\mathcal{R}$
Introduction to equine sciences including basic structure and function of equine anatomy, disease prevention and treatment, common breeds and nutritional requirements of horses. *Prerequisite: RDG100.*

## ANS202 Horsemanship II
*3 Credits (1 Lecture, 6 Labs)*
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. May be taken two times for credit. Prerequisites: ANS102 and ANS121.*

## ANS211 Advanced Horseshoeing
*3 Credits (2 Lectures, 3 Labs)*
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)*
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)*
Functional anatomy and systemic physiology of domestic animals with emphasis on physiological systems of importance to animal production. *Prerequisite: BIO100 or higher.*

## ANS216 Equine Anatomy and Physiology
*3 Credits (3 Lectures)*
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)*
Anatomy and physiology of reproduction, heat detection, semen handling, herd management and the techniques of artificial insemination.

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## ANS223 Advanced Equine Training
**Previously known as ANS223 Training for Timed Events**
*3 Credits (1 Lecture, 6 Labs)*
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. Prerequisite: ANS231*

## ANS226 Feeds and Feeding
*3 Credits (3 Lectures)*
Fundamentals of nutrition through feeds and feeding. Identification and classification of livestock feeds. Discuss anatomy and physiology of digestion. Computation of standards rations for livestock.

## ANS231 Equine Behavior and Training II
**Previously known as ANS231 Training the Roping Horse II**
*3 Credits (1 Lecture, 6 Labs)*
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. Recommended: ANS122.*

# ANTHROPOLOGY (ANT)

## ANT100 Anthropology and You
*3 Credits (3 Lectures)*
Introduction to cultural anthropology, linguistic anthropology, physical anthropology, and archaeology. Students will investigate the value of the study of anthropology in today's society.

## ANT101 Physical Anthropology and Archaeology
*4 Credits (3 Lectures, 3 Labs)* 🅰 ℛ
Evidence and processes of human evolution and of culture change. Includes primates, primate comparative anatomy and behavior, biomolecular variation, fossil hominids and their tools, variation models, heredity, environment and human biology, prehistoric culture and society. *Field work activities may be required. Prerequisite: RDG100. Recommended: Students with prior background in biology may have a richer course experience.*

## ANT102 Cultural Anthropology
*3 Credits (3 Lectures)* 🅰 ℛ
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: RDG100.*

## ANT200 Principles of Archaeology
*3 Credits (3 Lectures)* 🅰 ℛ
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: RDG100.*

## ANT201 Indians of the Southwest
*3 Credits (3 Lectures)* 🅰 ℛ
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: RDG100.*

## ANT203 Introduction to the Principles of Human Rights
*3 Credits (3 Lectures)* 🅰 ℛ
Examination of the history and evolution of human rights within the political economic, social, and cultural contexts of capitalism, race-based oppression, and gender-based oppression around the world. *Prerequisites: ENG100, RDG100.*

# ART (ART)

## ART100 Art Appreciation
*3 Credits (3 Lectures)* 🅰 ℛ
Introduction to the history, vocabulary, materials and processes of art with an emphasis on painting, sculpture and architecture. *Prerequisite or corequisite: RDG100.*

## ART101 Two-Dimensional Design
*3 Credits (2 Lectures, 3 Labs)* 🔘 *ART1112* 🅰 ℛ
A study of perception, emphasizing the elements and principles of design as a basis of all creative work in the visual arts. Emphasis on two-dimensional media. *Prerequisite or corequisite: RDG100.*

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**ICON LEGEND:**    **AGEC:** 🅰    **Intensive Writing:** *IW*    **Reading Required: RDG100:** ℛ    **SUN Course:** 🔘

## ART102 Three-Dimensional Design

*3 Credits (2 Lectures, 3 Labs)* ⊚ *ART1115* ⓐ 𝓡
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 or corequisite: RDG100.*

## ART103 Beginning Jewelry and Metalwork

*3 Credits (2 Lectures, 3 Labs)* ⓐ 𝓡
Basic jewelry design and metalwork techniques for the beginner. *Prerequisite or corequisite: RDG100.*

## ART104 Advanced Jewelry and Metalwork

*3 Credits (2 Lectures, 3 Labs)* ⓐ
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)* ⓐ 𝓡
An overview of hand building, wheel throwing, glazing, materials and concepts of ceramics as a foundation for further work in ceramic arts. *Prerequisite or corequisite: RDG100.*

## ART106 Ceramics II

*3 Credits (2 Lectures, 3 Labs)* ⓐ
Instruction in advanced ceramic techniques and in-depth study of one or more construction techniques and/or surface treatments. *May be taken up to four times for credit. Prerequisite: ART105.*

## ART107 Drawing I

*3 Credits (2 Lectures, 3 Labs)* ⊚ *ART 1111* ⓐ 𝓡
Introductory study of linear perspective, classical shading theory and composition using basic drawing media, including perspective theory, local values of objects, depiction of three-dimensional space and the basic principles of design. *Prerequisite or corequisite: RDG100.*

## ART108 Intermediate Drawing

*3 Credits (2 Lectures, 3 Labs)*
Drawing with emphasis upon the creative use of various media, tools, supports and techniques as a means of expression. *May be taken four times for credit. Prerequisite: ART107* ⊚. *Recommended: ART101* ⊚.

## ART109 Color Theory

*3 Credits (2 Lectures, 3 Labs)* ⓐ
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)*
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)*
Exploration of color, composition, techniques and subject matter in painting media. *Prerequisite: ART201. Recommended: ART101* ⊚.

## ART207 Art History I

*3 Credits (3 Lectures)* ⊚ *ART 1101* ⓐ 𝓡
A survey of the history of art from the Prehistoric Era through 1300 C.E. *Prerequisite: RDG100.*

## ART208 Art History II

*3 Credits (3 Lectures)* ⊚ *ART 1102* ⓐ 𝓡
A survey of the history of art from 1300 CE to the present. *Prerequisite: RDG100.*

# ASTRONOMY (AST)

## AST101 Survey of Astronomy

*4 Credits (3 Lectures, 3 Labs)* ⓐ 𝓡
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: RDG100, MAT087 or MAT097.*

# BUILDING CONSTRUCTION TECHNOLOGY (BCT)

## BCT100 NCCER Core

*5 Credits (3 Lectures, 6 Labs)*
Introduction to the NCCER core curriculum. Topics include knowledge of all safety rules, pre- and post-operating equipment inspections, builder's level readings, identifying needed repairs or routine maintenance jobs, and maintaining records of maintenance.

## BCT121 Industrial Carpentry

*5 Credits (3 Lectures, 6 Labs)*
Introduction to industrial carpentry. Topics include knowledge of all safety rules, OSHA regulations, building materials,

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**ICON LEGEND:**   **AGEC:** ⓐ   **Intensive Writing:** *IW*   **Reading Required: RDG100:** 𝓡   **SUN Course:** ⊚

fasteners, adhesives, hand and power tools, and basic stair layout.

## BCT133 Concrete
*3 Credits (3 Lectures)*
Basics of concrete construction are covered, including slump, composition, and aggregate concrete.

## BCT140 Introduction to Concrete Finishing
*2 Credits (2 Lectures)*
The basics of concrete finishing construction, including concepts, terminology, safety, code, and applications.

## BCT141 Industrial Concrete
**Previously known as BCT141 Concrete Finishing II**
*5 Credits (3 Lectures, 6 Labs)*
Application of advanced concrete finishing construction, including finishes, mix composition, and quality practices.

## BCT150 Industrial Safety and OSHA 30
**Previously known as BCT150 OSHA 30**
*3 Credits (2 Lectures, 3 Labs)*
A thirty-hour course in construction industry safety. Using OSHA standards as a guide, students will receive instruction in construction safety and health principles to help prevent injury. Special emphasis is placed on those areas that are the most hazardous. Topics include but are not limited to: OSH Act, safety programs, fall protection, personal protective equipment, stairways and ladders, excavations and confined space entry.

## BCT180 Communication for the Trades
*3 Credits (2 Lectures, 3 Labs)*
Develop a working vocabulary of Spanish or English, which includes words to facilitate communication with coworkers about construction trade issues. Also included is discussion of cultural issues that are crucial for effectively bridging communication gaps in the building industry.

## BCT221 Advanced Industrial Carpentry
*5 Credits (3 Lectures, 6 Labs)*
Advanced industrial carpentry training. Topics include knowledge of management safety concepts, building codes, project time management, advanced building techniques, and construction job layout.

## BCT296 Industrial Carpentry Internship
**Previously known as BCT296 Construction Apprenticeship**
*3 Credits (3 Internships)*
Construction industry placement tailored to the students' academic program pathway, skill set, and abilities.

# BIOLOGY (BIO)

## BIO100 Biology Concepts
*4 Credits (3 Lectures, 3 Labs)* 🅰 ℛ
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: RDG100.*

## BIO109 Natural History of the Southwest
*4 Credits (3 Lectures, 3 Labs)* 🅰 ℛ
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: RDG100.*

## BIO156 Introductory Human Biology
**Previously known as BIO156 Human Biology for Allied Health**
*4 Credits (3 Lectures, 3 Labs)* 🅰 ℛ
Introductory biology course with an emphasis on human biology. Topics include fundamental concepts of cell biology, histology, genetics, and microbiology. *Prerequisite: RDG100.*

## BIO160 Introduction to Human Anatomy and Physiology
*4 Credits (3 Lectures, 3 Labs)* 🅰ℛ
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: RDG100.*

## BIO181 General Biology I
*4 Credits (3 Lectures, 3 Labs)* 🔘 *BIO 1181*🅰ℛ
Biological principles of structure and function at the molecular and cellular levels, and processes of scientific inquiry. Field trips may be required at student expense. *Prerequisite: RDG100. Recommended: CHM130*🔘 *or one year of high school chemistry.*

## BIO182 General Biology II
*4 Credits (3 Lectures, 3 Labs)* 🔘 *BIO 1182*🅰
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*🔘.

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**ICON LEGEND:**    **AGEC:** 🅰    **Intensive Writing:** *IW*    **Reading Required: RDG100:** ℛ    **SUN Course:** 🔘

### BIO201 Human Anatomy and Physiology I

*4 Credits (3 Lectures, 3 Labs)* ⊚ *BIO 2201* ⓐℛ

A study of structure and function of the human body, including 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: RDG100 and (BIO156 or BIO181* ⊚ *or a grade of C or better on the Introductory Biology Assessment).*

### BIO202 Human Anatomy and Physiology II

*4 Credits (3 Lectures, 3 Labs)* ⊚ *BIO 2202* ⓐℛ

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* ⊚*, RDG100.*

### BIO205 Microbiology

*4 Credits (3 Lectures, 3 Labs)* ⊚ *BIO 2205* ⓐ

Examines the structure and function of microorganisms and the role they play in human disease with emphasis on classification and characteristics of microorganisms, microbial metabolism and genetics, pathogenesis, immunology and epidemiology. Laboratory work includes the practice of microscopy, culturing, aseptic technique and identification of microorganisms through biochemical and other tests. Course content is designed for students interested in Microbiology and Healthcare pathways. *Prerequisites: BIO156 with minimum grade of C, or BIO181* ⊚ *with minimum grade of C, or Introductory Biology Assessment with minimum grade of C.*

## BUSINESS (BUS)

### BUS100 Introduction to Business

*3 Credits (3 Lectures)* ℛ

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 or corequisite: RDG100.*

### BUS101 Business Mathematics

*3 Credits (3 Lectures)* ℛ

Business and accounting topics covered include computing discounts, reconciling bank statements, computing sales taxes and property taxes, utilizing present value computations, mortgages, installment buying, and computing basic statistical descriptors of central tendency. Basic computations of payroll are covered in detail. Includes a review of arithmetical fundamentals such as fractions, decimals, percents and basic algebra. *Prerequisite or corequisite: RDG100.*

### BUS111 Principles of Logistics and Supply Chain Management

*3 Credits (3 Lectures)*

Introduction to the field of logistics and supply chain management including development of logistics systems, careers in logistics, distribution planning, supply chain principles, and customer service. Topics include: purchasing, inventory control, physical distribution, warehousing, transportation methods, and packaging.

### BUS120 Personal Money Management

*3 Credits (3 Lectures)* ℛ

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: RDG100.*

### BUS122 Small Business Management

*3 Credits (3 Lectures)* ℛ

Factors in planning, owning and managing a small business with use of case materials to develop entrepreneurship and managerial/marketing skills. *Prerequisite or corequisite: RDG100. Offered every fall and spring.*

### BUS123 Business Relations

*3 Credits (3 Lectures)* ⓐℛ

This course explores the development of interpersonal skills and increasing the understanding of the underlying dynamics of human interactions necessary for improving supervision and leadership in the workplace. Topics include work/life balance, communication processes, self-esteem, leadership/management styles and theories, conflict and stress management, developing organizational cultures which value diversity, traits of great presenters, and ethics. *Prerequisite or corequisite: RDG100.*

### BUS124 Inventory Control

*3 Credits (3 Lectures)*

Study of inventory control concepts and techniques, including cost concepts, determining size and nature of inventory, planning and control, forecasting, transportation, security, and the tools used.

## BUS180 Introduction to Marketing

*3 Credits (3 Lectures)* ℛ

An introduction to marketing, including product, principles, practices and total marketing process planning and analysis. *Prerequisite or corequisite: RDG100.*

## BUS190 Principles of Management and Leadership

*3 Credits (3 Lectures)* 🄰ℛ

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 or corequisite: RDG100.*

## BUS201 Legal Environment of Business

*3 Credits (3 Lectures)* ℛ

An examination of the legal framework governing rules of conduct among businesses and the legal implications of establishing business policy. *Prerequisite: RDG100.*

## BUS207 Business Communications

*3 Credits (3 Lectures)*

Written, oral, and visual communication delivered through digital and non-digital channels with an emphasis on the shift to mobile communication and connectivity in business today. *Prerequisite: ENG101*⦿.

## BUS208 Business Statistics

*3 Credits (3 Lectures)* ⦿ *BUS 2201* ℛ

A study of business applications using descriptive and inferential statistics, measurement of relationships and statistical process control management techniques. *Prerequisites: RDG100; MAT151*⦿; *(CIS120*⦿ *or instructor consent).*

## BUS216 Transportation and Traffic Management

*3 Credits (3 Lectures)*

Study of the domestic freight transportation system and the demand for freight movement. Topics include laws, regulations, pricing, and policies, as related to traffic management, customer service, and security. *Recommendation: Basic computer skills.*

## BUS220 Retail Management

*3 Credits (3 Lectures)* ℛ

Management principles of retailing with application to small, medium, and large stores, evaluating store locations, layout, employment, merchandising management and current trends in retailing. *Prerequisite or corequisite: RDG100. Offered every fall.*

## BUS227 Introduction to Purchasing and Supply Management

*3 Credits (3 Lectures)*

Survey of basic purchasing functions and supply management. Includes determining requirements and quantities, developing policies and procedures for purchasing, making purchasing decisions, receiving acceptable goods, arranging packaging and shipping, and managing inventory levels.

## BUS260 Applied Business Seminar

*3 Credits (3 Lectures)*

This is a capstone course that includes community service learning project experience or possible internship 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. Open to students who have successfully completed a minimum of 30 college credits. *Prerequisites: CIS110 or CIS120*⦿ *and successful completion of 30 college credits. Offered every fall and spring.*

## BUS292 Fundamental of Logistics - Organizational Management

*3 Credits (3 Lectures)*

Introduction to the fundamentals of logistics, including procurement, inventory, transportation, warehousing, materials handling, packaging, information management, sustainability and international logistics of supply chain management.

# COMPUTER BUSINESS APPLICATIONS (CBA)

## CBA112A MS Word Basic

*1 Credit (3 Labs)*

Introduction to Microsoft Word covering the basic skills needed to create business documents. *Recommended: Basic Windows and file management knowledge.*

## CBA112B MS Word Intermediate

*1 Credit (3 Labs)*

Build multi-paged documents and web pages with enhanced styles, charts, tables, custom building blocks, and lists in MS Word. Use mark-up and advanced editing tools and create merged documents. *Recommended: Basic Windows, file management knowledge, and skills covered in CBA112A.*

## CBA112C MS Word Advanced

*1 Credit (3 Labs)*

Build advanced business documents that include macros, navigation, hyperlinks and forms in MS Word. *Recommended:*

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**ICON LEGEND:** **AGEC:** 🄰 **Intensive Writing:** *IW* **Reading Required: RDG100:** ℛ **SUN Course:** ⦿

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*Knowledge of computer basics, file management, and skills covered in CBA113A and CBA113B.*

## CBA113A MS Excel Basic

*1 Credit (3 Labs)*
Introduction to MS Excel covering the basics of spreadsheets. Topics include: spreadsheet design, set-up, and management; creating charts and tables; using functions and what-if analysis tools. *Recommended: Basic Windows and file management knowledge.*

## CBA113B MS Excel Intermediate

*1 Credit (3 Labs)*
Use MS Office Excel to analyze data with financial and look-up functions, charts and diagrams, advance sorting and filtering, and pivot tables and charts.

## CBA113C MS Excel Advanced

*1 Credit (3 Labs)*
Use MS Excel's analysis tools, database functions, and macros to interpret data and create reports.

## CBA114A MS Access Basic

*1 Credit (3 Labs)*
Introduction to MS Access and database basics.

## CBA114B MS Access Intermediate

*1 Credit (3 Labs)*
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)*
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)*
Introduction to creating, editing and delivering basic presentations using MS PowerPoint. *Recommendation: Basic Windows and file management knowledge.*

## CBA116B MS PowerPoint Advanced

*1 Credit (3 Labs)*
Build and deliver professional MS PowerPoint presentations with advanced graphics, custom animations, hyperlinks, videos, and charts. *Recommendations: Basic computer and file management skills and basic PowerPoint skills.*

## CBA117A MS Publisher Basic

*1 Credit (3 Labs)*
Create simple publications using MS Publisher, including use of wizards, templates, images, graphic boxes, and other special enhancements. *Recommendation: Basic Windows and file management knowledge.*

## CBA117B MS Publisher Intermediate

*1 Credit (3 Labs)*
Create customized publications, business forms, tables, and web pages using MS Publisher. *Prerequisite: CBA117A.*

## CBA118 MS Outlook

*1 Credit (1 Lecture)*
Use Microsoft Outlook to send, receive and organize email, create and organize contacts, and schedule appointments and tasks. *Satisfactory/Unsatisfactory grading option is available. Recommendation: Basic Windows and file management knowledge.*

## CBA119 MS Project

*1 Credit (3 Labs)*
Learn features and tools of Microsoft Project to plan, create, modify, and streamline project management in business and education. *Recommendations: Basic computer and file management skills.*

## CBA133A Spreadsheet Applications in Excel

*3 Credits (2 Lectures, 3 Labs)*
Create, format, and print both structured and "what-if" spreadsheets using formulas and functions, charting, tables and analysis. Skills learned will cover the Core Level skills for Microsoft Office Specialist (MOS) Certification: Microsoft Office Excel 2013. *Prerequisites: Basic Windows and file management knowledge; BUS101.*

## CBA133B Advanced Spreadsheet Applications in Excel

*3 Credits (2 Lectures, 3 Labs)*
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. Skills learned will include the Excel 2013 Expert Part One and Part Two Level skills for Microsoft Office Specialist (MOS) certification. *Prerequisite: CBA133A. Recommended: Basic accounting knowledge.*

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# CIVIL TECHNOLOGY (CET)

## CET11 Introduction to Surveying for Heavy Equipment Operators

*3 Credits (2 Lectures, 3 Labs)*
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)*
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)*
Theory and application of plane surveying, including horizontal and vertical measurements, differential leveling, topographic mapping, and construction staking. Grade staking skills are covered including percent, ratio, stake reading, hubs and lath, grade transfers, offsets, laser use and ground safety

# CHEMISTRY (CHM)

## CHM090 Preparation for General College Chemistry

*1 Credit (1 Lecture)* 𝓡
The basic aspects of chemistry, including matter, measurement, unit conversions, atoms and subatomic particles, molecules, ions, ionic bonding, moles, stoichiometry, and problem solving skills. *Prerequisites: MAT097 or higher, RDG100. Prerequisite or corequisite: CHM151* 🔘.

## CHM130 Fundamental Chemistry

*4 Credits (3 Lectures, 2 Labs, 1 Recitation)* 🔘 *CHM 1130* ⓐ𝓡
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: MAT087 or higher, RDG100.*

## CHM138 Chemistry for Allied Health with Lab

*4 Credits (3 Lectures, 2 Labs, 1 Recitation (90 hours))* ⓐ𝓡
A one semester lecture and lab course that is an introduction to general, organic and biological chemistry for allied health. This course covers the major topics in general chemistry which is the foundation for understanding organic and biological chemistry, and the fundamentals of organic chemistry in such a way to provide support for the biological chemistry portion, and has an overview of the most important and timely topics in biological chemistry. Topics covered in lecture and lab include measurements, atomic structure, bonding, nomenclature, states of matter, solutions, reactions, hydrocarbons, functional groups, carbohydrates, lipids, proteins, enzymes, and metabolic pathways. Labs will be appropriate for general, organic and biological chemistry for allied health. *Prerequisites: BUS101 or (MAT087 or higher); RDG100.*

## CHM151 General Chemistry I

*4 Credits (3 Lectures, 2 Labs, 1 Recitation)* 🔘 *CHM1151* ⓐ𝓡
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: CHM090 or CHM130* 🔘 *or one year of high school chemistry with a grade of "C" or better; and MAT097. Corequisite: If none of the prerequisites are fulfilled, CHM090 must be taken as a corequisite.*

## CHM152 General Chemistry II

*4 Credits (3 Lectures, 2 Labs, 1 Recitation)* 🔘 *CHM 1152* ⓐ
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. Prerequisite: CHM151* 🔘.

## CHM235 General Organic Chemistry I

*4 Credits (3 Lectures, 2 Labs, 1 Recitation)* 🔘 *CHM 2235* ⓐ
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, and conjugated dienes. 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* 🔘.

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**ICON LEGEND:**  **AGEC:** ⓐ   **Intensive Writing:** *IW*   **Reading Required: RDG100:** 𝓡   **SUN Course:** 🔘

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## CHM236 General Organic Chemistry II

*4 Credits (3 Lectures, 2 Labs, 1 Recitation)* ⊚ *CHM 2236* ⓐ

A continuation of CHM235 ⊚, explore the general principles of organic chemistry with advanced continued emphasis on reactivity and synthesis. Topics covered are alcohols and thiols, ethers and epoxides, 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* ⊚.

# COMPUTER INFORMATION SYSTEMS (CIS)

## CIS110 Fundamentals of Computer Literacy

*3 Credit (2 Lectures, 3 Labs)*

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. Recommendation: 9th Grade reading level.*

## CIS112 Web Design Fundamentals with HTML

**Previously known as CIS112 Web Page Design Fundamentals**

*3 Credits (2 Lectures, 3 Labs)*

Teaches HTML and CSS topics such as text configuration, color configuration, and page layout, with focus on design, accessibility, and web standards. Covers HTML5, CSS, JavaScript, design, e-commerce, and promotion strategies; considered fundamental to contemporary web development. An emphasis on hands-on practice provides a well-rounded foundation to help students as they pursue careers as web professionals. *Recommendation: Basic computer user skills, i.e. ability to use a mouse and a keyboard, save a file, and use the internet to find information. Typically offered: Spring.*

## CIS113 E-Commerce and Social Media

*3 Credits (3 Lectures)*

Introduction to Electronic Commerce and Social Media: including marketing, advertising, digital payment systems, professionalism, and ethical, legal, and security considerations. *Recommended: Basic computer skills, including file management.*

## CIS114 Web Development Tools

**Previously known as CBA210 Web Development Tools**

*3 Credits (2 Lectures, 3 Labs)*

Theory, design, and web construction covering: information architecture, web project management, scenario development, performance evaluations, and browser incompatibility. Create and manage websites and applications using current tools in areas such as content management, photo editing, multimedia, HTML and CSS. *Prerequisite: CIS120* ⊚.

## CIS119 Set-up and Maintenance of Personal Computers

**Previously known as CIS261 Service and Maintenance of Personal Computers**

*3 Credits (2 Lectures, 3 Labs)*

Theory and application of servicing personal computers. Set-up, upgrade, and troubleshoot. Topics include advanced configuration, diagnoses and repair of hardware problems, workstation setup and configuration, storage and optical drives, random-access memory modules, motherboard-level diagnosis, and repair, installation, replacement, and upgrade of expansion cards. *Recommendation: Basic computer user skills, i.e. ability to use a mouse and a keyboard, save a file, and use the internet to find information.*

## CIS120 Survey of Computer Information Systems

*3 Credits (2 Lectures, 3 Labs)* ⊚ *CIS1120* ℛ

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: RDG100.*

## CIS121 Windows Operating System Fundamentals

**Previously known as CIS121 Windows Operating System and Hardware Maintenance**

*3 Credits (2 Lectures, 3 Labs)*

Course covers proper installation of the operating system, the features of the system, maximum utilization of the user interface, efficient file handling, create, edit and delete user profiles, create a functional user environment, create and utilize shared network resources, utilize troubleshooting skills to overcome simple and complex problems in the Microsoft operating system environments. May lead to Microsoft 365 Certified Modern Desktop Administration Associate. *Recommendation: Basic computer user skills, i.e. ability to use a mouse and a keyboard, save a file, and use the internet to find information.*

## CIS123 Introduction to Programming

*3 Credits (2 Lectures, 3 Labs)*
Concepts of problem solving using an object-oriented programming language. Topics include data types, control structures, classes, arrays, methods and argument passing, iteration, inheritance and programming and documentation style. *Prerequisite: CIS120 or EGR102.*

## CIS130 Networking Essentials

*3 Credits (2 Lectures, 3 Labs)*
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. *Prepares students for Network+ Certification. Recommendation: Basic computer user skills, i.e. ability to use a mouse and a keyboard, save a file, and use the internet to find information.*

## CIS150 Windows Server

*3 Credits (2 Lectures, 3 Labs)*
A study of a currently active and deployed Microsoft server network operating system 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. *May lead to Microsoft Certification. Recommendation: Basic computer user skills, i.e. ability to use a mouse and a keyboard, save a file, and use the internet to find information.*

## CIS153 Network Security

*3 Credits (2 Lectures, 3 Labs)*
Identify security risks and plan and design Windows network security solutions on currently-supported operating systems used in business organizations 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. Prerequisites: CIS130 and CIS150. Offered every spring.*

## CIS162 Comparative Programming Languages

*3 Credits (2 Lectures, 3 Labs)*
Explores alternative ways of specifying computation and helps in understanding and harnessing the power of various dynamic object-oriented and scripting programming languages. Learn to understand the characteristics of the programming paradigms supported by programming languages and be able to apply some of the techniques in other languages. Increases the ability to learn new languages paramount in today's job market.

*Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS123.*

## CIS170 JavaScript Programming

*3 Credits (2 Lectures, 3 Labs)*
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. *Prerequisites: CIS112 and CIS123.*

## CIS176 Python Programming

*3 Credits (2 Lectures, 3 Labs)*
Introduction to the Python programming language. Covers the basic programming constructs of Python, including basic data types, control structures, decision constructs, regular expressions, input and output techniques, functions, object-oriented design, lists, dictionaries, file I/O, and exception handling. *Satisfactory/Unsatisfactory grading option available. Prerequisite: CIS123.*

## CIS178 Database Fundamentals and Programming

**Previously known as CIS129 Database Fundamentals**
*3 Credits (2 Lectures, 3 Labs)*
Fundamentals of relational database management systems and their use in business environments. Topics include: database classifications, data models with extensive coverage of the relational model, entity-relationship and extended entity models, normalization, advanced data modeling, and Structured Query Language (SQL) programming. Students design and implement a real-world relational database and create complex SQL queries to retrieve data from the database. *Prerequisite: CIS120.*

## CIS181 C# .NET

*4 Credits (3 Lectures, 3 Labs)*
Object-oriented programming language to create visual applications for Windows, MS Office, the web, controls, and more. Created to work within the .NET framework. Prerequisite: CIS123. Satisfactory/Unsatisfactory grading option available. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS123.*

## CIS210 Cloud Computing

*3 Credits (3 Lectures)*
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.

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**ICON LEGEND:**    **AGEC:** a     **Intensive Writing:** *IW*     **Reading Required: RDG100:** *R*     **SUN Course:**

*Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS150. Offered every fall.*

## CIS213 Linux Server

*3 Credits (2 Lectures, 3 Labs)*

Learn the fundamentals of working on the Linux platform including installation, file system management and administration. Emphasis on the command-line BASH shell command interface. Introduction to the GUI options with Linux. Learn about initialization options, how to manage processes and operating system utilities, and administration tasks, including network configurations. *May lead to Linux Certification. Prerequisite: CIS130. Offered every spring.*

## CIS215 CISCO Routers

*3 Credits (2 Lectures, 3 Labs)*

Learn OSI internetworking, Ethernet networking, TCP/IP, subnetting and Variable Length Subnet Masks (VLSNs) and how to design a network design using VLSNs. Learn the Cisco IOS (Internetworking Operating System) and command-line interfaces. Develop management skills with router configurations, including static and dynamic routing with various protocols including RIP, RIPv2, EIGRP, and OSPF. *May lead to CISCO Certification. Prerequisite: CIS130. Offered every fall.*

## CIS216 Java Programming

*4 Credits (3 Lectures, 3 Labs)*

Thorough coverage of class construction, inheritance, Applets Exception Handling, String Buffer class, and JavaFX 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 available. Offered every fall.*

## CIS218 C++ Programming

*4 Credits (3 Lectures, 3 Labs)*

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.*

## CIS225 Practical Applications in Cybersecurity

*3 Credits (2 Lectures, 3 Labs)*

A study of cyber security that integrates knowledge gained through previous coursework and experience and builds on that conceptual foundation through integrative analysis, practical application, and critical thinking. The goal is to protect an organization's critical information and assets by ethically integrating cyber security best practices and risk management throughout an enterprise. Emerging issues in cyber security are considered. Provides extensive hands-on exercises to reinforce key course concepts. *Offered every spring.*

## CIS231 Object Oriented Programming and Data Structures

**Previously known as CIS231 Introduction to Data Structures**

*4 Credits (3 Lectures, 3 Labs)*

Topics include stacks and queues, recursion, lists, binary search trees, iteration over collections, hashing, searching, sorting algorithms, Big-O notation, and standard collection classes. Also included is an overview of advanced topics. *May lead to Oracle Program Developer Certification. Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS216.*

## CIS232 Advanced Web Development

**Previously known as CIS232 Advanced Web Development with Game Programming**

*3 Credits (3 Lectures)*

Opportunity to build on existing knowledge of HTML5 and JavaScript. Techniques used to build mobile games include the use of JQuery, CSS3, and Canvas. Topics include standard patterns for building games in HTML5, methodology, popular game engines, frameworks, building Android or iOS apps, and publishing. *Satisfactory/Unsatisfactory grading option is available. Prerequisites: CIS123, CIS170.*

## CIS233 Web Application Development Using PHP

*3 Credits (2 Lectures, 3 Labs)*

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: CIS112, CIS123.*

## CIS252 Windows Network Infrastructure

*3 Credits (2 Lectures, 3 Labs)*

Windows networking class where students learn about and complete hands-on labs to configure multiple servers in a network using currently-supported operating systems. Topics covered include Active Directory configuration, DNS 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. Prerequisite: CIS150. Offered every fall.*

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**ICON LEGEND:**     **AGEC:** a     **Intensive Writing:** *IW*     **Reading Required: RDG100:** *R*     **SUN Course:** ◉

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## CIS253 Windows Server Identity

*3 Credits (2 Lectures, 3 Labs)*

Install, configure, secure, and manage the identity services using the functionality and tools within the Microsoft Server. *May lead to Microsoft certification. Prerequisite: CIS252.*

## CIS263 Cloud Operations

*3 Credits (2 Lectures, 3 Labs)*

Solving problems and troubleshooting various scenarios; creating automatable and repeatable deployments of cloud networks and systems, configuring and deploying various cloud services, and building a variety of infrastructures. *Prerequisite: CIS210.*

## CIS273 Network Defense

*3 Credits (2 Lectures, 3 Labs)*

Cybersecurity principles and techniques. Topics include the tools and tactics used in assessing the security posture of computer networks; the steps involved in a penetration testing methodology-network footprinting and discovery, service enumeration, attack vector evaluation, and vulnerability assessments; and the legal and ethical issues raised by penetration testing. *Prerequisite: CIS130.*

## CIS275 Computer Forensics and Investigation

*3 Credits (2 Lectures, 3 Labs)*

Fundamentals of Computer Forensics: 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: CIS121, CIS119.*

# CLINICAL LABORATORY ASSISTANT (CLA)

## CLA155 Introduction to Phlebotomy

**Previously known as HKS155 Introduction to Phlebotomy**

*3 Credit (2 Lectures, 3 Labs)* ℛ

This course is an introduction to the basic knowledge, attitude, skills and practical experience necessary for the safe and successful collection of blood samples via venipuncture using a vacutainer, butterfly, syringe, and micro collection techniques on real patients in a hospital and doctor's office setting under supervision. In addition, this course prepares students to take the national exam to become a Certified Phlebotomist, which ensures a higher standard for phlebotomy jobs. *Prerequisites: High school diploma or GED, immunization required, and RDG100. Corequisite: CLA255. Offered every summer.*

## CLA169 Clinical Laboratory Assistant Basics I

**Previously known as HPM169 Clinical Laboratory Assistant Basics I**

*4 Credits (3 Lectures, 3 Labs)*

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.*

## CLA170 Clinical Laboratory Assistant Basics II

**Previously known as HPM170 Clinical Laboratory Assistant Basics II**

*4 Credits (3 Lectures, 3 Labs)*

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: CLA169.*

## CLA175 Clinical Laboratory Assistant Practicum

**Previously known as HPM175P Clinical Laboratory Assistant Practicum**

*3 Credits (3 Practicum)*

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 CLA175, instructor consent. Offered every spring.*

## CLA255 Phlebotomy Practicum

**Previously known as HKS255 Phlebotomy Practicum**

*3 Credits (3 Practicum)*

This course is an introduction to the basic knowledge, attitude, skills, and practical experience necessary for the safe and successful collection of blood samples via venipuncture using a

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**ICON LEGEND:**    **AGEC:** 🅰    **Intensive Writing:** *IW*    **Reading Required: RDG100:** ℛ    **SUN Course:** ◎

vacutainer, butterfly, syringe, and micro collection techniques on real patients in a hospital or doctor's office setting under supervision. This course prepares students to take the national exam to become a Certified Phlebotomist, which ensures a higher standard for phlebotomy jobs. *Corequisite: CLA155. Offered every summer.*

# CERTIFIED NURSING ASSISTANT (CNA)

## CNA125 Nursing Assistant
*7 Credits (6 Lectures, 3 Labs)* $\mathcal{R}$
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 three years after the absolute discharge of sentence. All court-ordered terms of probation or parole must be completed at least three years prior to the date of application. *Students are required to have criminal background check, health and drug screening, and AHA BLS Provider Level CPR. Prerequisites: HS diploma or GED, proof of legal presence, MAT087, and RDG100, or appropriate math and reading placement test scores.*

## CNA125A Nursing Assistant Advanced Placement
*6 Credits (5 Lectures, 3 Labs)* $\mathcal{R}$
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 three years after absolute discharge of sentence. All court ordered terms of probation or parole must be completed at least three years prior to the date of application. This course is specifically for qualified healthcare workers who want to earn the additional certification and gain entry into a nursing program. Review and Approval of completed coursework sent to D&S testing when all requirements have been met. The student is then eligible to sit for the nursing assistant certification examination and to take the practical examination. *Students are required to have criminal background check, health and drug screening, and AHA BLS Provider Level CPR. Prerequisites: HS diploma or GED, MAT087 or appropriate test score, and RDG100. Also, at least one (1) year full-time employment in the direct provision of health care within five (5) years OR successful completion of course work that includes direct patient care experiences in allied health, medicine, or nursing in the past five (5) years.*

*Specific admission criteria include:*

*1. At least one (1) year full-time employment in the direct provision of health care within five (5) years OR successful completion of course work that includes direct patient care experiences in allied health, medicine, or nursing in the past five (5) years.*
*2. Meeting the same course outcomes as the traditional course by taking all examinations and completing all skills demonstrations.*
*3. Successful completion of all clinical objectives during a 16-hour clinical rotation, under direct supervision and observation of a qualified RN instructor, in a long-term care facility.*

# COMMUNICATION STUDIES (COM)

## COM100 Fundamentals of Human Communication
*3 Credits (3 Lectures)* 🔴 *COM 1100* 🅰 $\mathcal{R}$
Explore the benefits of effective communication in daily interactions through theoretical and practical approaches to understanding the human communication process. Students will learn communication skills to enhance interpersonal relationships, increase their ability to work in collaborative groups and develop effective presentation skills. *Prerequisites: RDG100, and ENG100 or ENG121.*

## COM101 Interpersonal Communication
*3 Credits (3 Lectures)* 🔴 *COM 1110* 🅰 $\mathcal{R}$
Explore the benefits of effective communication in daily interactions through theoretical and practical approaches to understanding the human communication process. Students will learn communication skills to enhance interpersonal relationships, increase their ability to work in collaborative groups and develop effective presentation skills. *Prerequisites: RDG100, and ENG100 or ENG121 or appropriate placement test scores.*

## COM202 Small Group Communication
*3 Credits (3 Lectures)* 🔴 *COM 2271* 🅰 $\mathcal{R}$
Group collaboration and small group communication is essential to many professions in the world of business, education, health care, engineering, public safety, hospitality, sports and fitness, and many more. In small groups students will learn to successfully accomplish meaningful tasks. Along the way students will experience the benefits of positive group dynamics by establishing clear goals, anticipating and solving problems, participating in leadership, and building cohesion. *Prerequisites: RDG100, and ENG100 or ENG121 or appropriate placement test scores.*

## COM206 Public Speaking

*3 Credits (3 Lectures)* 🄰

Gain confidence and poise through hands-on experiences preparing and delivering a variety of presentations. Effective strategies for creating effective and engaging content and delivery tailored to specific audiences is emphasized. Students will deliver extemporaneous presentations using principles of audience adaptation, development of effective content, purposeful organization, appropriate visuals, and proper vocal and physical delivery techniques. Presentations will require research and outlining. *Corequisite: ENG101* 🔘.

## COM207 Introduction to Communication Inquiry

*3 Credits (3 Lectures)* 🄰*IW*

Overview of theory and methodological practice in communication. Emphasis on the development of critical thinking and scholarly writing skills through active participation in the research process. *Prerequisites: COM100* 🔘, *ENG102* 🔘. *Recommended: Students may wish to take several COM courses (in addition to the required COM100* 🔘 *course) prior to taking this course.*

## COM259 Professional Communication

*3 Credits (3 Lectures)* 🄰

Develop communication and critical thinking skills necessary for securing a job and succeeding in diverse, ever-changing workplaces of the 21st Century. Students will explore ways to manage a professional image on the job, in professional settings and even in social media outlets. In addition, they will learn to present ideas clearly and concisely in meetings and in the interview process, build confidence in sharing ideas in collaborative projects, and speak effectively in presenting information. This class emphasizes developing communication skills that will build professionalism, personal presence, and potential for advancement in any career. *Corequisite: ENG101* 🔘.

## COM263 Intercultural Communication

*3 Credits (3 Lectures)* 🄰 ℛ

Gain knowledge and skills to aid interaction in a culturally diverse world. Students will discover how cultural beliefs and values guide human behavior and communication including their own. Students will explore how biases and barriers interfere with effective intercultural interaction. Students will build skills for effective interaction with culturally different others. *Prerequisites: RDG100, and ENG100 or ENG121 or appropriate placement test scores.*

## COM275 Communication Studies Capstone

*3 Credits (3 Recitations)*

This course requires students to advance and extend their cumulative study of communication theories and practices. It includes discussion of coursework via small groups, independent research, or creative projects presented to an audience. Students must complete a final project to earn a Communication Studies Certificate or Communication Skills for the Professional Certificate. Project must demonstrate synthesis and application of discipline knowledge. *Prerequisite: Completion of 9 credits of COM courses.*

# COUNSELING/PERSONAL DEVELOPMENT (CPD)

## CPD110 Transition to College and Career

**Previously known as CPD110 Orientation to College**

*3 Credits (3 Lectures)* 🄰ℛ

Focus on helping students develop the knowledge, skills, and attitudes needed to successfully examine their own lives, explore and evaluate a wide range of education and career options, and make reasoned and researched goals for their future. *Prerequisite or corequisite: RDG100. Recommended for all new students.*

# COMMUNITY PUBLIC HEALTH (CPH)

## CPH160 Introduction to Community Health Worker

*3 Credits (3 Lectures)*

Overview of the various roles, skills, and functions of the Community Health Worker. This is part of the Community Health Worker Certificate, a closed enrollment program. *Prerequisite: Acceptance into the CHW program or CPH department approval. Recommended: Good written and oral communication skills.*

## CPH178 Personal Health and Community Wellness

*3 Credits (3 Lectures)*

Analyze basic personal and community health problems, as well as long-term benefits and strategies, for maintaining a wellness lifestyle. Use current scientific information to promote individual and community health. This is part of the Community Health Worker Certificate, a closed enrollment program. *Recommended: Good communication skills, interest in community activities, and personal interest in a healthy living lifestyle.*

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**ICON LEGEND:**  **AGEC:** 🄰   **Intensive Writing:** *IW*   **Reading Required: RDG100:** ℛ   **SUN Course:** 🔘

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## CPH180 Chronic Disease Management

*3 Credits (3 Lectures)*

Develop skills and resources necessary to understand chronic conditions and diseases in order to be able to communicate self-management techniques effectively. This is part of the Community Health Worker Certificate, a closed enrollment program. *Corequisite: CPH196.*

## CPH185 Health Communication

*3 Credits (3 Lectures)*

Methods of communication in healthcare are covered. Topics include: health literacy, counseling, and motivational interviewing. This is part of the Community Health Worker Certificate, a closed enrollment program.

## CPH196 Community Health Worker Internship

*2 Credits (2 Internships, 90 hours)*

Opportunities to apply Community Health Worker competencies in community/public health settings. This is part of the Community Health Worker Certificate, a closed enrollment program. *Prerequisites: CPH160, CPH178, CPH185, CPH200, and HCC103 and CPH department approval. Before beginning the internship, students (at their own expense) may be required to pass a background check, drug screen, and TB skin test. Proof of immunizations may also be required. Corequisite: CPH180.*

## CPH200 Community and Public Health

*3 Credits (3 Lectures)*

Introduction to the broad discipline of public health and influences of community and individual health status. Examines the role of various agencies in public health, methods of evaluation, and major public health issues. This is part of the Community Health Worker Certificate, a closed enrollment program.

# CARPENTRY (CRP)

## CRP132 Concrete Forming

*3 Credits (3 Lectures)*

Construction and installation techniques, including building site and layout factors, parts of forms and related hardware, function of concrete form work in walls, columns, beams, decks, and retaining walls; Wall forms and prefabricated walls, and residential foundations.

# CULINARY ARTS (CUL)

## CUL105 Food Safety Foundations

*1 Credit (1 Lecture)* ℛ

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. ServSafe Certification is an option. *Prerequisite: RDG100.*

## CUL108 Culinary Boot Camp

*1 Credit (.75 Lecture, 1 Lab)*

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; plan and cook delicious meals. *May be taken three times for credit.*

## CUL110 Asian Cuisine

*1 Credit (1 Lecture)*

Discover the unique flavors, ingredients, and culinary traditions of Asian cuisine. 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)*

Discover the unique flavors, ingredients, and culinary traditions of Italian cuisine. Learn to make your favorite Italian appetizers, soups, entrees, pasta, bread, salads and desserts.

## CUL114 Mexican and Latin American Cuisine

*1 Credit (1 Lecture)*

Discover the unique flavors, ingredients, and culinary traditions of Mexico and other Latin American countries. Learn to make some of your favorite appetizers, soups, entrees, salads, breads and desserts.

## CUL116 French Cuisine

*1 Credit (1 Lecture)*

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.*

## CUL125 Sustainable Food Practices

*1 Credit (1 Lecture)*

Overview of the issues currently impacting the U.S. and Global food supply. Discussions on such topics as: local, seasonal,

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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)*

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. *Prerequisite or corequisite: CUL105.*

## CUL142 Applied Food Science

*4 Credits (3 Lectures, 3 Labs)* ⓐ ℛ

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: RDG100.*

## CUL160 Baking and Pastry I

*3 Credits (1 Lecture, 6 Labs)*

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. *Prerequisite or corequisite: CUL105.*

## CUL161 Cake Decorating

*1 Credit (1 Lecture)*

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 buttercream frosting. *May be taken two times for credit. Recommended: Read class supply list available on website, purchase and bring items to first class.*

## CUL162 Cakes, Fillings, and Frostings

*1 Credit (1 Lecture)*

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

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: RDG100.*

## CUL185 Catering Operations

*2 Credits (2 Lectures)* ℛ

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. There is a strong emphasis on culinary math skills. *Prerequisite: RDG100.*

## CUL230 Culinary Principles and Applications II

*3 Credits (1 Lecture, 6 Labs)*

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)*

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.*

## CUL261 Advanced Cake Decorating

*1 Credit (1 Lecture)*

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 Specialty and Wedding Cakes
**Previously known as CUL262 Wedding Cakes**

*1 Credit (1 Lecture)*

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. The entrepreneurial aspects of creating a successful Specialty Cake Business will be presented, including creating a portfolio, pricing, portioning, transporting and marketing. *May be taken three times for credit.*

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**ICON LEGEND:**    **AGEC:** ⓐ    **Intensive Writing:** *IW*    **Reading Required: RDG100:** ℛ    **SUN Course:**

## CUL263 Everything Chocolate

*1 Credit (1 Lecture)*

Comprehensive 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.

## CUL268 Special Dietary Baking and Advanced Techniques

**Previously known as CUL268 Nutrition for Culinary Arts**

*3 Credits (2 Lectures, 3 Labs)*

Introduction to the concepts of common food allergies. 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. Explore advanced techniques in baking including current industry trends, high volume production, quality control, and bakery business start-up. *Prerequisite: CUL160.*

## CUL290 Commercial Cooking Internship

**Previously known as CUL290 Commercial Cooking Practicum**

*2 Credits (2 Practica – 90 Hours)*

This culinary arts internship 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.*

# DRAFTING (DFT)

## DFT127 AutoCAD I

*3 Credits (2 Lectures, 3 Labs)*

Introductory course in Computer-Aided Drafting (CAD) computer technology for creation and documentation of 2D drawings utilizing the most recent version of AutoCAD distributed by AutoDesk. Includes operation and capabilities of computers in CAD, drafting fundamentals, dimensioning, annotating, management of CAD files, and printing.

## DFT128 AutoCAD II

*3 Credits (2 Lectures, 3 Labs)*

Advanced course in Computer-Aided Drafting (CAD) computer technology for creation and documentation of advanced 2D drawings utilizing the most recent version of AutoCAD distributed by AutoDesk. Content to be covered includes learning the usage of Groups, Blocks, External Reference Files, and advanced text modifiers. *Prerequisite: DFT127 or instructor consent.*

## DFT130 Advanced Computer Aided Drafting Applications

*1 Credit (1 Lecture)*

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)*

Basic Commands and Techniques including: wireframe, Surface and Solid Modeling using AutoCAD required to create, shade, render and print three-dimensional (3D) drawings. *Prerequisite: DFT127 or instructor consent.*

# DIESEL/HEAVY EQUIPMENT (DIE)

## DIE110 Introduction to Diesel Engines and Fuel Systems

*3 Credits (2 Lectures, 3 Labs)*

An introduction to diesel engines focusing on the theory of operation of the four main subsystems: basic engine, lubrication, cooling and fuel systems.

## DIE116 Introduction to Diesel Technology

*3 Credits (2 Lectures, 3 Labs)*

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. Requirements: Valid driver's license.

## DIE118 Computer Systems for Equipment Technicians

*3 Credits (2 Lectures, 3 Labs)*

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. *Prerequisite: DIE110 or instructor consent.*

## DIE132 Diesel Engines and Fuel Systems

*8 Credits (2 Lectures, 18 Labs)*

An introduction to diesel engines focusing on the theory of operation of the four main subsystems: basic engine,

lubrication, cooling and fuel systems. Practical training in troubleshooting, diagnosing, and performing repairs on diesel engines and engine subsystems. An in depth study of modern diesel engines used in off and on highway application, emphasizing computer controlled fuel systems and new emission standards.

## DIE133 Diesel Power Trains
*8 Credits (2 Lectures, 18 Labs)*
An introduction to power train systems used in heavy equipment focusing on the theory of operation and application of manual, power-shift, and hydro-static transmissions. Training in diagnosis and repair of heavy equipment manual, power shift, and hydro-static transmission systems. Modern power train systems used in on and off highway equipment, emphasizing diagnostic and repair procedures applied to computer controlled power shift and hydro-static transmission systems.

## DIE196 Diesel Equipment Technology and HEO Internship I
*3 Credits (Internship – 135 hours)*
Internship offering career study designed to provide hands-on work experience in the Diesel and Heavy Equipment Repair industry as a technician helper/shop laborer. Intern may be required by their employer to possess a basic tool set. This internship requires 135 clock hours. *Prerequisite: Enrollment in DIE, CFE or HEO program.*

## DIE215 Diesel Electrical/Electronic Systems
*8 Credits (2 Lectures, 18 Labs)*
Theory, operation, and components of electrical and electronic circuits. An application of electrical/electronic principles and theories emphasizing electrical system anomaly diagnostics and repair/replacement of components.

## DIE216 Diesel Hydraulic Systems
*8 Credits (2 Lectures, 18 Labs)*
Theory of operation of hydraulic and hydro-static systems used in heavy equipment and truck applications. Application of the theoretical concepts, diagnostic procedures, and service and repair techniques related to hydraulic and hydro-static systems used in heavy equipment and truck applications. The course emphasizes the use of hydraulic schematics, test equipment, and service manuals to diagnose and repair.

## DIE222 Mobile Refrigeration
*3 Credits (2 Lectures, 3 Labs)*
Principles of operation for the various types of mobile air conditioning systems utilized in diagnosing, testing and

reconditioning these systems. *Prerequisite: Valid driver's license.*

## DIE296 Diesel Equipment Technology and HEO Internship II
*3 Credits (Internship – 135 hours)*
Internship offering advanced career study designed to provide hands-on work experience in the Diesel and Heavy Equipment Repair industry as a technician helper/shop laborer. Intern may be required by their employer to possess a basic tool set. This internship requires 135 clock hours. The internship allows the student to obtain college credit for advanced level hands-on work experience. *Prerequisite: DIE196.*

# DIGITAL MEDIA ARTS (DMA)
## DMA101 Media and Society
**Previously known as MSC101 Media and Society**
*3 Credits (3 Lectures)* ⓐ ℛ
An introduction to a variety of ways of understanding the role of mass communication in our society. Examine interactions between media and culture. Individual media institutions will be studied in terms of the information they distribute, the entertainment they provide and the influence they bring. Special attention will be given to the audience-medium relationship and to improving students' media literacy. *Prerequisite: RDG100.*

## DMA115 Digital Imaging
*3 Credits (2 Lectures, 3 Labs)*
Emphasis will be on using Photoshop as a tool in the process of image creation, manipulation, and enhancement for visual expression and communication. Students will explore a variety of creative techniques for producing, editing, and altering images using digital editing software. The course will include technical instruction in Adobe Photoshop including, panels, image editing, selections, layers, masks and paths, layer styles, type effects, and filters.

## DMA120 Graphic Design and Adobe InDesign
**Previously known as MSC120 Graphic Design and Adobe InDesign**
*3 Credits (2 Lectures, 3 Labs)*
Focuses on aesthetics and composition for graphic design. Students will use Adobe InDesign software to create original designs for a variety of real-world projects. The course will focus on the basic principles of contrast, alignment, repetition and proximity while exploring the important role typography plays in successful design solutions. Students will finish the semester with a complete electronic portfolio.

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**ICON LEGEND:**    **AGEC:** ⓐ    **Intensive Writing:** *IW*    **Reading Required: RDG100:** ℛ    **SUN Course:** ◎

# 2022-2023 College Catalog    |    163

## DMA122 Introduction to Web Design
**Previously known as MSC122 Introduction to Web Design**
*3 Credits (2 Lectures, 3 Labs)* R
Create professional quality standards compliant websites using HTML5 and CSS3. Use WYSIWYG editors such as Adobe Dreamweaver CC or comparable software to create and modify websites. Students will create two professional quality websites: one using HTML5, CSS3 and Dreamweaver and another using a content management system such as WordPress. *Offered every spring.*

## DMA125 Introduction to Illustrator
**Previously known as MSC125 Introduction to Illustrator**
*3 Credits (2 Lectures, 3 Labs)* R
An introduction to the use of Adobe Illustrator software in the creation of logos, illustrations and typographic designs for use in multi-media design projects. *Prerequisite: RDG100. Offered every fall.*

## DMA130 Digital Photography I
**Previously known as MSC130 Digital Photography and Photoshop**
*3 Credits (2 Lectures, 3 Labs)*
Focus is on the introductory elements of digital photography and the technical skills required to operate a digital camera in manual mode. Students will be introduced to the fundamentals of photo composition and the basics of using computer software to edit photos by computer. Through lectures, critiques, demonstrations, picture taking, and digital manipulation exercises, students will learn to shoot, edit and use a variety of digital techniques to produce material for print and web distribution. *Recommended: Students should have an entry level DSLR camera.*

## DMA132 Digital Video I
*3 Credits (2 Lectures, 3 Labs)*
Introductory techniques of video production for digital media. Topics include operation and application of all the basic tools, as well as exploring hardware, software, and technical options. Through lectures and projects, all phases of video production will be addressed, from preproduction through production to post-production, with a focus on digital media aspects.

## DMA135 Lighting for Photography and Video
*3 Credits (2 Lectures, 3 Labs)*
Introductory lighting techniques and practices, including: the visible spectrum, exposure, using electricity, video and the electronic medium, controlling color temperature, light quality, and measuring light intensity. Topics also include instruction on manipulating light, light concepts in practice, and light in the studio and on location. *Recommendation: Students should have an entry level DSLR camera.*

## DMA205 Portfolio Development
**Previously known as MSC205 Portfolio Preparation**
*3 Credits (2 Lectures, 3 Labs)*
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. *Offered every spring.*

## DMA210 Publications and Packaging Design
*3 Credits (2 Lectures, 3 Labs)*
The role of publications and packaging in brand identification, presentation, and production. Skills necessary for developing publications and packaging design are covered. Other topics include the unique challenges of adapting typography, illustration, design, and materials to three-dimensional forms, as well exploring the fields of newspaper, magazine, and book design. *Prerequisite: DMA120.*

## DMA220 Advanced Graphic Design
**Previously known as MSC220 Advanced Graphic Design**
*3 Credits (2 Lectures, 3 Labs)*
Builds upon skills learned in DMA120, and introduces advanced layout techniques using more complex design guidelines and typeface rules. Topics include learning to craft a visual message and identity, and to deliver brand and image consistently across print and electronic media, while pursuing more individualized advanced projects. *Prerequisite: DMA120. Offered every fall.*

## DMA223 Designing with Type
**Previously known as MSC123 Designing with Type**
*3 Credits (2 Lectures, 3 Labs)*
Explore the art, craft, technical procedures and concepts involved in producing successful typographic design, which is a fundamental component of visual communications. Topics include typographer history, 20th century typographers, changes in printing technologies, anatomy, classification, measurement systems, legibility and readability, typographic meaning, grid systems, typographic hierarchy, type as a design element, spacing and alignment, type specification and proofreading and typography as it functions in various media.

**ICON LEGEND:** **AGEC:** a  **Intensive Writing:** *IW*  **Reading Required: RDG100:** R  **SUN Course:**

**2022-2023 College Catalog | 164**

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Students use a variety of software applications to develop letterform design and type organization skills. *Prerequisites or corequisites: (DMA115 and DMA125) or instructor consent. Offered every spring.*

## DMA230 Digital Photography II
**Previously known as MSC230 Advanced Digital Photography and Adobe Photoshop**
*3 Credits (2 Lectures, 3 Labs)*
Build on skills developed in DMA130, Digital Photography I, and explore advanced techniques for creating and manipulating still images in the digital environment. Through lectures, critiques, demonstrations, complex photographic assignments, and digital manipulation exercises, learn to use a variety of advanced digital techniques including editing and cataloging with Adobe Lightroom to produce material for print and web distribution. Emphasis is placed on the development of portfolio-quality pieces. *Prerequisite: DMA130. Offered every fall.*

## DMA232 Digital Video II
*3 Credits (2 Lectures, 3 Labs)*
Build on skills learned in DMA132, Digital Video. Topics include: introduction to advanced digital video production techniques, digital formats and scripting, production plan, utilization of digital camera and lighting equipment in remote and on-location sites, post production, linear and non-linear editing equipment and approaches, editing and the visual storyline, and building a portfolio. *Prerequisite: DMA132. Recommendation: A video capable DSLR camera is needed.*

## DMA245 Independent Projects Photography / Video
*3 Credits (2 Lectures, 3 Labs)*
An opportunity to explore a topical area of interest, while developing a personal aesthetic style and vision as they relate to photography or video. Create projects that utilize multi-image photographic skills, audio gathering, video capture, editing video and text. Emphasis is placed on the development of portfolio-quality pieces. *Prerequisites: DMA130, DMA132; Corequisites: DMA230, DMA232.*

# EARLY CHILDHOOD EDUCATION (ECE)

## ECE101 Introduction to the Child Care Profession
*3 Credits (3 Lectures)*
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. *Satisfactory/Unsatisfactory grading option available.*

## ECE105 Foundations of Early Childhood Education
*3 Credits (3 Lectures)*
An introduction to the field of early childhood education (ECE). Content includes an overview of different types of programs for young children, professional opportunities within the field, and key philosophies and theories of early childhood education. The course is suggested as an entry level course for an ECE certificate or degree.

## ECE109 CDA Portfolio Preparation
*1 Credit (1 Lecture)*
Preparation and compilation of a professional portfolio to be used for those seeking a National Child Development Associate (CDA) Credential. The course also includes a review of each of the CDA Competency Areas to support the compiling of the required portfolio. *May be taken up to three times for credit.*

## ECE110 Health, Safety, and Nutrition
*3 Credits (3 Lectures)*
An introduction to practices and procedures used to promote the health, safety, and nutrition of young children in early childhood settings. Includes an emphasis on planning and implementing education experiences that support the development of lifelong healthy habits and attitudes for young children.

## ECE116 Effective Interactions and Guidance
*3 Credits (3 Lectures)*
Relationships among children and caring adults create the context for healthy social and emotional development. Topics include classroom management strategies and techniques for implementing effective interactions and guidance as a fundamental part of the learning environment and curricula.

## ECE124 Active Learning in Math and Science
*3 Credits (3 Lectures)*
An exploration of the fundamental concepts of math and science for young children. Includes the study of strategies and techniques for helping children develop problem solving and reasoning skills, and an awareness and appreciation of the natural environment.

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**ICON LEGEND:**     **AGEC:** a     **Intensive Writing:** *IW*     **Reading Required: RDG100:** ℛ     **SUN Course:** 🔸

## ECE204 Infant and Early Childhood Mental Health

*3 Credits (3 Lectures)*

Introduction to infant and early childhood mental health focusing on risk and protective factors that may impact the development and well-being of infants, toddlers, and their families. Includes research-based principles and approaches to providing effective, relationship-based support using an Infant and Early Childhood Mental Health (IECMH) framework.

## ECE215 Infant and Toddler Observation and Assessment

*3 Credits (3 Lectures)*

Introduction to infant and early childhood mental health Introduction to assessment practices and services for children, birth to five. Includes an exploration of instructional strategies and techniques for observing, recording, and assessing the growth and development of young children, including those with developmental delays.

## ECE216 Early Childhood Observation and Assessment

*3 Credit (3 Lectures)*

Observation and assessment, along with planning, implementation and evaluation, form an ongoing process that is the basis for making developmentally appropriate educational decisions, informing curriculum planning, and evaluating goals for children and programs. Includes effective strategies for implementing the observation and assessment process and partnerships with families and other professionals to support each child's learning and development.

## ECE229 Early Childhood Practicum

*4 Credits (2 Lectures, 2 Practica)*

Practicum requiring 100 hours of field work in an early childhood program where the concepts learned in the Early Childhood Education (ECE) core coursework are applied. The application process requires documentation of a negative TB test, AZ Fingerprint Identity Verified Print (IVP) card, and director approval. This is intended to be the last course taken in the program of study. *Prerequisite: Director consent.*

## ECE254 Emergent Language and Literacy

*3 Credits (3 Lectures)*

Foundation for early childhood professionals to become knowledgeable about current theories, research, and best practices to understand early language and literacy development.

## ECE257 Family Child Care Management

*3 Credits (3 Lectures)*

The multi-faceted aspects of providing family child care, including the fundamentals of creating appropriate curriculum and environments, fiscal management and recordkeeping, and marketing and communications. Topics include the principles of achieving a balance of work and family life while operating a family child care business are also addressed.

## ECE271 Creating Early Childhood Environments

*3 Credits (3 Lectures)*

Focuses on developmentally effective anti-bias learning environments and curriculum content for children birth-age eight. Emphasizes the integration of academic disciplines in early childhood curriculum content areas as it relates to the development of rich learning environments for young children. Twenty hours of field experience in a preschool setting with children ages 3 -5 years old is required.

## ECE276 Child Development

*3 Credits (3 Lectures)* 🄰 𝓡

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 or corequisite: RDG100.*

## ECE277 Responsive Curriculum and Environments for Infants and Toddlers

*3 Credits (3 Lectures)*

Explores the role of the curriculum and environment in infant and toddler care settings. Encompasses the planning, development, and implementation of a comprehensive curriculum that is relationship based and responsive to the unique needs of infants, toddlers, and their families. Field experience required.

## ECE278 Early Childhood Curriculum Development

*3 Credits (3 Lectures)*

Focuses on developmentally and culturally effective anti-bias curriculum for young children. Development and implementation of curriculum in all academic disciplines and content areas is emphasized. Focus on applying early learning standards to curriculum development, implementation, and evaluation to ensure that learning will be stimulating, challenging, and meaningful to each child. 20 hours of field experience in an early learning setting with children, birth to 3 years of age is required.

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**ICON LEGEND:** **AGEC:** 🄰 **Intensive Writing:** *IW* **Reading Required: RDG100:** 𝓡 **SUN Course:** ◎

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## ECE280 Inclusion of Children with Special Needs

*3 Credits (3 Lectures)*

This course provides an overview of the values, policies and practices of inclusion of children with special needs including laws governing services, individualized plans, and working collaboratively with families.

## ECE283 Building Family and Community Partnerships 🅰R

**Previously known as ECE283 Valuing Families and Diversity**

*3 Credits (3 Lectures)*

Explores the role of family and community in child development and care and focuses on the role of the early childhood professional in building strong family and community partnerships. Includes awareness of diverse family values and structures and strategies for implementing culturally appropriate programs. *Prerequisite or corequisite: RDG100.*

# ECONOMICS (ECN)

## ECN200 Contemporary Economic Issues

*3 Credits (3 Lectures)* 🅰 R

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 or corequisite: RDG100.*

## ECN201 Principles of Macroeconomics

*3 Credits (3 Lectures)* ◎ *ECN 2201* 🅰R

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 or corequisite: RDG100.*

## ECN202 Principles of Microeconomics

*3 Credits (3 Lectures)* ◎ *ECN 2202* 🅰 R

A descriptive analysis of the theory of consumer choice, price determination, resource allocation and income distribution. Topics include non-competitive market structures such as monopoly, oligopoly and the effects of government regulation. *Prerequisite or corequisite: RDG100.*

# EDUCATION (EDU)

## EDU221 Introduction to Education

*3 Credits (3 Lectures)* 🅰 R

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 or corequisite: RDG100.*

## EDU222 Introduction to Special Education

*3 Credits (3 Lectures)* 🅰R

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 or corequisite: RDG100.*

## EDU225 Relationships in the Classroom

*3 Credits (3 Lectures)* R

Create effective learning environments through the development of positive and appropriate relationships with students and creation of positive individual and group management systems in PK-12 settings. May be taken as a refresher or reinforcement for individuals currently working in the teaching environment. *Prerequisite: RDG100.*

## EDU228 Behavior Management

*3 Credits (3 Lectures)* R

Create effective learning environments through the development of positive, appropriate, and proactive comprehensive strategies focusing on creation of individual student management systems in P-12 settings. This course may be taken as a refresher or reinforcement for teachers currently serving in a teaching environment. *Prerequisite: EDU225. Post baccalaureate EPP program students are not required to take EDU225. Corequisite: RDG100.*

## EDU230 Cultural Values in Education

*3 Credits (3 Lectures)* 🅰R

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 or corequisite: RDG100.*

## EDU240 Structured English Immersion

**Previously known as EDU240 Provisional Structured English Immersion**

*3 Credits (3 Lectures)* 🅰

Introduction to Structured English Immersion (SEI) for teachers and administrators who are working in the K-12

school setting, students in the AAEE program, and post baccalaureate EPP students. Includes SEI foundations, English Language Learner (ELL) proficiency standards, second language acquisition, home/school partnerships, assessment, data analysis, instructional strategies and methods, and lesson planning for Integrated and Targeted English Language Development (ELD). Meets SEI Endorsement requirements for teacher certification with the Arizona Department of Education.

## EDU258 Educational Psychology EPP

*3 Credits (3 Lectures)*

Overview of how children develop physically, psychologically, emotionally, socially, and cognitively and how this information impacts grades K-8 instruction. Focus is placed on the study and application of psychological principles and methodologies related to teaching and learning. Emphasis on theories of development, cognitive growth, and motivation. Includes current trends in educational psychology and implications for the classroom teacher. *Prerequisite: Baccalaureate Degree and formal acceptance to the Central Arizona College state approved post-baccalaureate Educator Preparation Program (EPP) or permission of Department or Division.*

## EDU259 21st Century Learning EPP

*3 Credits (3 Lectures)*

Introduction to strategies, tools, and resources for teaching in today's classrooms. Includes K-8 content standards, instructional objectives, lesson planning, data literacy, and 21st century skills. Also includes benefits and challenges of technology integration and functions of technology. Incorporates interdisciplinary strategies of instruction for making connections with other content areas. *Prerequisite: Baccalaureate Degree and formal acceptance to the Central Arizona College state approved post-baccalaureate Educator Preparation Program (EPP) or permission of Department or Division.*

## EDU271A Structured Literacy A: The Science of Reading (Phonological Awareness, Phonics, Fluency, Vocabulary, Comprehension)

*3 Credits (3 Lectures)*

Overview of the Science of Reading and the essential components of early literacy instruction at the elementary level (grades K-8). Includes developmental stages of literacy and strategies for teaching phonemic awareness, vocabulary and oral language, phonics and decoding, oral reading fluency, and reading comprehension. Emphasizes the use of instruction and intensifying instruction and various assessment tools to analyze miscues, diagnose learner needs, and differentiate instruction through intentional planning. Includes interdisciplinary

strategies of instruction for making connections with other content areas.

## EDU271B Structured Literacy: Investigating Instruction, Assessment, Intervention and Dyslexia

*3 Credits (3 Lectures)*

Overview of the Science of Reading and the essential components of early literacy instruction at the elementary level (grades K-8). Includes developmental stages of literacy and interventions to improve reading proficiency. Emphasizes recognizing and understanding dyslexia, intensifying instruction through interventions, and various assessment tools to analyze miscues, diagnose learner needs, and differentiate instruction through intentional planning.

## EDU272 Elementary Math Methods Educator Preparation Program (EPP)

*3 Credits (3 Lectures)*

This course emphasizes the application of theories, methods, and techniques for teaching mathematics in grades K-8. Includes standards-based alignment with mathematical practices, elements of effective mathematics instruction, differentiation, formative and summative assessment practices, 21st century skills, technology integration, and data literacy. Includes current trends from the National Council of Teachers of Mathematics (NCTM), Standards for School Mathematics (NCTM PSSM), and current research and application of the dimensions aligned with the science of mathematics and making connections with STEM. Includes interdisciplinary strategies of instruction connected with other content areas. *Prerequisite: Baccalaureate Degree and formal acceptance to the Central Arizona College state approved post-baccalaureate Educator Preparation Program (EPP) or permission of Department or Division.*

## EDU273 Science & Social Studies Methods Educator Preparation Program (EPP)

*3 Credits (3 Lectures)*

This course emphasizes the application of theories, methods, and techniques for teaching Science and Social Studies (SS) in grades K-8. Includes standards-based instruction, inquiry and problem-based learning, formative and summative assessment practices, strategies to increase student engagement, 21st century learning, digital technologies for Science and Social Studies instruction, the dimensions of science which integrate engineering practices, and STEM impacts on facets of Social Studies. Includes unit planning and interdisciplinary strategies of instruction for making connections with other content areas.

**ICON LEGEND:**     **AGEC:** 🅰     **Intensive Writing:** *IW*     **Reading Required: RDG100:** 𝓡     **SUN Course:** ◎

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*Prerequisite: Baccalaureate Degree and formal acceptance to the Central Arizona College state approved post-baccalaureate Educator Preparation Program (EPP) or permission of Department or Division.*

## EDU274 English Language Arts (ELA) Methods Educator Preparation Program (EPP)

*3 Credits (3 Lectures)*

Emphasizes the application of theories, methods, and techniques for teaching English Language Arts (ELA) and Literacy in grades K-8. Includes standards-based instruction, elements of effective instruction, differentiation through intentional lesson planning, technology, formative and summative assessment practices, language and writing instruction, and 21st century skills in ELA instruction. Includes interdisciplinary strategies of instruction for making connections with other content areas. *Prerequisite: Baccalaureate Degree and formal acceptance to the Central Arizona College state approved post-baccalaureate Educator Preparation Program (EPP) or permission of Department or Division.*

## EDU287A Master Teacher Seminar Teacher in Residence Educator Preparation Program (EPP)

*3 Credits (3 Lectures)*

Discussion, discourse, and dialogue of the Model Code of Ethics for Educators (MCEE) National Association of State Directors of Teacher Education and Certification (NASDTEC), in-depth understanding of the Interstate Teacher Assessment and Support Consortium Model Core Standards (InTASC), and the Arizona Professional Teaching Standards. Includes discussion of data literacy (ie: attendance, behavior, interventions, teacher observation, academic). Involves preparation for the end of program capstone student teaching experience with clarification of monitoring and evaluation procedures and the importance of being a reflective practitioner. Incorporates facets of job application submission and the interview process with the goal of obtaining a full-time teaching position as needed. *Prerequisite: Baccalaureate Degree and formal acceptance to the Central Arizona College state approved post-baccalaureate Educator Preparation Program (EPP) or permission of Department or Division.*

## EDU287B Master Teacher Seminar Traditional Educator Preparation Program (EPP)

*3 Credits (3 Lectures)*

Discussion, discourse, and dialogue of the Model Code of Ethics for Educators (MCEE) National Association of State Directors of Teacher Education and Certification (NASDTEC), in-depth understanding of the Interstate Teacher Assessment and Support Consortium Model Core Standards (InTASC), and the Arizona Professional Teaching Standards. Includes discussion of data literacy (ie: attendance, behavior, interventions, teacher observation, academic). Involves preparation for the end of program capstone student teaching experience with clarification of monitoring and evaluation procedures and the importance of being a reflective practitioner. Incorporates facets of job application submission and the interview process with the goal of obtaining a full-time teaching position. *Prerequisite: Baccalaureate Degree and formal acceptance to the Central Arizona College state approved post-baccalaureate Educator Preparation Program (EPP) or permission of Department or Division.*

## EDU293A Teacher in Residence (TIR) Student Teaching Educator Preparation Program (EPP)

*8 Credits (2 Lecture, 18 Labs)*

Student teaching in an elementary classroom with an experienced teacher mentor. Includes learning development, learning differences, learning environments, content knowledge, application of content, assessment, planning for instruction, instructional strategies, professional learning and ethical practice, and leadership and collaboration. This course is a 12-week student teaching capstone field experience. Outcomes are aligned to the Interstate Teacher Assessment and Support Consortium (InTASC) Model Core Teaching Standards. *Prerequisite: Baccalaureate Degree and formal acceptance to the Central Arizona College state approved post-baccalaureate Educator Preparation Program (EPP) or permission of Department or Division, and Capstone readiness approval are required before enrolling in this course. Teacher in Residence (TIR) students will enroll in this course the final 12 weeks of the program. TIR students will already be placed in a K-8 classroom under a full-time teaching contract under the auspice of a mentor master teacher. TIR teaching in the classroom will count as student teaching field experience. This is the capstone experience required by the EPP program and must be completed to be eligible for Institutional Recommendation for state teaching certification.*

## EDU293B Traditional Student Teaching Educator Preparation Program (EPP)

*8 Credits (2 Lecture, 18 Labs)*
Student teaching in a K-8 elementary classroom with an experienced mentor teacher. Includes learning development, learning differences, learning environments, content knowledge, application of content, assessment, planning for instruction, instructional strategies, professional learning and ethical practice, and leadership and collaboration. This course is a 12-week student teaching capstone field experience for Traditional Track students in the Educator Preparation Program. Outcomes are aligned to the Interstate Teacher Assessment and Support Consortium (InTASC) Model Core Teaching Standards and International Society for Technology in Education.
*Baccalaureate Degree and formal acceptance to the Central Arizona College state approved post-baccalaureate Educator Preparation Program (EPP) or permission of Department or Division, and Capstone readiness approval are required before enrolling in this course. Traditional Track students will enroll in this course the final 12 weeks of the program. Traditional Track students are required to spend 12-weeks (60 full instructional days) in the student teaching field experience in a K-8 classroom. This is the capstone experience required by the EPP program and must be completed to be eligible for Institutional Recommendation for state teaching certification.*

## EDU296A Teacher in Residence (TIR) Practicum/Internship Educator Preparation Program (EPP)

*2 Credits (1 Lecture, 3 Labs)*
Overview of the intern experience in the grades K-8 Educator Preparation Program (EPP) internship classroom. Includes classroom management, learning objectives, assessment, lesson planning, differentiation, collaboration, ISTE Standards for Educators, and education laws. Internship includes in-depth discussion for expectations, monitoring, and extensive evaluation procedures, documentation of the supervised school-based experience for EPP TIR candidates. Outcomes are aligned to the Interstate Teacher Assessment and Support Consortium (InTASC) model core teaching standards and the International Society for Technology in Education Standards (ISTE). *Prerequisite: Admission to the Post-Degree Teacher Certification Program and EPP Internship approval are required before enrolling in this course. May be taken two times for a maximum of four credits; if this course is repeated, see a financial aid advisor or Veteran's Affairs advisor to determine funding eligibility as appropriate.*

## EDU296B Traditional Practicum/Internship Educator Preparation Program (EPP)

*2 Credits (1 Lecture, 3 Labs)*
Overview of the intern experience in a grades K-8 Educator Preparation Program (EPP) internship classroom. Includes classroom management, learning objectives, assessment, lesson planning, differentiation, collaboration, and education laws. Practicum/field experience expectations, monitoring, and evaluation procedures for EPP Traditional candidates will be discussed at length. Outcomes are aligned to the Interstate Teacher Assessment and Support Consortium (InTASC) model core teaching standards and International Society for Technology in Education (ISTE).
*Prerequisite: Admission to the Post-Degree Teacher Certification Program and EPP Internship approval are required before enrolling in this course. May be taken two times for a maximum of four credits; if this course is repeated, see a financial aid advisor or Veteran's Affairs advisor to determine funding eligibility as appropriate.*

# ENGINEERING (EGR)

## EGR102 Introduction to Engineering

*3 Credits (2 Lectures, 3 Labs)* ◉ *EGR 1102*
Comprehensive engineering problem solving incorporating the design process, its scientific basis, hands-on teamwork, effective communication, ethical implications and the profession itself. *Prerequisite: MAT151◉.*

## EGR120 Digital Design Fundamentals

*4 Credits (3 Lectures, 3 Labs)*
The theory and application of digital systems and binary numbers, binary and compliment arithmetic, and Boolean algebra; logic gates, combinational logic, circuit minimization; flip-flops and synchronous sequential logic, registers and counters; memory and programmable logic. Analysis and design of combinational and synchronous sequential circuits, simulation, and building and testing of circuits. *Prerequisite or corequisite: MAT182 or MAT187◉.*

## EGR201 Statics

*4 Credits (3 Lectures, 3 Recitation)*
Force vectors and force system resultants, equilibrium of particles and rigid bodies, friction, centroid and moments of inertia of an area. *Prerequisite: MAT231◉, PHY121◉.*

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**ICON LEGEND:**      **AGEC:** 🅐      **Intensive Writing:** *IW*      **Reading Required: RDG100:** *R*      **SUN Course:** ◉

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## EGR202 Dynamics

*4 Credits (3 Lectures, 1 Recitation)*
Kinematics and kinetics of particles. Work, energy, and momentum principles for particles. Planar kinematics and kinetics of rigid bodies. Conservation of energy and momentum for rigid bodies. Equations of motion for particles and rigid bodies. Vibrations. *Prerequisite: EGR201. Prerequisite or corequisite: MAT275.*

## EGR222 Circuits I

*5 Credits (4 Lectures, 3 Labs)*
Principles for analyzing linear and non-linear circuits; using SPICE simulation; design and measurement of linear analog electrical systems. *Prerequisites or corequisites: MAT275 and PHY122 ⊙.*

# ENTERTAINMENT INDUSTRY TECHNOLOGY (EIT)

## EIT100 History of Rock n' Roll

*3 Credits (3 Lectures)* ⓐ ℛ
A survey of the history and development of rock music noting how cultural, social, political and economic conditions have affected its evolution. *Prerequisite or corequisite: RDG100.*

## EIT101 Introduction to Entertainment

*3 Credits (3 Lectures)* ℛ
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 or corequisite: RDG100.*

## EIT120 Entertainment Law

*3 Credits (3 Lectures)*
An introduction to legal aspects of the entertainment industry, including performance rights, songwriting and personal appearance contracts, copyright law and trademarks. *Prerequisite or corequisite: EIT101. Offered every spring.*

## EIT130 Live Audio Production I

*3 Credits (2 Lectures, 3 Labs)*
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 or corequisite: EIT101. Offered every spring.*

## EIT140 Introduction to Lighting

*3 Credits (2 Lectures, 3 Labs)*
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 or corequisite: EIT101. Offered every spring.*

## EIT151 Digital Audio Workstation

*3 Credits (2 Lectures, 3 Labs)*
Use of Pro Tools mixing and automation software in conjunction with editing and recording, including computer operation, troubleshooting and file management. *Recommended: Students should possess basic computer skills and be comfortable navigating personal computers prior to enrolling in this course.*

## EIT153 Recording Engineering I

*3 Credits (2 Lectures, 3 Labs)*
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. Recommended: Students need to perform basic operations of the Macintosh operating system and operate Pro Tools recording software. Offered every spring.*

## EIT170 Performance Skills

*1 Credit (3 Labs)*
Private coaching and practice for a modern popular music 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. Intended for students with moderate vocal or instrumental music proficiency. *Prerequisite: The soloist or group must perform a live audition for the coordinator of the Entertainment Industry Technology program. Acceptance into the course is based on approval. Students may register for this course prior to auditioning, but must audition prior to the end of drop week. May be taken four times for credit.*

## EIT171 Songwriting I

*2 Credits (1 Lecture, 3 Labs)*
Introduction to the basics of song writing, including lyrics, rhythmic, melodic and harmonic development, form and emotional content. *Offered every fall.*

## EIT203 Entertainment Capstone Project

*2 Credits (6 Labs)*
A capstone experience for the entertainment professional, including planning, preparing and developing a specific entertainment project by selecting materials, setting up and

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**ICON LEGEND:**   **AGEC:** ⓐ   **Intensive Writing:** *IW*   **Reading Required: RDG100:** ℛ   **SUN Course:** ⊙

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monitoring a budget, and overseeing a complete compact disk, project portfolio, or a full concert performance. *May be taken four times for credit, once for each of the four EIT tracks. Prerequisite: Completion of first three semesters of an EIT track with a grade of C or better in each course. Offered every spring.*

## EIT221 Entertainment Marketing and Promotion

*3 Credits (3 Lectures)*
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 or corequisite: EIT101. Offered every fall.*

## EIT231 Live Audio Production II

*3 Credits (2 Lectures, 3 Labs)*
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. Offered every spring.*

## EIT232 Equipment Maintenance

*3 Credits (2 Lectures, 3 Labs)*
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. *Offered every fall.*

## EIT241 Concert Lighting

*3 Credits (2 Lectures, 3 Labs)*
An in-depth study of concert lighting to include full lighting design and lighting instrument hang 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. Offered every spring.*

## EIT242 Rigging

*3 Credits (2 Lectures, 3 Labs)*
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: EIT101. Offered every fall.*

## EIT254 Recording Engineering II

*3 Credits (2 Lectures, 3 Labs)*
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. Offered every fall.*

## EIT255 Recording Engineering III

*3 Credits (2 Lectures, 3 Labs)*
A continuation in the study of recording studio procedures learned in EIT254. Topics include mixing techniques, 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. Offered every spring.*

## EIT272 Songwriting II

*2 Credits (1 Lecture, 3 Labs)*
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. Offered every spring.*

## EIT296 Entertainment Internship

*3 Credits (Internship – 135 Hours)*
Students work in entertainment industry internships designed to fit the students' selected degree/certificate track, career goals, interests and skills. The student may take one internship for each of the four tracks of the Entertainment Industry Technology program. May be taken four times for credit, once for 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. Offered every fall.*

# ELECTRICITY (ELC)

## ELC121 Electrical Level 1

*5 Credits (3 Lectures, 6 Labs)*
Electricians install electrical systems in structures; they install wiring and other electrical components, such as circuit breaker panels, switches, and light fixtures; they follow blueprints, the "National Electrical Code," and state and local codes.

## ELC212 Electrical Level 2

*5 Credits (3 Lectures, 6 Labs)*

This course prepares trainees for a career in the electrical field. National Center of Construction Education and Research (NCCER) certification is offered and comprehensive electrical curriculum that complies with Department of Labor (DOL) time-based standards for apprenticeship. *Prerequisite: ELC121.*

## ELC213 Electrical Level 2 Apprenticeship 2B

*5 Credits (3 Lectures, 6 Labs)*

This course meets and/or exceeds Arizona Department of Labor Apprenticeship standards and requirements. Post-employment training for commercial electricians. National Center of Construction Education & Research (NCCER) certification is offered and comprehensive electrical curriculum that complies with Department of Labor (DOL) time-based standards for apprenticeship. *Prerequisites: ELC212 and must be a registered apprentice.*

## ELC224 Electrical Level 3

*5 Credits (3 Lectures, 6 Labs)*

This course meets and/or exceeds Arizona Department of Labor Apprenticeship standards and requirements. Post-employment training for commercial electricians. National Center of Construction Education & Research (NCCER) certification is offered and comprehensive electrical curriculum that complies with Department of Labor (DOL) time-based standards for apprenticeship. *Prerequisites: ELC212 and must be a registered apprentice.*

## ELC225 Electrical Level 3 Apprenticeship 3B

*5 Credits (3 Lectures, 6 Labs)*

This course meets and/or exceeds Arizona Department of Labor Apprenticeship standards and requirements. Post-employment training for commercial electricians. National Center of Construction Education & Research (NCCER) certification is offered and comprehensive electrical curriculum that complies with Department of Labor (DOL) time-based standards for apprenticeship. *Prerequisites: ELC212 and must be a registered apprentice.*

## ELC226 Electrical Level 4

*5 Credits (3 Lectures, 6 Labs)*

This course meets and/or exceeds Arizona Department of Labor Apprenticeship standards and requirements. Post-employment training for commercial electricians. National Center of Construction Education & Research (NCCER) certification is offered and comprehensive electrical curriculum that complies with Department of Labor (DOL) time-based standards for apprenticeship. *Prerequisites: ELC212 and must be a registered apprentice.*

## ELC227 Electrical Level 4 Apprenticeship 4B

*5 Credits (3 Lectures, 6 Labs)*

This course meets and/or exceeds Arizona Department of Labor Apprenticeship standards and requirements. Post-employment training for commercial electricians. National Center of Construction Education & Research (NCCER) certification is offered and comprehensive electrical curriculum that complies with Department of Labor (DOL) time-based standards for apprenticeship. *Prerequisites: ELC212 and must be a registered apprentice.*

## ELC251 Instrumentation

*3 Credits (2 Lectures, 3 Labs)*

Alternative energy fields equipment usage, measurements and calculations.

# ELECTRONICS (ELT)

## ELT130 Computer Upgrades and Operating Systems I

*3 Credits (2 Lectures, 3 Labs)*

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.*

# EMERGENCY MEDICAL SERVICES (EMS)

## EMS100 CPR for Professionals

*.5 Credit (.5 Lecture)*

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), and 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. *May be taken 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)*

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.*

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**ICON LEGEND:**  **AGEC:** a  **Intensive Writing:** *IW*  **Reading Required: RDG100:** *R*  **SUN Course:** ⊙

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## EMS123 Emergency Medical Responder

*3 Credits (3 Lectures)*

The primary focus of the Emergency Medical Responder is to initiate immediate lifesaving care to critical patients who access emergency medical services. You will possess the basic knowledge and skills necessary to provide lifesaving interventions while awaiting additional emergency medical services (EMS) response and to assist higher level personnel at the scene and during transport. Emergency Medical Responders function as part of a comprehensive EMS response, under medical oversight. Emergency Medical Responders perform basic intervention with minimal equipment. *Corequisite: EMS100.*

## EMS125 Emergency Medical Technician

*9 Credits (9 Lectures)*

Coursework follows the current EMT-Basic National Standard Curriculum and Arizona State Department of Health Services-EMS Division State statutes. Emphasis is on 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 Basic Life Support or ASHI Professional Rescuer Card, RDG091 or appropriate placement score, Vaccination record: TB Skin Test within last 6 months, MMR, Tetanus and Diphtheria within the last 5 years.*

## EMS190 Pediatric Advanced Life Support

*1 Credit (1 Lecture)*

Pediatric Advanced Life Support (PALS) is a classroom, video-based, instructor-led course that uses a series of simulated pediatric emergencies to reinforce the important concepts of a systematic approach to pediatric assessment, basic life support, PALS treatment algorithms, effective resuscitation and team dynamics. The goal of the PALS course is to improve the quality of care provided to seriously ill or injured children, resulting in improved outcomes. *Prerequisites: Advanced Life Support Provider (ALS)-AEMT, Paramedic, Nurse, or MD.*

## EMS191 Neonatal Resuscitation Program

*1 Credit (1 Lecture)*

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. *May be taken two times for credit. Prerequisite: Open to certified paramedics, registered nurses, respiratory therapists, and physicians. Prior to course completion, students must present the instructor with a Neonatal Resuscitation course completion certificate from the American Academy of Pediatrics.*

## EMS200 Basic EMT Refresher

*2 Credits (2 Lectures)*

EMT Refresher 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. Prepares students for State recertification and NREMT re-registration process. *May be taken two times for credit. Prerequisites: Current basic EMT and CPR certifications.*

## EMS201 Basic EMT Renewal Challenge

*.5 Credit (.5 Lecture)*

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. Prerequisites: Basic EMT and CPR certifications.*

## EMS208 Advanced Emergency Medical Technician

*11 Credits (7 Lectures, 12 Labs – 285 Hours)*

Meets the U.S. Department of Transportation and AZ Department of Health Services Office of Emergency Medical Services requirements for EMT-Advanced. Provides advanced knowledge and skills related to hypoperfusion states, respiratory arrest or insufficiency, seizure states, cardiovascular emergencies, unconscious states of undetermined etiology, head injuries with altered levels of consciousness and chest trauma. *Current EMT certification for one year required. Comprehensive written, oral and practical evaluations on basic EMT skills. Prerequisites: Valid EMT certification; HCP CPR; DHS requirements.*

## EMS236 Pharmacology in an Emergency Setting

*3 Credits (3 Lectures)*

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)*

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)*
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 electric pacemaker. *Prerequisites: Current CPR provider level and current AHA ACLS provider level.*

## EMS242 Advanced Life Support Refresher Course

*3 Credits (3 Lectures)*
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. *May be taken two times for credit. Prerequisite: Paramedic or IEMT Certification.*

## EMS245 Pre-Hospital Trauma Management/PHTLS

*1 Credit (1 Lecture)*
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)*
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

*13.5 Credits (13.5 Lectures – 216 Hours)*
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. *Prerequisite: Certified EMT with one year of experience; FSC129; entrance assessment; ability to obtain a DPS background clearance card for clinical sites; instructor consent. Corequisite: BIO160.*

## EMS272B Advanced Emergency Medical Technology/Paramedic, Module II

*8.5 Credits (8 Lectures, 2 Labs – 150 Hours)*
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)*
Provides 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. Emphasis is on 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)*
Hands-on application of EMS skills and knowledge in a supervised, pre-hospital emergency setting, with an emphasis

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**ICON LEGEND:**   **AGEC:** 🅰   **Intensive Writing:** *IW*   **Reading Required: RDG100:** *ℛ*   **SUN Course:** ◉

on demonstrating diagnostic and advanced emergency treatment skills to care for acutely ill and seriously injured patients. Competences covered include further development of diagnostic and advanced emergency treatment skills, professional communications with patients, their families, hospital and fire personnel, and improved 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)*
Second semester practicum providing continued hands-on application of EMS skills and knowledge within a supervised, pre-hospital emergency setting, including patients with diverse physiology, pathophysiology, and clinical symptoms. Emphasis is on demonstrating diagnostic and advanced emergency treatment skills to care for acutely ill and seriously injured patients. *Prerequisite: EMS272B. Corequisite: EMS272C.*

### EMS275 Critical Care Emergency Medical Transport Program (CCEMTP)
**Previously known as EMS275 Critical Care for Paramedics (CCEMTP)**
*5.5 Credits (5 Lectures, 2 Labs)*
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: One year's experience as a registered nurse, certified paramedic or respiratory therapist; current certifications in CPR, trauma (BTLS or PHTLS), PALS or PEPP, and ACLS.*

# ENGLISH (ENG)

### ENG090 Introduction to Composition I
**Previously known as ENG090 English Composition I**
*3 Credits (3 Lectures)*
This course will increase reading comprehension, reading fluency, and college-level vocabulary while introducing students to the writing process. Emphasis will be on identifying the topic, main idea, and details in reading passages then using this knowledge for idea development and organization in writing. In addition, students will work on the development of grammar and punctuation skills as well as the revision process.

### ENG100 Introduction to Composition II
**Previously known as ENG100 English Composition II**
*3 Credits (3 Lectures)*
This course will increase reading comprehension, reading fluency, and college-level vocabulary while introducing students to the writing process. Emphasis will be on identifying the topic, main idea, and details in reading passages then using this knowledge for idea development and organization in writing. In addition, students will work on the development of grammar and punctuation skills as well as the revision process.

### ENG101 College Composition I
**Previously known as ENG101 English Composition III**
*3 Credits (3 Lectures)* 🟠 *ENG 1101* 🅰️ℛ
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. *Prerequisite:ENG100. Prerequisite or corequisite: RDG100.*

### ENG102 College Composition II
**Previously known as ENG102 English Composition IV**
*3 Credits (3 Lectures)* 🟠 *ENG 1102* 🅰️
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)*
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 or RDG091.*

### ENG200 Introduction to Creative Writing
*3 Credits (3 Lectures)* 🅰️
An introduction to the craft of writing the literary forms of creative nonfiction, poetry, and fiction, emphasizing readings, writing exercises, and the composition of original, short literary creative nonfiction, poetry, and fiction for a literary audience. *Prerequisite: ENG101*🟠*.*

### ENG201 News Reporting and Writing
*3 Credits (3 Lectures)* 🟠 *JRN 2201* 🅰️*IW*ℛ
Basic reporting and writing skills, Associated Press editing style, and the organizational structure for news will be covered in order to assist in the production of the school newspaper, The Cactus. Stories will be produced with an emphasis on accuracy, newsworthiness, deadlines, objectivity, and fairness. *May be taken two times for credit. Prerequisite: ENG101*🟠*. Corequisite: ENG102*🟠*.*

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**ICON LEGEND:** **AGEC:** 🅰️ **Intensive Writing:** *IW* **Reading Required: RDG100:** ℛ **SUN Course:** 🟠

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## ENG210 Introduction to Fiction Writing

*3 Credit (3 Lectures)* [a]

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* [◉].

# ENVIRONMENTAL SCIENCE (ENV)

## ENV101 Environmental Science

*4 Credits (3 Lectures, 3 Labs)* [a][R]

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: RDG100.*

# FIRE SCIENCE TECHNOLOGY (FSC)

## FSC106 Introduction to Emergency Services

*3 Credits (3 Lectures)*

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)*

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.

## FSC109 Fire Protection Systems

*3 Credits (3 Lectures)*

This course provides a comprehensive and concise overview of the design and operation of the various types of fire protection systems, including fire alarm and detection systems, automatic fire sprinkler systems, special hazard fire protection systems, smoke control and management systems, and security and emergency response systems. *Prerequisite: FSC140.*

## FSC110 Fire and Emergency Services Safety and Survival

*3 Credits (3 Lectures)*

Introduction to the basic principles and history related to the 16 National Fire Fighter Life Safety Initiatives, focusing on the need for cultural and behavior change throughout the emergency services. Encompasses three of the latest trends with the fire service (as it relates to college education): following the FESHE guidelines, a greater emphasis on the application of risk management, and online courses.

## FSC111 Emergency Driver Operator

*2 Credits (1 Lecture, 3 Labs)*

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)*

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. *Prerequisite: FSC140 or Program Director consent.*

## FSC118 Fire Hydraulics

*3 Credits (3 Lectures)*

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)*

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)*

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

*2 Credits (2 Lectures)*

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.

## FSC130 Fitness for Firefighters/CPAT

*1.5 Credits (1.5 Lectures)*

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 and Conditioning for Firefighters

*3 Credits (3 Lectures)*

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. *Corequisite: FSC140. Recommended: 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

*11 Credits (10 Lectures, 3 Labs)*

Introductory fire science primarily targeting the fire department recruit. Includes firefighting skills, equipment, administrative policies, fire department operations, personnel policies, and International Fire Service Accreditation Congress Practical Skills Testing. *Prerequisites: EMS100 (CPR), EMS125 (EMT). Corequisites: FSC106, FSC129, FSC134.*

## FSC180 Wildland Fire, Module I

*3 Credits (3 Lectures)*

Designed for individuals with little or no experience in the wildland environment. Provides preparation for performing as a beginning-level wildland firefighter on an engine or hand crew. 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: 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: training.nwcg.gov/*

## FSC181 NWCG S-131 Advanced Firefighter Training

*.5 Credit (.5 Lecture)*

Advanced firefighter training. National Wildfire Coordinating Group standardized course. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: FSC180.*

## FSC182 NWCG S211 Portable Pumps and Water Use

*1 Credit (1 Lecture)*

Combined self-paced/field exercise format providing training for a portable water pump operator, per National Wildfire Coordinating Group. National Wildfire Coordinating Group standardized course. *Satisfactory/Unsatisfactory grading options available. Prerequisite: FSC180 or Program Director consent.*

## FSC183 NWCG S212 Wildland Power Saws

*1.5 Credits (1.5 Lectures)*

Skill course designed to instruct prospective chain saw operators in the requirements of the wildfire power saw operator position, per National Wildfire Coordinating Group. National Wildfire Coordinating Group standardized course. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: FSC180 or Program Director consent.*

## FSC185 NWCG Basic Incident Command System, I-200

*1 Credit (1 Lecture)*

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)*
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, demobilization at Wildfires. This course is required to obtain the NWCG Engine Boss qualification. National Wildfire Coordinating Group standardized course. *Prerequisite: NWCG S-131 OR FSC181.*

### FSC187 NWCG Engine Boss (Single Resource), S-231

*.5 Credit (.5 Lecture)*
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. National Wildfire Coordinating Group standardized course. *Prerequisite: NWCG S-131 OR FSC181.*

### FSC188 NWCG Ignition Operations, S-234

*2 Credits (2 Lectures)*
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. National Wildfire Coordinating Group standardized course. *Prerequisite: NWCG S-290 OR FSC191.*

### FSC189 NWCG Interagency Incident Business Management, S-260/S-261

*2 Credit (2 Lectures)*
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.

### FSC190 NWCG Basic Air Operations, S-270

*1.5 Credits (1.5 Lectures)*
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)*
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)*
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.*

### FSC193 NWCG L-280 Followership to Leadership

*1 Credit (1 Lecture)*
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)*
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)*
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.*

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**ICON LEGEND:**      **AGEC:** 🅐      **Intensive Writing:** *IW*      **Reading Required: RDG100:** *R*      **SUN Course:** 🔶

## FSC204 Firefighting Tactics and Strategy

*3 Credits (3 Lectures)*

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.*

## FSC205 Command Strategies for Major Emergencies

*3 Credits (3 Lectures)*

Methods of managing major emergency incidents to include major wildland fires, complex hazardous materials incidents and multi-casualty medical incidents. Management of incidents requiring the commitment of resources based on transitional situations, the interactions involved with multi-agency coordination and the incorporation of federal, state and local resources while utilizing simulation exercises. *Prerequisite: FSC204 or equivalent course.*

## FSC206 Fire Department Health and Safety Officer

*3 Credits (3 Lectures)*

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 Building Construction for the Fire Service

**Previously known as FSC208 Fire Safety and Building Construction**

*3 Credits (3 Lectures)*

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 and Determination

*3 Credits (3 Lectures)*

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. *Prerequisite: FSC140 or Program Director consent.*

## FSC220 Fire Officer Leadership

*3 Credits (3 Lectures)*

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. *Prerequisites: FSC202 and students must be employed as a member of public safety.*

## FSC238 Vehicular Extrication and Victim Stabilization

*2 Credits (2 Lectures)*

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, hazardous materials incidents, integration of local emergency medical services (EMS) for patient assessment and management, and standard operating procedures to selected victim scenarios. *Prerequisites: Basic EMT certification or equivalent, nurse with emergency department and Program Director consent.*

## FSC250 Ladder Company Officer

*1 Credit (1 Lecture)*

Overview of all aspects of ladder company operations including activities, expectations and responsibilities required of the ladder captain. Designed for the company officer who aspires to the role of ladder company officer.

## FSC252 Engine Company Officer

*1 Credit (1 Lecture)*

Overview of all aspects of engine company operations including the activities and responsibilities performed by the captain as well as mechanisms for developing a personal supervisory style. Designed for the aspiring company officer or anyone having the opportunity for the role of a company officer. *Prerequisites: Firefighter, either volunteer or paid.*

## FSC255 Fire Instructor I

*3 Credits (3 Lectures)*

Designed to train firefighters and emergency services instructors to teach a fire-related class with basic instructional knowledge and from a prepared lesson plan. This course meets the requirements set forth in the National Fire Protection Association (NFPA) 1041 standard. *Prerequisite: FSC140 or Program Director consent.*

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**ICON LEGEND:** **AGEC:** a   **Intensive Writing:** *IW*   **Reading Required: RDG100:** *R*   **SUN Course:**

## FSC256 Fire and Emergency Services Instructor II

*1.5 Credits (1.5 Lectures)*
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; organize and plan the supervisory/administrative components of instruction. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: FSC255.*

# GEOGRAPHY (GEO)

## GEO101 Introduction to Cultural and Historical Geography

*3 Credits (3 Lectures)* 🄰 𝓡
Historical and contemporary spatial variations among cultural groups and spatial functioning of society. Illustrations from a variety of cultures world-wide showing how culture is constructed, contested, and contextualized. *Prerequisite: RDG100.*

## GEO111 Introduction to Physical Geography

*4 Credits (3 Lectures, 3 Labs)* 🄰 𝓡
Spatial and functional relationships among climates, landforms, soils, water and plants. *Prerequisite: RDG100*

# GEOLOGY (GLG)

## GLG101 Physical Geology

*4 Credits (3 Lectures, 3 Labs)* ◉ *GLG 1101* 🄰 𝓡
Basic principles of geology. Earth's minerals and rocks, external and internal processes, energy resources, and planetary geology. *Prerequisite: RDG100.*

## GLG102 Historical Geology

*4 Credits (3 Lectures, 3 Labs)* ◉ *GLG 1102* 🄰 𝓡
Rocks, fossils, organic evolution, geologic time, plate tectonics, earth's origin and the major time periods of earth history. *Prerequisite: RDG100.*

## GLG110 Geologic Hazards and Disasters

*4 Credits (3 Lectures, 3 Labs)* 🄰 𝓡
Geological studies as they apply to interactions between humans and the Earth, including geologic processes and hazards, resources and global change. *Prerequisite: RDG100.*

# HEALTH CAREERS CENTER (HCC)

## HCC100 Introduction to Healthcare

*3 Credits (3 Lectures)* 𝓡
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: RDG100.*

## HCC103 Introduction to Medical Terminology

*1 Credit (1 Lecture)* 𝓡
Introduction to medical terminology and abbreviations used in healthcare. Origin of selected medical terms and abbreviations related to body system structures, functions and diseases. Building and analyzing terms using basic word parts. *Prerequisite: RDG100.*

## HCC112 Therapeutic Communication

**Previously known as HCC112 Interpersonal Skills**
*2 Credits (2 Lectures)* 𝓡
Develop interpersonal communication skills and the ability to communicate with multi-cultural clients, embracing complementary and alternative therapies, and with clients of varying ages and circumstances, as well as with health peers and professionals. This course will include the study of basic principles of psychology and development stages of the life cycle while emphasizing integrative medicine. Focus includes recognizing that life factors such as heredity, culture, economics, life experience, spiritual and moral values, and role models do influence one's personal communication skills and behavior. Also covered is utilizing appropriate strategies to communicate therapeutically and respond optimally when interacting with clients encountered in the healthcare setting. *Prerequisite: RDG100.*

## HCC116 Medical Terminology

*3 Credits (3 Lectures)* 𝓡
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: RDG100.*

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**ICON LEGEND:**    **AGEC:** 🄰    **Intensive Writing:** *IW*    **Reading Required: RDG100:** 𝓡    **SUN Course:** ◉

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## HCC162 Basic Pharmacology for Health Occupations
**Previously known as HPM162 Basic Pharmacology for Health Occupations**
*3 Credits (3 Lectures)* $\mathcal{R}$
Introduction to drug sources, uses, and classifications including purpose, side effects, cautions, interactions, and patient education. *Prerequisites: RDG100.*

## HCC173 Pathophysiology
*3 Credits (3 Lectures)* $\mathcal{R}$
**Previously known as HPM173 Pathophysiology**
Pathological conditions and terminology, causes, incidence, signs, symptoms, diagnosis, treatment and special considerations associated with the major diseases of the body systems studied. *Prerequisite: RDG100.*

## HCC174 Pathopharmacology for Health Occupations
*5 Credits (5 Lectures)* $\mathcal{R}$
The fundamentals of pathophysiology as they relate to pharmacology in a healthcare setting. Pathological conditions and terminology, causes, incidence, signs, symptoms, diagnosis treatment, and special considerations associated with the major diseases of the body systems studied. Students will demonstrate application of pathophysiological principles to pharmacologic therapy as it relates to drug sources, uses, and classifications including purpose, side effects, cautions, interactions, and patient education. *Prerequisite: RDG100.*

# HEAVY EQUIPMENT OPERATIONS (HEO)

## HEO100 Introduction to Heavy Equipment Operations
*5 Credit (1 Lecture, 12 Labs)*
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: Valid driver's license or instructor consent.*

## HEO118 Forklifts, Rigging, and Hoisting Training
*2 Credits (1 Lecture, 3 Labs)*
Introduction to basic heavy equipment operation knowledge and experience, including working with heavy equipment in a safe and responsible manner, operating various types of forklifts used in the industry, and demonstration of rigging and hoisting safety techniques. Hands-on experiences include lifting, transporting, and placing various types of loads.

## HEO121 Heavy Equipment Operations Core
**Previously known as HEO121 Heavy Equipment Operations**
*5 Credits (3 Lectures, 6 Labs)*
Introduction to the use of heavy equipment with emphasis on safety, preventive maintenance and grade stake interpretation. *Prerequisite: Valid driver's license, Program Director consent, must be declared Heavy Equipment Operator major.*

## HEO122 Heavy Equipment Operations I
**Previously known as HEO122 Heavy Equipment Operations II**
*5 Credits (3 Lectures, 6 Labs)*
Expanded operation of heavy equipment to include interpreting blueprints, staking, and estimating costs, using technology to conduct research and construct more complex projects. *Prerequisite: A valid driver's license.*

## HEO127 Heavy Equipment Reconditioning
*5 Credits (3 Lectures, 6 Labs)*
Fundamentals of heavy equipment reconditioning and preventive maintenance procedures. *Prerequisite: Valid driver's license.*

## HEO128 Diesel Equipment Service and Repair
*5 Credits (3 Lectures, 6 Labs)*
Service and repair of diesel and heavy equipment.

## HEO130 Rigging, Trenching and Foundations
**Previously known as HEO130 Trenching and Foundations**
*3 Credits (2 Lectures, 3 Labs)*
Introduction to basic heavy equipment operation knowledge and experience, including working with heavy equipment in a safe and responsible manner, operating various types of forklifts used in the industry, and demonstration of rigging and hoisting safety techniques. Hands-on experience includes lifting, transporting, and placing various types of loads.

## HEO221 Heavy Equipment Operations II
**Previously known as HEO221 Advanced Heavy Equipment Operations**
*5 Credits (3 Lectures, 6 Labs)*
Advanced instruction and application of heavy equipment operation comprehensive skills, knowledge and abilities. *Prerequisites: HEO122 and valid driver's license.*

## HEO222 Heavy Equipment Operations III

**Previously known as HEO222 Applied Heavy Equipment Construction**

*5 Credits (3 Lectures, 6 Labs)* ℛ

Heavy Equipment Operator capstone construction project and introduction to job seeking techniques. *Prerequisites: RDG100, HEO122 or instructor consent, valid driver's license.*

## HEO223 Commercial Driver License Preparation

*3 Credits (3 Lectures)*

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.*

## HEO225 Preventive Maintenance

**Previously known as DIE225 Preventive Maintenance**

*2 Credits (1 Lecture, 3 Labs)*

The development of skills necessary to identify, prevent and repair mechanical problems as related to the maintenance of heavy earth-moving equipment. *Prerequisite: Valid driver's license.*

# HEALTH INFORMATION MANAGEMENT (HIM)

## HIM115 Health Information Management I

*2 Credits (2 Lectures)* ℛ

Introduction of fundamental concepts of health information management with an emphasis on healthcare delivery systems across the continuum of care focusing on payment methodologies, external standards, state and federal regulations, and initiatives governing health information. Healthcare professionals and disciplines will be examined along with ethical standards of practice. *Prerequisite: RDG100. Offered every fall.*

## HIM117 Health Information Management II

*3 Credits (3 Lectures)*

Introduction to the fundamental concepts of health data management derived from healthcare functions and processes. Policies for data governance are reviewed, focusing on accuracy, integrity and compliance of data reporting to support patient care, reimbursement, and quality improvement programs. Primary and secondary users of health data are identified. Students will also investigate the impact of collecting data for statistical analysis to identify trends and to support decision making efforts related to healthcare. *Prerequisite: HIM115. Offered every spring.*

## HIM121 Legal Aspects of Health Information

*3 Credits (3 Lectures)*

Principles of healthcare law and ethics including legal terminology, liability theories, evidence, patient consent, risk management, quality improvement, compliance, and requirements affecting the privacy, security, control, and disclosure of health information. *Prerequisite: HIM117. Offered every summer.*

## HIM131 Introduction to Insurance and Insurance Billing I

*3 Credits (3 Lectures)* ℛ

Introductory course to insurance systems, billing processes, clinical vocabularies, ethical and legal issues and computer applications used to complete these processes. *Prerequisite: RDG100. Offered every fall.*

## HIM138 ICD Coding

*3 Credits (3 Lectures)* ℛ

Development of fundamental coding techniques using the current International Classification of Diseases Clinical Modification (ICD-CM). Emphasis is placed on specificity and the application of professional standards in the assignment of codes to diagnoses and procedures adhering to coding guidelines. In addition, the study of clinical classification systems, terminologies and vocabularies will be covered. *Prerequisite: HIM115, HIM116. Prerequisite or corequisite: HIM117. Offered every spring.*

## HIM158 CPT Coding

*3 Credits (2 Lectures, 3 Labs)*

Fundamental coding techniques using the Current Procedural Terminology (CPT) and the Healthcare Common Procedure Coding System (HCPCS) coding classifications, and providing hands-on practical skills for student learning adhering to coding guidelines. *Prerequisite: HIM138. Offered every fall.*

## HIM160 Healthcare Data Management

*2 Credits (2 Lectures)*

Review of clinical documentation and functions of the health record for various clinical settings. In addition, primary and secondary data sources, accreditation and regulations, and best practices for documentation impacting the continuum of care within the U.S. healthcare delivery systems are covered. *Prerequisite: HIM117. Offered every summer.*

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**ICON LEGEND:** **AGEC:** ⓐ    **Intensive Writing:** *IW*    **Reading Required: RDG100:** ℛ    **SUN Course:** ◎

## HIM200 Introduction to Revenue Cycle Management

*2 Credits (2 Lectures)*
Principles of reimbursement and health insurance relating to private, state, and government programs, and managed care contracting within the U.S. healthcare payment systems are evaluated. Emphasis is placed on payment methodologies and systems within the revenue cycle management. *Corequisite: HIM158. Offered every fall.*

## HIM205 Healthcare Statistics and Research

*2 Credits (2 Lectures)*
General principles of healthcare statistics with emphasis in hospital statistics. Students are required to utilize formulas and perform calculations. *Prerequisites: MAT118 or higher, HIM160. Offered every fall.*

## HIM210 Leadership, Supervision and Quality

*3 Credits (2 Lectures, 3 Labs)*
Comprehensive introduction to the theory, practice, and management of performance and quality improvement processes in healthcare organizations. Overview of Leadership for HIM professionals. *Prequisite: HIM205. Offered every fall.*

## HIM215 Health Information Systems

*3 Credits (2 Lectures, 3 Labs)*
Application of analysis, design, evaluation, selection, acquisition, and utilization of health information systems in healthcare organizations. Additional topics include guidance on interoperability, optimization, and enterprise content management while addressing a broader range of health technologies. *Corequisites: HIM205. Offered every spring.*

## HIM220 Advanced Revenue Management

*3 Credits (2 Lectures, 3 Labs)*
Continued study in advanced revenue cycle concepts utilizing all coding methodologies while following official guidelines, evaluating processes and regulatory requirements. *Prerequisites: HIM158 and HIM205.*

## HIM230 Advanced Data Management

*3 Credits (2 Lectures, 3 Labs)*
Continued study of advanced health information data management by evaluating data sets, utilizing databases and understanding standards related to compliance, governance, and health information exchange standards. *Prerequisites: HIM160 and HIM205.*

## HIM296 Health Information Management Practicum

**Previously known as HIM275 Health Information Management Practicum**
*4 Credits (4 Practica – 180 Hours)*
Through professional practice, students will apply knowledge and skills obtained in the Health Information Management program with a healthcare organization affiliate and through professional development experiences; requires a minimum of 180 hours. This practicum course may be a hybrid of online and in-person hours and requires extensive healthcare facility driven clearance requirements. *Prerequisites: All program requirements completed prior to enrollment in HIM296 and HIM Director written consent. Offered every summer.*

# HISTORY (HIS)

## HIS101 United States History I

*3 Credits (3 Lectures)* 🔴 *HIS 1131* 🅰️𝓡
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. *Prerequisite or corequisite: RDG100.*

## HIS102 United States History II

*3 Credits (3 Lectures)* 🅰️𝓡
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. *Prerequisite or corequisite: RDG100.*

## HIS103 History of Western Civilization I

*3 Credits (3 Lectures)* 🅰️𝓡
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. *Prerequisite or corequisite: RDG100.*

## HIS104 History of Western Civilization II

*3 Credits (3 Lectures)* 🅰️𝓡
Western world development from early 18th century to modern day, stressing its cultural, intellectual, military, and political conflicts and contributions. *Prerequisite or corequisite: RDG100.*

## HIS105 Arizona History

*3 Credits (3 Lectures)* 🅰️𝓡
Survey of Arizona history from prehistoric and modern day Native American experience, Spanish Colonial exploration

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**ICON LEGEND:**     **AGEC:** 🅰️     **Intensive Writing:** *IW*     **Reading Required: RDG100:** 𝓡     **SUN Course:** 🔴

through the Mexican Republic, and American territorial years through statehood to the present. This includes the development and evolution of state governments and the contributions of the cultural, religious, and ethnic groups making up Arizona culture. *Prerequisite or corequisite: RDG100.*

### HIS106 Mexican-American History

*3 Credits (3 Lectures)* 🅰 *IW* ℛ

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: RDG100. Corequisite: ENG102* 🔘*.*

### HIS107 African-American History I

*3 Credits (3 Lectures)* 🅰 ℛ

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: RDG100.*

### HIS108 Eastern Civilization – Beginnings to 1850

*3 Credits (3 Lectures)* 🅰 ℛ

An examination of the characteristics and development of civilizations, religions, and philosophies of the Middle East, Far East, and Southeast Asia from ancient times to the mid-nineteenth century. *Prerequisite: RDG100.*

### HIS201 Women in United States History

*3 Credits (3 Lectures)* 🅰 *IW* ℛ

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. *Prerequisite: RDG100. Prerequisite or corequisite: ENG102* 🔘*.*

### HIS208 Eastern Civilization – 1850 to Modern Times

*3 Credits (3 Lectures)* 🅰 *IW* ℛ

An examination of the characteristics and development of civilizations, religions, and philosophies of the Middle East, Far East and Southeast Asia from the mid-nineteenth century to modern times. *Prerequisite: RDG100. Prerequisite or corequisite: ENG102* 🔘*.*

## HUMANITIES: COMMUNICATIONS (HMC)

### HMC210 Classical Mythology and Western Art

*3 Credits (3 Lectures)* 🅰 ℛ

A survey of the major Greek and Roman myths and their influence on Western culture. Emphasis on works of past and contemporary art and architecture which were inspired by these myths. *Prerequisite: RDG100.*

### HMC250 Humanities in the Western World I

*3 Credits (3 Lectures)* 🅰 ℛ

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: RDG100 and ENG100. Recommended: Sophomore status.*

### HMC251 Humanities in the Western World II

*3 Credits (3 Lectures)* 🅰 ℛ

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: RDG100, ENG100, Sophomore status.*

## HUMANITIES: SOCIAL AND BEHAVIORAL (HMS)

### HMS100 Introduction to Social Behavioral Science

*3 Credits (3 Lectures)*

Concepts and issues in the social sciences are explored through such sources as primary documents, articles, biographies, ethnographies, postings by social science organizations on social media, and visual media.

## HONORS (HNR)

### HNR201 Honors Seminar I

*1 Credit (1 Recitation)*

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.*

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**ICON LEGEND:** **AGEC:** 🅰 **Intensive Writing:** *IW* **Reading Required: RDG100:** ℛ **SUN Course:** 🔘

*This catalog was prepared on the basis of the best information available at the time of publication. Catalog information is subject to changes without notice, obligation or liability.*

*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)*
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)*
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)* 🅰 *IW* ℛ
The Honors Colloquium is required for Honors students in the eighteen-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. 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. The Special Awareness Requirement for Intensive Writing is earned upon the completion of both HNR204 and HNR205. *Prerequisites or corequisites: RDG100 and ENG101* 🔴.

## HNR205 Honors Colloquium II
*3 Credits (3 Lectures)* 🅰 *IW* ℛ
The Honors Colloquium is required for Honors students in the eighteen-hour program. Honors Colloquium II is the second

course requirement in the Honors course sequence designed for the academic transfer student. 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. The Special Awareness Requirement for Intensive Writing is earned upon the completion of both HNR204 and HNR205. *Prerequisites: HNR204 and RDG100. Prerequisite or corequisite: ENG102* 🔴.

# HOSPITALITY MANAGEMENT (HRM)

## HRM100 Introduction to Hospitality
*3 Credits (3 Lectures)* ℛ
An introduction to the hospitality industry and career exploration of the hotel, restaurant, culinary arts, recreation, tourism and related industries. *Recommended: RDG100.*

## HRM101 Facilities Management
*3 Credits (3 Lectures)* ℛ
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: RDG100. Offered every spring.*

## HRM102 Management of Guest Services
*3 Credits (3 Lectures)* ℛ
Front office procedures from the reservations process to check-out, including customer service, account settlement, revenue management, interoffice communication and human resource supervision. *Prerequisite: RDG100. Offered every fall.*

## HRM103 Managing Food Service Operations
*3 Credits (3 Lectures)* ℛ
The principles of commercial food service operations with a systemic concept to operations approach. *Prerequisite: RDG100. Offered every spring.*

## HRM145 Convention and Meeting Management
*3 Credits (3 Lectures)* ℛ
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. *Prerequisite: RDG100. Offered every fall.*

## HRM252 Managing Hospitality Human Resources

*3 Credits (3 Lectures)* 𝓡

This course provides an overview of U.S. employment and workplace law requirements, including strategies for hiring and training used in business, restaurant or lodging operations. *Prerequisite: RDG100. Offered every spring.*

# IRON WORKING (IRW)

## IRW130 Structural Steel Erection I

*3 Credits (2 Lectures, 3 Labs)*

Basic foundations of iron work including proper safety procedures, setting up and using safety tie off points, and navigating and walking steel in an elevated position. Also covered is basic rigging of structural members, making structural connections such as plumbing of columns and aligning members, using a transit properly, and finalizing the structural connection fit-up including high strength bolting and complete joint penetration welding. *Prerequisite: Fundamentals of Arc Welding Certificate, or prior learning equivalent credit, or documented industry experience, or instructor consent.*

# LITERATURE (LIT)

## LIT101 Introduction to Literature

*3 Credits (3 Lectures)* a𝓡

Introduction to literary analysis of various genres, literary devices, and production and reception of literature by various audiences. *Prerequisite: RDG100.*

## LIT201 American Literature I

*3 Credits (3 Lectures)* a *IW*

Survey of a diverse range of American literary works from the American Colonial Period through the Civil War, emphasizing literary history, criticism, and socio-cultural and historical contexts. *Prerequisite or corequisite: ENG102*.

## LIT202 American Literature II

*3 Credits (3 Lectures)* a *IW*

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)* a *IW*

Major English literary works from the Middle Ages to 1800. *Prerequisite: ENG101. Prerequisite or corequisite: ENG102. Offered every fall – odd year.*

## LIT204 English Literature II

*3 Credits (3 Lectures)* a *IW*

Major English literary works from the Romantic period to the Modern period. *Prerequisite: ENG101. Corequisite: ENG102. Offered every spring - even year.*

## LIT206 World Literature

*3 Credits (3 Lectures)* a 𝓡

Introduction to literary works from diverse global cultures, focusing on illuminating both the universality and diversity of human experience. *Prerequisites: RDG100 and ENG101.*

## LIT232 African American Literature

*3 Credits (3 Lectures)* a *IW*

Exploration of major literary works written by African Americans from the 1700s through the present. *Prerequisite: ENG101. Prerequisite or corequisite: ENG102.*

## LIT233 American Ethnic Literature

*3 Credits (3 Lectures)* a *IW*

Exploration of literary works written by a variety of American ethnic authors. *Prerequisite: ENG101. Prerequisite or corequisite: ENG102.*

## LIT234 U.S. Latinx Literature and Culture

*3 Credits (3 Lectures)* a

A multi-genre examination of United States Latinx authored literature from linguistic, cultural, global, and historical perspectives as well as theoretical approaches relevant to studying such literature. *Prerequisite: ENG101.*

## LIT256 Science Fiction Literature and Film

*3 Credits (3 Lectures)* a *IW*

A survey of science fiction literature and film as a narrative medium for social, political, and cultural commentary from the genre's early influences to the modern era. *Prerequisite: ENG101. Prerequisite or corequisite: ENG102.*

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**ICON LEGEND:** **AGEC:** a   **Intensive Writing:** *IW*   **Reading Required: RDG100:** 𝓡   **SUN Course:** ◎

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## LIT278 Native American Literature and Culture

**Previously known as LIT278 Native American Literatures**

*3 Credits (3 Lectures)* ⓐ ℛ

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: RDG100; ENG101*◎. *Offered every spring – odd year.*

## LIT291 Children's Literature for Educators

*3 Credits (3 Lectures)* ⓐ *IW*

Introduces, explores, and evaluates a wide array of classic and contemporary children's literature. Emphasis is on examination of criteria for selection and an evaluation of children's books, including culturally and socially diverse literature. *Prerequisite: ENG101*◎. *Prerequisite or corequisite: ENG102*◎.

# LICENSED MASSAGE THERAPY (LMT)

## LMT136 Business Skills for Massage Therapy

**Previously known as HPM136 Business Skills for Massage Therapy**

*3 Credits (3 Lectures)* ℛ

Career options in the massage field include private practice, working in medical settings, and resort and spa work. Preparation for joining the workforce in all capacities are covered including professional ethics, resume writing and basics of accounting, insurance billing and preparing for State licensing. Course is designed especially for those entering or already in the massage therapy field. *Prerequisite: RDG100.*

## LMT150 Chiropractic Assistant Training

**Previously known as HPM150 Chiropractic Assistant Training**

*2 Credits (2 Lectures)*

Introduction to administrative and clinical chiropractic procedures. This course is a requirement in the massage therapy program and is available as certification training for individuals who are not in the massage therapy program but who wish to pursue a career as a chiropractic assistant.

## LMT151 Study of Acupuncture for Healthcare Professionals

**Previously known as HPM151 Study of Acupuncture for Healthcare Professionals**

*1 Credit (1 Lecture)* ℛ

Introduction to acupuncture principles and practices that may be part of patient care in a chiropractic medical practice. This course is required in the massage therapy program and is available for individuals who wish to pursue a career as a chiropractic assistant. *Prerequisite: RDG100.*

## LMT152 Physical Modalities for the Chiropractic Assistant

**Previously known as HPM152 Study of Physiotherapy for Health Care Professionals**

*1 Credit (1 Lecture)* ℛ

Introduction to the principles and practices that are part of patient care in a chiropractic medical practice. This course is a requirement in the massage therapy program and is available as to individuals who wish to pursue a career as a chiropractic assistant. *Prerequisite: RDG100.*

## LMT154 Complementary and Alternative Medicine

**Previously known as HPM154 Complementary and Alternative Medicine**

*3 Credits (3 Lectures)* ℛ

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: RDG100.*

## LMT160 Applied Anatomy for Massage Therapy

**Previously known as HPM160 Applied Anatomy for Massage Therapy**

*3 Credits (3 Lectures)* ℛ

Study of bones, joints and muscles: their location in the body, their functions in providing structure and protection, and their actions. Students develop palpation skills with practical application in concurrent massage class experience. *Prerequisite: RDG100.*

## LMT175 Practicum – Massage Therapy – Relaxation Massage

**Previously known as LMT175L Practicum – Massage Therapy – Relaxation Massage**

*1 Credit (1 Practicum - 45 Hours)*

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 director permission may retake this course only once with director permission. *Prerequisites: LMT180 and director consent.*

**ICON LEGEND:**    **AGEC:** ⓐ    **Intensive Writing:** *IW*    **Reading Required: RDG100:** ℛ    **SUN Course:** ◎

## LMT176 Practicum – Massage Therapy – Therapeutic Massage
**Previously known as LMT175M Practicum – Massage Therapy – Therapeutic Massage**
*1 Credit (1 Practicum – 45 Hours)*
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 director permission may retake this course only once with director permission.
*Prerequisites: LMT180 and director consent.*

## LMT177 Practicum – Massage Therapy for Special Populations
**Previously known as LMT175N Practicum – Massage Therapy for Special Populations**
*1 Credit (1 Practicum – 45 Hours)*
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 director permission may retake this course only once with director permission.
*Prerequisites: LMT180 and director consent.*

## LMT178 Practicum – Massage Therapy (Spa/Hydrotherapy)
**Previously known as LMT175O Practicum – Massage Therapy (Spa/Hydrotherapy)**
*1 Credit (1 Practicum – 45 Hours)*
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 director permission may retake this course only once with director permission. *Prerequisites: LMT180 and director consent.*

## LMT180 Therapeutic Massage I
**Previously known as HPM180 Therapeutic Massage I**
*3 Credits (3 Lectures)*
Introduction to massage history, benefits and contraindications, draping, hygiene and safety, relaxation (Swedish) massage techniques and benefits, and business and ethics.

## LMT181 Therapeutic Massage II
**Previously known as HPM181 Therapeutic Massage II**
*3 Credits (3 Lectures)*
An event massage such as a chair or a sports massage may be performed in a public setting. Additional emphasis is on working long-term with athletes to maximize performance.

Business strategies, hygiene and proper body mechanics for the massage therapist are addressed.

## LMT280 Therapeutic Massage III
**Previously known as HPM280 Therapeutic Massage III**
*3 Credits (3 Lectures)*
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.*

## LMT281 Therapeutic Massage IV
**Previously known as HPM281 Therapeutic Massage IV**
*3 Credits (3 Lectures)*
Special populations massage includes pregnancy, geriatric and lymphatic massages and foot reflexology. Also covered is the use of proper body mechanics, hygiene, safety, and draping and professional decorum.

## LMT282 Therapeutic Massage V
**Previously known as HPM282 Therapeutic Massage V**
*3 Credits (3 Lectures)*
"Spa technologies" include hot rock massage, scrubs, muds, and wraps which are popular in resorts and spas. Industry standards such as hygiene and draping as well as job-search recommendations are included.

# MATHEMATICS (MAT)

## MAT087 Foundations I
*5 Credits (5 Lectures)*
Review of fundamental mathematical skills as a foundation for other mathematics courses. Exams are proctored.
*Recommended: RDG091.*

## MAT097 Foundations II
*5 Credits (5 Lectures)*
Development of fundamental mathematical skills and concepts such as operations/properties of exponents and complex numbers; factoring; graphing functions; solution/application of linear, quadratic, and rational equations; operations on rational and radical expressions. Exams are proctored. *Credit is allowed for only MAT097 or MAT121. Recommended: RDG091.*

## MAT106 Technical Math I
*3 Credits (2 Lectures, 3 Labs)*
Review of basic operations of whole numbers, fractions, decimals, percentages, and their application to the construction trade. Incorporates the use of tools to measure length and weight. Various mathematical conversions are studied along

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**ICON LEGEND:**    **AGEC:** 🅐    **Intensive Writing:** *IW*    **Reading Required: RDG100:** *ℛ*    **SUN Course:** ◉

with practical applications. A study of basic geometry including perimeter, area, volume, and geometric constructions. Exams are proctored.

## MAT118 Essential Mathematics
*4 Credits (4 Lectures)*
A review of the basic skills of mathematics with emphasis on developing sound mathematical skills in arithmetic, algebra, geometry and problem-solving. Exams are proctored. *Prerequisite: MAT087 and RDG091.*

## MAT121 Intermediate Algebra, Standard
*4 Credits (4 Lectures)*
Operations/properties of real numbers, exponents and complex numbers; factoring, solution/application of linear and quadratic equations; operations on rational and radical expressions. Exams are proctored. *Prerequisite: Eligibility determined by placement process. Recommended: RDG091.*

## MAT141 College Mathematics, Standard
*4 Credits (4 Lectures)* 🔘 *MAT 1142* 🅰 ℛ
General mathematics including personal finance, set theory, exponential growth and decay, probability and statistics. Exams are proctored. *Prerequisite: MAT087. Prerequisite or corequisite: RDG100.*

## MAT151 College Algebra, Standard
*4 Credits (4 Lectures)* 🔘 *MAT 1151* 🅰 ℛ
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. Exams are proctored. *Prerequisite: MAT097 or MAT121. Prerequisite or corequisite: RDG100.*

## MAT162 Applied Statistics
*3 Credits (3 Lectures)* 🅰 ℛ
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. Exams are proctored. *Prerequisite: MAT097 or MAT121 or higher. Prerequisite or corequisite: RDG100.*

## MAT182 Trigonometry with Algebra Review
*4 Credits (4 Lectures)* 🅰ℛ
A comprehensive coverage of trigonometry and selected topics from college algebra for students intending to take calculus: measurements of angles, trigonometric functions, equations and graphs, inverse trigonometric functions, identities, polar

coordinates, solutions of triangles, applications, complex numbers, DeMoivre's theorem, vectors, logarithms, exponential functions, partial fractions, conics, sequences and series. Exams are proctored. *Prerequisite: MAT151* 🔘*. Prerequisite or corequisite: RDG100.*

## MAT187 Pre-Calculus
*5 Credits (5 Lectures)* 🔘 *MAT1187* 🅰 ℛ
Polynomial, logarithmic, exponential functions, factoring and graphing techniques, angles and their measures, properties and graphs of trigonometric functions and equations, identities, vectors, solutions of triangles, applications, polar coordinates, systems of equations and inequalities, partial fractions, conics, sequences and series. Exams are proctored. *Prerequisite: MAT121 or MAT097 with a grade of B or higher. Prerequisite or corequisite: RDG100.*

## MAT201 Math for Elementary Teachers I- Number, Operations and Numerical Systems
*3 Credits (3 Lectures)* 🅰
An explanation of numbers, number systems, operations on numbers, and problem solving. The course is designed to meet the requirements for prospective elementary education teachers. Exams are proctored. *Prerequisite: MAT141*🔘 *or MAT151*🔘*.*

## MAT202 Math for Elementary Teachers II– Geometry, Measurement and Visualization
*3 Credits (3 Lectures)* 🅰
Spatial visualization, measurement, geometry, proof, probability and data analysis using appropriate technologies and various strategies. Use physical models, technology and pattern-finding strategies to identify properties of and develop formulas for measuring two- and three-dimensional shapes. This course is designed to meet the requirements for prospective elementary education teachers. Exams are proctored. *Prerequisite: MAT141*🔘 *or MAT151*🔘*.*

## MAT211 Brief Calculus, Standard
*4 Credits (4 Lectures)* 🔘 *MAT 2212* 🅰
Foundations of differential and integral calculus, including applications to business and economics. Exams are proctored. *Not open to students with credit in MAT221*🔘 *or MAT231*🔘*. Prerequisite: MAT151*🔘*.*

## MAT215 Math for Business Analysis
*4 Credits (4 Lectures)* 🅰
A study of mathematics focused on solving business-related problems by applying the concepts of linear programming,

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**ICON LEGEND:**    **AGEC:** 🅰    **Intensive Writing:** *IW*    **Reading Required: RDG100:** ℛ    **SUN Course:** 🔘

optimization, statistics, probability and multivariable calculus. Exams are proctored. *Prerequisite: MAT211* ◎.

## MAT221 Analytical Geometry and Calculus I

*4 Credits (4 Lectures)* ◎ *MAT 2220* Ⓐ

An introduction to analytic geometry, limits, continuity, differential and integral calculus of single variable functions and related applications. Exams are proctored. *Prerequisite: MAT187* ◎ *or (MAT151* ◎ *and MAT182) or appropriate test score.*

## MAT231 Analytical Geometry and Calculus II

*4 Credits (4 Lectures)* ◎ *MAT 2230* Ⓐ

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. Exams are proctored. *Prerequisite: MAT221* ◎.

## MAT241 Analytical Geometry and Calculus III

*4 Credits (4 Lectures)* ◎ *MAT 2241* Ⓐ

Multivariable calculus including vectors, vector-valued functions, partial differentiation, multiple integration and an introduction to vector fields. Exams are proctored. *Prerequisite: MAT231* ◎. *Offered every fall.*

## MAT242 Elementary Linear Algebra

*3 Credits (3 Lectures)*

Introduction to the theories and applications of Linear Algebra. Topics included are systems of linear equations, vectors and matrices, linear transformations, determinants, eigenvectors, eigenvalues, and orthogonality. Exams are proctored. *Prerequisite: MAT221* ◎.

## MAT275 Modern Differential Equations

*4 Credits (4 Lectures)* Ⓐ

Designed for engineering students, this introduction to first and higher order ordinary differential equations with applications focuses on problem solving using MATLAB. Exams are proctored. *Prerequisite: MAT231* ◎.

# MEDICAL ASSISTANT (MDA)

## MDA139 Fundamentals of Medical Assisting

*4 Credits (3 Lectures, 3 Labs)* ℛ

Introduction to medical assisting, medical science history and practice, medical law and ethics, medical terminology,

communication, office environment, telephone techniques, patient reception, patient education, mental health, and career assistance. *Prerequisites: RDG100 and instructor consent.*

## MDA140 Medical Assisting Skills I

**Previously known as HPM140 Medical Assisting Skills I**

*5 Credits (3 Lectures, 6 Labs)* ℛ

Medical records, medical asepsis and the OSHA Standard, sterilization and disinfection, vital signs, the physical examination, eye and ear assessment and procedures, nutrition, gynecologic, prenatal and pediatric examinations, and male reproductive health are all covered. *Prerequisites: RDG100 and instructor consent.*

## MDA141 Medical Assisting Skills II

**Previously known as HPM141 Medical Assisting Skills II**

*5 Credits (3 Lectures, 6 Labs)* ℛ

Cardiopulmonary procedures, colon procedures, radiology and diagnostic imaging, minor surgery, medications, injections, introduction to the clinical laboratory, urinalysis, phlebotomy, hematology, blood chemistry and serology, and microbiology. *Prerequisites: RDG100 and instructor consent.*

## MDA171 Administrative Medical Procedures

**Previously known as HPM171 Administrative Medical Procedures**

*4 Credits (3 Lectures, 3 Labs)* ℛ

Medical business practices, basic practice finances, managed care/insurance, healthcare law and ethics, and procedural and diagnostic coding. *Prerequisites: RDG100 and instructor consent.*

## MDA174 Medical Assistant Certificate Practicum

**Previously known as HPM175E Medical Assistant Certificate Practicum**

*4 Credits (4 Practica – 180 hours)*

Practical experience of 180 hours in a medical facility, under the supervision of a physician, where 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.*

## MDA175 Medical Assistant Degree Practicum

**Previously known as HPM175C Medical Assistant Degree Practicum**

*4 Credits (4 Practica – 180 Hours)*

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:*

1. *Instructor consent.*
2. *Mandatory requirements specific to MDA175 must be met before enrollment.*
3. *All program courses must be successfully completed before enrolling in MDA175.*

# MANUFACTURING ENGINEERING TECHNOLOGY (MET)

## MET102 Machine Processing, Theory and Application

*5 Credits (4 Lectures, 3 Labs)*
Study and application of principles and theory of common metal removal processes including drilling, reaming, boring, milling, turning, and grinding. Cutting tool geometry and materials, cutting speeds and feeds, coolants, and precision measurement are covered.

## MET106 Industrial Safety

*2 Credits (2 Lectures)*
Safety, health management and accident prevention in the industrial work environment are covered. Topics include the role of the Occupational Safety and Health Administration Act, (OSHA), materials handling, electrical safety, machine safety, first response to fire and medical emergencies, safety signs and color codes, recognition of safety and health hazards accident prevention, and management responsibilities.

## MET110 Introduction to Quality Assurance

*3 Credits (2 Lectures, 3 Labs)*
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.

## MET115 Employment Readiness

*3 Credits (2 Lectures, 3 Labs)*
An interactive workplace environment will 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 only.*

## MET127 Manufacturing Process and Materials

*3 Credits (3 Lectures)*
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.

## MET131 Lean Manufacturing

*3 Credits (3 Lectures)*
Lean manufacturing methodologies and application of a manufacturing organization are covered. Topics include identification of waste and application of cost to poor quality process within a manufacturing organization, lean manufacturing tools and implementation, and organizational buy-in.

## MET150 VB.NET for Engineering

*3 Credits (2 Lectures, 3 Labs)*
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.*

## MET206 CNC Programming

*3 Credits (2 Lectures, 3 Labs)*
CNC Programming of Word Address Language (G&M Code) for computer numerical control (CNC) machine tools are covered. Topics include 2, 3 and 4-Axis CNC Programming for CNC controlled machines, computer-based tool path verification, CNC controller tool path verification and CNC machine tool program verification. Also covered are the study of tooling, speeds, feeds and material removal as related to CNC machine tools and CNC controlled machines.

## MET207 CNC Mill: Operator Training I

*3 Credits (2 Lectures, 3 Labs)*
Computer Numerical Control (CNC) Mill qualified setup and functioning program. Topics include Mill operations, changing tool values, and replacing and qualifying tooling. CNC Mill operator training also includes machine controls, tooling and operations, and proper machine shop safety. *Corequisite: MET206 or Program Director consent.*

## MET208 CNC Lathe: Operator Training I

*3 Credits (2 Lectures, 3 Labs)*
Computer Numerical Control (CNC) Lathe qualified setup and functioning program. Topics include operation of a lathe, changing tool values, and replacing and qualify tooling. CNC

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**ICON LEGEND:**     **AGEC:** 🅰     **Intensive Writing:** *IW*     **Reading Required: RDG100:** *R*     **SUN Course:** 🔘

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Lathe operator training also includes machine controls, tooling and operations and proper machine shop safety. *Corequisite: MET206 or Program Director consent.*

## MET209 CNC Mill: Operator Training II

*3 Credits (1 Lecture, 6 Labs)*
Setup and operation of a computerized numerical control (CNC) mill and fourth axis rotary table. Computerized numerical control (CNC) machining center. Manufacturing operation instruction and functioning program. Changing tool values. Replacement and qualifying tooling. Advanced program editing including CANNED cycle use and manipulation. CNC mill operator training including advanced machine control manipulation communication techniques, and fixturing concepts. Proper machine shop safety. *Prerequisites: MET102, MET206 and MET207 or Department or Division consent.*

## MET210 CNC Lathe: Operator Training II

*3 Credits (1 Lecture, 6 Labs)*
Setup and operation of a Computer Numerical Control (CNC) lathe and CNC Mill/Turn. Topics covered include manufacturing operation instructions and functioning program, changing tool values, and replacing and qualify tooling. Advanced CNC lathe topics include production tooling and coolants, live tooling (mill/turn), tail stock, bar pull/feed, advanced program editing, CANNED cycle use and manipulation, and set up time reduction. Proper machine shop safety is also covered. *Prerequisites: MET102, MET206 and MET208 or Department or Division consent.*

## MET215 Measurement Systems and Machine Tool Math

*3 Credits (2 Lectures, 3 Labs)*
Principles and applications of math concepts, blueprint reading, and quality assurance for manual machining. Math skills are specific to creating precision parts for industry applications, including prototyping and production. *Recommendation: Basic understanding of math.*

## MET216 Properties of Materials

*3 Credits (3 Lectures)*
Study of manufacturing properties of materials, the behavior of materials under load, stress and strain and torsion and qualities of materials other than strength.

## MET219 Advanced Manufacturing Processes

*3 Credits (3 Lectures)*
Introduction to the concepts of production systems management and control. Topics stressed include materials resource planning and basic production line controls, as well as

robotics, conveyors, machine tools, and quality integration. *Prerequisite: M127.*

## MET227 Advanced Machine Tools

*3 Credits (2 Lectures, 4 Labs)*
Advanced machining practices with an emphasis on application of machines and tool theory. *Prerequisite: MET102.*

## MET232 Solids Modeling – SolidWorks

*3 Credits (2 Lectures, 3 Labs)*
CAD modeling, solid part generation, assembly of parts and working drawing creation. Applications of CAD/CAM in Computer Integrated Manufacturing.

## MET233 Materials and Metal Cutting

*3 Credits (2 Lectures, 3 Labs)*
Principles and applications of layout, fixture design, characteristics of metals, drilling, taping, and cutting fluids for the manual machining program. This is an overview of all types of manual machining equipment and applications. *Recommended: Basic understanding of types of metals.*

## MET234 Drill Press Operations

*3 Credits (2 Lectures, 3 Labs)*
Principles and application of metal removal using a drill press. Applications include proper work holding, drilling, reaming, tapping, counter boring, and counter sinking. Also covered are the application of material removal of different types of materials, including various metals and plastics. *Recommended: Understanding of basic drilling.*

## MET235 Vertical Mill Machining

*3 Credits (2 Lectures, 3 Labs)*
Principles and applications of metal removal using a vertical mill. Applications include slot milling and cutting, squaring a block, angular milling, and pocket milling. Also covered are the application of material removal of different types of materials, including various metals and plastics. *Recommended: Basic hand tool experience.*

## MET236 Lathe Operations

*3 Credits (2 Lectures, 3 Labs)*
Principles and applications of metal removal using an engine lathe. Applications include turning, knurling, grooving-cutoff, boring and threading. Also covered are the application of material removal of different types of materials, including various metals and plastics. *Recommended: Basic understanding of hand tools.*

## MET240 DeviceNet
*3 Credits (2 Lectures, 3 Labs)*
This course focuses on DeviceNet concepts, communication protocol, programming, and sensor configurations to meet industry standards in automation. *Recommended: Students should have an interest in various types of programmable logic controllers and protocols.*

## MET250 Factory Talk
*3 Credits (2 Lectures, 3 Labs)*
Factory concepts and programming used in creating Human Machine Interfaces (HMI) in a variety of industry applications. An HMI is a graphical tool which controls automated devices. *Recommended: Interest in creating graphical controllers.*

## MET289 Advanced Technology Capstone
*3 Credits (2 Lectures, 3 Labs)*
The capstone brings together skills acquired in previous coursework in manufacturing processes, concept, design, engineering, and robotics into a suitable project with special emphasis on planning, problem solving, and machine processing.

## MET296 Advanced Manufacturing Apprenticeship
*3 Credits (3 Internships)*
Manufacturing internship placements tailored to the students' academic program, interests, and skills.

# MUSIC HISTORY AND LITERATURE (MHL)

## MHL100 Music Appreciation
*3 Credits (3 Lectures)* ⓐ𝓡
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 or corequisite: RDG100.*

## MHL207 Survey of Jazz/Popular Music
*3 Credits (3 Lectures)* ⓐ𝓡
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 or corequisite: RDG100.*

# MEDICAL LABORATORY TECHNICIAN (MLT)

## MLT210 Clinical Laboratory Operations
**Previously known as HCC210 Clinical Laboratory Operations**
*2 Credits (2 Lectures)*
Overview of laboratory services, laboratory professionals, and the role of a medical laboratory technician. An understanding of health care reform, reimbursement, cost analysis, coding, credentialing, accreditation, and regulatory agencies is included. Emphasis is on process improvement, laboratory mathematics, statistics, documentation, medico-legal implications, education, management and personnel, and specimen integrity. Additional focus is on application of pre-analytical, analytical, and post-analytical principles, infection control, and laboratory safety. Also covered is recognition of acceptable quality control and quality management principles, phlebotomy principles, and lab equipment, glassware, labware, and water purification. Additional topics are information systems and information management in laboratories, the importance of professional growth, communicating with the patient and public, and ethical conduct. *Prerequisite: Acceptance into the Medical Laboratory Science program and permission of Program Director.*

## MLT220 Clinical Hematology and Hemostasis
**Previously known as HCC220 Clinical Hematology and Hemostasis**
*7 Credits (5 Lectures, 6 Labs)*
Examines the anatomy and physiology of the hemopoietic and hemostasis systems, hematology and hemostasis case studies, anemia categories, and thrombocyte, hemostatic, and malignant and nonmalignant leukocyte disorders. Emphasis on interpreting, evaluating, and reporting hematology and hemostasis results, anticoagulant therapy, morphology, peripheral smear correlation with analyzer results, and patient condition. Erythrocyte indices, collection techniques, specimen handling, calibration, and quality control are also covered. *Prerequisites: Acceptance into the Medical Laboratory Science program and permission of Program Director.*

## MLT230 Clinical Urinalysis and Body Fluids Analysis
**Previously known as HCC230 Clinical Urinalysis and Body Fluids Analysis**
*4 Credits (3 Lectures, 3 Labs)*
Examines anatomy and physiology of the renal system, renal diseases, and renal function tests. Emphasis is on interpretation, evaluation, and reporting of urinalysis and body fluid results, urine and body fluid collection techniques, types, specimen

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handling and preservation, instrument calibration, maintenance, and quality control. Application of body fluid analysis, and chemical and microscopic analysis of urine are also covered. *Prerequisites: Acceptance into the Medical Laboratory Science program and permission of Program Director.*

## MLT240 Clinical Immunohematology and Immunology
**Previously known as HCC240 Clinical Immunohematology and Immunology**
*7 Credits (5 Lectures, 6 Labs)*
Principles of immunology and immunologic testing, causes of disorders of the immune system, and the study of blood group antigens, antibodies, and genetics. Additional emphasis is on understanding donor blood collection, component preparation, and transfusion therapies. Performance of testing techniques and evaluation of data is also covered. *Prerequisites: Acceptance into the Medical Laboratory Science program and permission of Program Director.*

## MLT250 Clinical Chemistry
**Previously known as HCC250 Clinical Chemistry**
*7 Credits (5 Lectures, 6 Labs)*
Principles and procedures of clinical chemistry and testing for diseases of protein, nonprotein nitrogen compounds, lipid, glucose, bilirubin, liver disease, cardiac and endocrine function, toxicology, therapeutic drug monitoring, acid base balance, electrolytes, and trace elements. Emphasis on quality assurance, quality control, mathematics and statistical analysis, specimen collection, and preanalytical processes. Study of immunoassays, nucleic acid probes, viral and tumor markers, automation of analytical techniques, spectrophotometry, genetic diseases and inborn errors of metabolism, and point-of-care testing. Use of reagents, equipment, supplies, and units of measure are also covered. *Prerequisites: Acceptance into the Medical Laboratory Science program and permission of Program Director.*

## MLT275 Clinical Microbiology
**Previously known as HCC275 Clinical Microbiology**
*7 Credits (5 Lectures, 6 Labs)*
Examines microbial infectious and bioterrorism agents, classification, morphology, phenotyping, diseases, biotechnology and molecular technology, quality assurance and quality control, epidemiological significance, and regulatory standards. Application of antimicrobial, biochemical and differential testing, drug resistance, selection, inoculation and incubation of culture media, isolation techniques, cell culture and viral detection tests, and macroscopic and microscopic examination. Emphasis on staining, rapid and commercial testing methods, safety precautions, specimen collection,

handling, storage, and disposal of biological material, pretreatment, decontamination, and concentration techniques, specimen type, source, and common microbial flora, specimen acceptability, and instrumentation. *Prerequisites: Acceptance into the Medical Laboratory Science program and permission of Program Director.*

# MUSIC THEORY AND COMPOSITION (MTC)

## MTC100 Music Fundamentals
*3 Credits (3 Lectures)*
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. Offered every spring.*

## MTC101 Aural Fundamentals
*.5 Credit (2 Labs)*
An introduction to the fundamentals of tonal aural problems and rhythms taught through sight singing and ear training. *Corequisite: MTC100. Offered every spring.*

## MTC102 Integrated Music Theory I
**Previously known as MTC102 Theory of Music I**
*4 Credits (3 Lectures, 3 Labs)*
Concepts of music theory taught through ear training and written work to include structure of tonality through Roman numeral analysis. *Prerequisite: MTC100 and MTC101. Recommended: MUP110 or MUP109P. Offered every fall.*

## MTC106 Integrated Music Theory II
**Previously known as MTC204 Theory of Music II**
*4 Credits (3 Lectures, 3 Labs)*
Concepts of music theory taught through sight singing, ear training, dictation, and written work to include diatonic harmony, secondary dominants; common chord modulations; and various common forms. *Prerequisite: MTC102. Recommended: MUP110 or MUP109P. Offered every spring.*

## MTC202 Integrated Music Theory III
*4 Credits (3 Lectures, 3 Labs)*
Concepts of music theory taught through sight singing, ear training, dictation and written work to include: Modes; Neapolitan and augmented-sixth chords; chromatic modulation; Sonata and Rondo Form. *Prerequisite: MTC106. Offered every fall.*

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**ICON LEGEND:**  **AGEC:** <span>a</span>    **Intensive Writing:** *IW*    **Reading Required: RDG100:** *R*    **SUN Course:** <span>◎</span>

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# MTC206 Integrated Music Theory IV
*4 Credits (3 Lectures, 3 Labs)*
Concepts of music theory taught through sight-singing, ear training, dictation, and written work. This includes an introduction to basic 20th century theory and analysis, and provides focus on the study of collections, set theory, and serial techniques. *Prerequisite: MTC202. Offered every spring.*

# MUSIC PERFORMANCE (MUP)

## MUP104 Concert Choir
*1 Credit (3 Labs)*
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
*1 Credit (1 Lab, 1 Recitation)*
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 four times for credit.*

## MUP107 Band
*1 Credit (3 Labs)*
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.*

## MUP108 Orchestra
*1 Credit (3 Labs)*
A performing organization open to Central Arizona College students and Pinal County residents. The ensemble performs a wide range of standard string orchestra 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)*
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.*

## MUP109D Private Instruction: Percussion
*1 Credit (1 Recitation)*
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.*

## MUP109G Private Instruction: Guitar/Bass Guitar
*1 Credit (1 Recitation)*
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)*
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.*

## MUP109S Private Instruction: Orchestral Strings
*1 Credit (1 Recitation)*
Performance of violin, viola, cello, or string bass repertoire, technical skills, and theory including scales, arpeggios, sight-reading, etc., commensurate with student's level of achievement. Students must provide own instrument and purchase own music, as recommended by instructor. *May be taken four times for credit. Recommended: MUP108.*

## MUP109V Private Instruction: Voice
*1 Credit (1 Recitation)*
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)*
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*

**ICON LEGEND:**    **AGEC:** 🅐    **Intensive Writing:** *IW*    **Reading Required: RDG100:** 𝓡    **SUN Course:** 🔘

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*credit. Prerequisite: Instructor consent. Recommended: MUP107.*

## MUP110 Piano Class
*1 Credit (1 Lab, 1 Recitation)*
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.*

## MUP111 Guitar Ensemble
*1 Credit (3 Labs)*
A performing organization open to Central Arizona College students by audition or instructor recommendation. The ensemble repertoire includes a vast array of works from traditional literature as well as contemporary works by jazz and pop composers and arrangers. Experience is gained by performing for the college, schools and community. Students must provide own instruments. *May be taken four times for credit. Prerequisite: Instructor consent.*

## MUP118 Handbell Choir
**Previously known as MUP118 Bell Choir Ringers**
*1 Credit (3 Labs)*
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.*

# NUTRITION/DIETETICS (NTR)

## NTR104 Nutrition
*3 Credits (3 Lectures)* $\mathcal{R}$
An introductory study of the optimal diet for health and fitness, principles of basic nutrition, and nutritional needs. *Prerequisite or corequisite: RDG100.*

## NTR105 ServSafe Preparation
**Previously known as NTR105 ServSafe Certification**
*1 Credit (1 Lecture)*
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.

## NTR123 Nutrition throughout the Life Cycle
*3 Credits (3 Lectures)*
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: NTR200 or NTR104.*

## NTR127 Breastfeeding and Human Lactation
*1 Credit (1 Lecture)*
An introduction to breastfeeding principles for the health care professional which covers such topics as the decision to breastfeed, basic anatomy and physiology of milk production and consumption, normal breastfeeding, feeding behaviors, growth patterns, nutritional needs and breastfeeding concerns.

## NTR131 Introduction to Diabetes
*3 Credits (3 Lectures)*
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)*
An overview of 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.

## NTR137 Carbohydrate Counting
*1 Credit (1 Lecture)*
A-Z guide to carbohydrate counting for people with diabetes addressing 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)* a $\mathcal{R}$
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 or corequisite: RDG100.*

## NTR142 Applied Food Science
*3 Credits (3 Lectures)*
Applied scientific principles of food preparation and production. Students must purchase ingredients for assignments (average cost $100.00).

## NTR150 Overview of Nutrition Professions
*1 Credit (1 Lecture)*
Overview of the career opportunities in the fields of nutrition, dietetics, foodservice management, wellness and counseling.

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**ICON LEGEND:**  **AGEC:** a  **Intensive Writing:** *IW*  **Reading Required: RDG100:** $\mathcal{R}$  **SUN Course:**

## NTR156 Foundations of Dietary Manager Internship

*2 Credits (2 Lectures)*

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. *Prerequisites: NTR104 and NTR223.*

## NTR157 Foundations of Dietetic Technician Internship

*2 Credits (2 Lectures)*

A written agreement between CAC and the internship rotation facility is secured by the student and instructor, including a Registered Dietitian Nutritionist preceptor or other credentialed preceptor, as approved by the Dietetic Technician Program Director. *A written agreement between facilities and a grade of C or better is required to proceed to NTR296. Prerequisites: Complete all Dietetic Technician AAS Degree general education requirements and Program Director or instructor consent. Corequisite: NTR295.*

## NTR163 Orientation to Dietetic Technician Program

*1 Credit (1 Lecture)*

Comprehensive orientation for students who have been admitted into the Dietetic Technician Program. *Prerequisite: Acceptance into the Dietetic Technician Program.*

## NTR191 Nutrition Counseling Skill Development

*3 Credits (3 Lectures)*

Comprehensive skill development of step-by-step nutrition counseling. *Prerequisite: NTR200 or NTR104.*

## NTR196 Dietary Manager Internship

*4 Credits (4 Internships – 150 Hours)*

Supervised application of food production, food service management and nutritional care principles in clinical and community environments. *Prerequisites: NTR156, NTR223, NTR240 and NTR255.*

## NTR200 Human Nutrition

*3 Credits (3 Lectures)* ℛ

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 or corequisite: RDG100.*

## NTR201 Nutrition Literacy

*1 Credit (1 Lecture)*

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. *Prerequisite: NTR200 or NTR104.*

## NTR219 Community Nutrition

*3 Credits (3 Lectures)*

Assessment of community nutrition needs through planning, analyzing and interpreting data. Develop nutrition education programs for diverse socio-economic conditions and age groups. *Prerequisite: NTR104. Prerequisite or corequisite: NTR200. Recommended for students seeking employment in community or public health.*

## NTR222 Nutrition Assessment and Medical Nutrition Therapy

*3 Credits (3 Lectures)*

An in-depth study of the Nutrition Care Process (NCP) components including the steps of assessment, nutrition diagnosis, intervention, monitoring and evaluation (ADIME) for all life cycle stages. *Prerequisites: NTR123.*

## NTR223 Food Service Management

*3 Credits (3 Lectures)*

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.

## NTR232A Food and Culture

*1 Credit (1 Lecture)* ℛ

Explore 15 cultures and customs around the world as they relate to food as well as to knowledge, attitudes and behaviors in promoting wellness. *Prerequisite: RDG100.*

## NTR240 Clinical Nutrition

*3 Credits (3 Lectures)*

In-depth study of Medical Nutrition Therapy and the role of nutrition in the prevention and treatment of diseases.

## NTR247 Weight Management Theory

*1 Credit (1 Lecture)*

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. *Prerequisite: NTR104 or NTR200.*

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**ICON LEGEND:**      **AGEC:** 🅰      **Intensive Writing:** *IW*      **Reading Required: RDG100:** ℛ      **SUN Course:** ◎

## NTR255 Nutrition Medical Terminology, Labs, and Food Drug Interaction

*1 Credit (1 Lecture)*
An overview of the medical terminology, lab values and food and drug interactions used by nutrition professionals. *Prerequisite: NTR200 or NTR104.*

## NTR295 Dietetic Technician Professional Practice Internship

*1 Credit (1 Internship = 66 Hours – Supervised Practicum)*
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 general education requirements for Dietetic Technician A.A.S. Degree completed and Program Director consent. Corequisite: NTR157*

## NTR296 Dietetic Technician Internship

*6 Credits (6 Internships = A Minimum of 384 Hours)*
The application of life cycle nutrition, assessment, disease prevention and medical nutrition therapy in clinical, community and food service management settings. *Prerequisites: All Dietetic Technician AAS Degree requirements completed with a grade of C or better, Program Director or instructor consent.*

# NURSING (NUR)

## NUR121 Introduction to Nursing Transitions

*8 Credits (5.5 Lectures, 8 Labs)*
Within the framework of transitions theory, the focus is on individuals and families in defined practice settings such as Long Term Care and Medical Surgical Acute Care areas. 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. Provides the opportunity for the practice of nursing in real and simulated structured situations. *Prerequisites: Nursing cohort student; BIO201; BIO202; eligible for ENG101 and MAT141; L.N.A. or L.P.N. licensure from the Arizona State Board of Nursing. Corequisite: NUR126.*

## NUR121A Nursing Transitions Introduction

*4 Credits (2 Lectures, 6 Labs)*
Within the framework of transitions theory, the focus is on individuals and families in defined practice settings such as Long Term Care and Medical Surgical Acute Care areas.

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. Provides the opportunity for the practice of nursing in real and simulated structured situations. *Prerequisites: Nursing cohort student; BIO201; BIO202; eligible for ENG101 and MAT141; L.N.A. or L.P.N. licensure from the Arizona State Board of Nursing. Corequisite: NUR126.*

## NUR121B Fundamentals of Health/Illness Transitions

*4 Credits (2 Lectures, 6 Labs)*
Introductory 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 culturally and spiritually diverse patients making health-illness and situational transitions. *Prerequisites: NUR121A, NUR126A, NUR125, NUR135. Corequisite: NUR145A.*

## NUR122 Nursing in Health Illness Transitions

*8 Credits (4 Lectures, 12 Labs)*
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 culturally and spiritually diverse patients making health-illness and situational transitions. *Prerequisites: ENG101, NUR121, NUR126, PSY101.*

## NUR125 Nursing Psychiatric Care and Developmental Transitions

*4 Credits (2 Lectures, 6 Labs)*
Nursing care of the patient across developmental, psychological, and psychiatric stages in the lifespan. Transitions theory is used as the framework to examine healthy and unhealthy transitions and nursing therapeutics, which promote healthy developmental transitions. *Prerequisites: NUR121A, NUR126A, NUR200. Corequisites: ENG101, MAT141 or higher.*

## NUR126 Principles and Application of Drug Dosage Calculations

*2 Credits (2 Lectures)*
Introduction to medication administration concepts and intensive study and practice in calculating dosages and concentrations of solutions used in nursing. *Prerequisites: Nursing cohort student; BIO201; BIO202; eligible for ENG101 and MAT141; C.N.A. or L.P.N. licensure from the Arizona State Board of Nursing. Corequisite: NUR121.*

**ICON LEGEND:** **AGEC:** a **Intensive Writing:** *IW* **Reading Required: RDG100:** *R* **SUN Course:**

**2022-2023 College Catalog | 199**

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## NUR126A Introduction to Principles and Application of Drug Dosage Calculations
*1 Credit (1 Lecture)*
Introduction to medication administration concepts and intensive study and practice in calculating dosages and concentrations of solutions used in nursing. *Prerequisites: Nursing cohort student; BIO201☉; BIO202☉; eligible for ENG101☉ and MAT141☉; LNA or L.P.N. licensure from the Arizona State Board of Nursing. Corequisite: NUR121A.*

## NUR126B Bridge Introduction to Principles and Application of Drug Dosage Calculations
*1 Credit (1 Lecture)*
Introduction to medication administration concepts and intensive study and practice in calculating dosages and concentrations of solutions used in nursing. *Prerequisites: LPN license in good standing; Successful Completion of HESI LPN Exam. 1st Year RN prerequisites including: ENG101☉, ENG102☉, PSY101☉, MAT141☉ or higher. Corequisite: NUR130.*

## NUR126C Advanced Principles and Application of Drug Dosage Calculations
*1 Credit (1 Lecture)*
Advanced medication administration concepts and intensive study and practice in calculating dosages and concentrations of solutions used in nursing. *Prerequisites: NUR121A, NUR125, NUR126A, NUR121B, NUR135, NUR145A; or NUR130 and NUR126B. Corequisites: NUR201, NUR145B.*

## NUR131 LPN to RN Bridge Course
**Previously known as NUR130 LPN to RN Bridge Course**
*4 Credits (3 Lectures, 3 Labs)*
The LPN to RN bridge course allows an LPN to bridge their previous education and experience to the accredited RN curriculum. Included in this course are dosages and calculations; assessment; IV concepts and skills, pharmacology, and concepts related to the transition to Professional RN licensure exam. *Recommendation: GPA 2.75. Prerequisites: LPN license in good standing; Successful Completion of HESI LPN Exam. 1st Year RN prerequisites including: ENG101☉, ENG102☉, PSY101☉, MAT141☉. Credits may transfer - contact college to review past college credits to evaluate what may transfer. Student must submit accredited LPN curriculum and transcript from previous program/institution of study. Corequisites NUR126B.*

## NUR135 Nursing in Obstetric and Pediatric Transitions
*4 Credits (2 Lectures, 6 Labs)*
This course focuses on the role of the nurse in meeting the physiological, psychosocial, cultural and developmental needs of the maternal and child client. Course content includes antepartal, intrapartal, and postpartal care, complications of pregnancy, newborn care, human growth and development, pediatric care, and selected pediatric alterations. Nutrition, pharmacology, cultural diversity, use of technology, communication, anatomy and physiology review, medical terminology, critical thinking, and application of the nursing process are integrated throughout this course. Upon completion of this course, students will be able to provide and manage care for maternal and pediatric clients in a variety of settings. *Prerequisites: NUR121A, NUR125, NUR126A, ENG101☉, and MAT141☉ or Higher. Corequisites PSY101☉ and ENG102☉.*

## NUR145 Pathopharmacology
**Previously known as NUR145 Pharmacology**
*4 Credits (4 Lectures)*
The fundamentals of pathophysiology as it relates to pharmacology for nursing care is discussed. A focus on pathological conditions that cause disease, the incidence, signs, symptoms, diagnosis, treatment, and special considerations of major diseases of the body systems are studied. Students will demonstrate application of pathophysiological principles to pharmacologic therapy as it relates to major drug classifications, prototypes, therapeutic actions, side effects, interactions, ethical-legal implications, age-related, and cultural considerations of patients. The nursing process will be used as the method by which students apply pathopharmacologic principles to patient care. *Prerequisites: NUR121, NUR126. Corequisite: NUR122.*

## NUR145A Introduction to Pathopharmacology
*2 Credits (2 Lectures)*
The fundamentals of pathophysiology as it relates to pharmacology for nursing care is discussed. A focus on pathological conditions that cause disease, the incidence, signs, symptoms, diagnosis, treatment, and special considerations of major diseases of the body systems are studied. Students will demonstrate application of pathophysiological principles to pharmacologic therapy as it relates to major drug classifications, prototypes, therapeutic actions, side effects, interactions, ethical-legal implications, age-related, and cultural considerations of patients. The nursing process will be used as the method by which students apply pathopharmacologic principles to patient care. *Prerequisites: NUR121A, NUR126A, NUR125. Corequisite: NUR121B.*

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**ICON LEGEND:**    **AGEC:** 🅰    **Intensive Writing:** *IW*    **Reading Required: RDG100:** 𝓡    **SUN Course:** ☉

## NUR145B Advanced Pathopharmacology

*2 Credits (2 Lectures)*
Advanced pathophysiology as it relates to pharmacology for nursing care is discussed. A focus on pathological conditions that cause disease, the incidence, signs, symptoms, diagnosis, treatment, and special considerations of major diseases of the body systems are studied. Students will demonstrate application of pathophysiological principles to pharmacologic therapy as it relates to major drug classifications, prototypes, therapeutic actions, side effects, interactions, ethical-legal implications, age-related, and cultural considerations of patients. The nursing process will be used as the method by which students apply pathopharmacologic principles to patient care. *Prerequisites: NUR121A, NUR121B, NUR126A, NUR125, NUR135, NUR145A. Corequisite: NUR201.*

## NUR150 Nursing Professional Transitions

*3 Credits (3 Lectures)*
Leadership, professional development, and specialized course content to prepare first year nursing students to transition into the second year of the nursing program. 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.*

## NUR200 Advanced Medical Terminology for Clinical Nurses

*1 Credit (1 Lecture)* ℝ
Clinical abbreviations and word structures related to clinical diseases, medications, structures of the human body, and relevant clinical procedures. Emphasis is on necessary clinical language needed to assess and care for patients in the clinical setting. *Prerequisites: RDG100 and Nursing Cohort Student.*

## NUR201 Advanced Nursing in Health Illness Transitions

*8 Credits (4 Lectures, 12 Labs)*
Advanced 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 culturally and spiritually diverse patients making health-illness and situational transitions. *Prerequisites: NUR121A, NUR121B, NUR125, NUR135, NUR145A. Corequisites: NUR145B, NUR126C.*

## NUR221 Nursing in Developmental Transitions

*8 Credits (4 Lectures, 12 Labs)*
Nursing care of the patient across developmental stages in the lifespan. Transitions theory is used as the framework to examine healthy and unhealthy transitions and nursing therapeutics, which promote healthy developmental transitions. *Prerequisites: ENG102 ◎, NUR122 and NUR145.*

## NUR222 Nursing in Organizational Transitions

*8 Credits (4 Lectures, 12 Labs)*
Nursing care at this level focuses on the patient with complex health problems and their family/caregiver(s) and students perform higher-level nursing skills. Application of evidence-based clinical practice and transitions theory within organizational settings. *Prerequisites: BIO205 ◎, NUR221. Corequisites: MAT141 ◎ or higher excluding MAT201 or MAT202, Humanities course, NUR223.*

## NUR223 Transition to the Nursing Workforce

*1 Credit (1 Lecture)*
Students prepare for graduation by writing resumes, practicing interviews for employment, preparing e-portfolio, virtual simulations on practice management of care, prioritization and delegation. *Prerequisites: NUR121, NUR126, NUR145, NUR122, NUR221. Corequisites: NUR222, Humanities Course, MAT141 ◎.*

# OFFICE AUTOMATION SYSTEMS (OAS)

## OAS101 Keyboard – Alphabetic

*1 Credit (3 Labs)*
Mastery of essential microcomputer keyboard skills. Emphasis on alphabetic material using the touch technique. *Recommended: Blackboard skills.*

## OAS103 Keyboard – Speed/Accuracy

*1 Credit (3 Labs)*
Improve keyboard speed and accuracy. Emphasis on alphabetic, numeric and symbol material using the touch technique. *Recommended: Blackboard skills.*

## OAS104 Ten-Key Pad

*1 Credit (3 Labs)*
Key numeric data using touch technique on the computer numeric ten-key pad. *Recommended: Blackboard skills.*

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# PHYSICAL EDUCATION ACTIVITY (PAC)

## PAC102J Intermediate Weight Training
*1 Credit (3 Labs)*
Weight training techniques for use throughout the life cycle. *May be taken two times for credit.*

## PAC105 Physical Fitness: Core Emphasis
*1 Credit (3 Labs)*
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. *May be taken four times for credit.*

## PAC106 Aerobics and Weight Training
*2 Credits (6 Labs)*
Fundamental skills and principles of weight training and aerobics. *May be taken two times for credit.*

## PAC113 Total Body Conditioning
*1 Credit (3 Labs)*
Total body workout through aerobic exercise. This course covers upper body conditioning and abdominal conditioning, stretching techniques, safety, diet and nutrition. *May be taken four times for credit.*

## PAC121 Theory and Practice of Basketball I
*2 Credits (6 Labs)*
Fundamental techniques of team play and strategy in the sport of basketball. Includes mechanics of basketball, rules and total body conditioning. *May be taken two times for credit.*

## PAC122 Theory and Practice of Baseball I
*2 Credits (6 Labs)*
Fundamentals of baseball, including techniques of team play, rules, conditioning and mechanics of baseball. *May be taken two times for credit.*

## PAC123 Theory and Practice of Track and Field I
*2 Credits (6 Labs)*
Fundamentals and techniques of track and field events, including psychological aspects, training and styles used in track and field events. *May be taken two times for credit.*

## PAC125 Theory and Practice of Softball I
*2 Credits (6 Labs)*
Fundamentals of+ softball, including techniques of team play, rules, conditioning and mechanics of softball. *May be taken two times for credit.*

## PAC126 Theory and Practice of Cross-Country I
*2 Credits (6 Labs)*
Fundamentals of racing strategies, mechanics of cross country, rules, conditioning and cross training are emphasized. *May be taken two times for credit.*

## PAC221 Theory and Practice of Basketball II
*2 Credits (6 Labs)*
Advanced techniques of team play and strategy in the sport of basketball. Includes advanced mechanics of basketball and total body conditioning. *May be taken four times for credit. Prerequisite: PAC121 or instructor consent.*

## PAC222 Theory and Practice of Baseball II
*2 Credits (6 Labs)*
Advanced techniques of baseball including techniques of team play, rules, conditioning, and mechanics of baseball. *May be taken two times for credit. Prerequisite: PAC122 or instructor consent.*

## PAC223 Theory and Practice of Track and Field II
*2 Credits (6 Labs)*
Advanced techniques of track and field events including psychological aspects, training and styles used in track and field events. *May be taken two times for credit. Prerequisite: PAC123 or instructor consent.*

## PAC225 Theory and Practice of Softball II
*2 Credits (6 Labs)*
Advanced techniques of softball, including techniques of team play, rules, conditioning and mechanics of softball. *May be taken two times for credit. Prerequisite: PAC125 or instructor consent.*

## PAC226 Theory and Practice of Cross Country II
*2 Credits (6 Labs)*
Advanced techniques of racing strategies, mechanics of cross country, rules, conditioning and cross training for cross country racing. *May be taken two times for credit. Prerequisite: PAC126 or instructor consent.*

# PHYSICAL EDUCATION (PED)

## PED100 History and Philosophical Foundations of Sport and Physical Education

*3 Credits (3 Lectures)*

The historical and philosophical foundations of sport and physical education, current and future directions of instruction, administration and research.

## PED102 The Management of Sport

*3 Credits (3 Lectures)* ℛ

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: RDG100.*

## PED103 Foundations of Exercise

*3 Credits (3 Lectures)*

Fundamentals of basic biomechanics, motor learning/control/development, exercise physiology, exercise metabolism, physiology of training, nutrition and sports psychology.

## PED105 Women and Sport in the U.S.

*3 Credits (3 Lectures)* ℛ

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 or corequisite: RDG100.*

## PED112 Introduction to Strength Training

*3 Credits (3 Lectures)*

A comprehensive guide to the design and implementation of strength and conditioning programs.

# PHYSICAL EDUCATION HEALTH (PEH)

## PEH101 Personal Health

*3 Credits (3 Lectures)* 🅰 ℛ

The significance of physical, mental, emotional, spiritual, occupational, environmental, financial, and social dimensions of wellness to the individual and society, community health programs, and national health indicators. Special emphasis on learning tools for a healthy lifestyle. *Prerequisite or corequisite: RDG100.*

## PEH111 Nutrition for Health, Fitness and Sport

*3 Credits (3 Lectures)*

Practical nutritional application for health and wellness, and a sports and fitness based lifestyle. Explore the essential nutrients and the recommended nutrient intake for fitness and sport, and weight maintenance through proposer nutrition and exercise,

# PHYSICAL EDUCATION VARSITY SPORTS (PEV)

## PEV110 Rodeo Sports Events I

*2 Credits (1 Lecture, 3 Labs)*

Development of skills in one or more of the following rodeo events: steer wrestling, calf roping, team roping, bull riding, bareback riding, saddle bronc 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)*

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 Varsity Basketball team member.*

## PEV202 Varsity Baseball I

*1 Credit (3 Labs)*

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)*

Hone track and field skills, knowledge and strategies. *May be taken two times for credit. Prerequisite: Intercollegiate Track and Field team member.*

## PEV205 Varsity Softball I

*1 Credit (3 Labs)*

For members of the intercollegiate varsity softball team. *May be taken three times for credit. Prerequisite: Intercollegiate Softball team member.*

## PEV206 Varsity Cross-Country I

*1 Credit (3 Labs)*

Varsity level Cross-Country I includes rules and athlete code of conduct, training and competition strategies, teamwork and sports etiquette. *May be taken three times for credit. Prerequisite: Intercollegiate Varsity Cross-Country team*

*member.*

## PEV211 Varsity Basketball II

*1 Credit (3 Labs)*

Intercollegiate varsity basketball with application of theory in NJCAA events. *May be taken three times for credit. Prerequisite: PEV201 or instructor consent.*

## PEV212 Varsity Baseball II

*1 Credit (3 Labs)*

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)*

Intercollegiate Varsity Track and Field with application of theory in NJCAA events. *May be taken two times for credit. Prerequisite: PEV203 or instructor consent.*

## PEV215 Varsity Softball II

*1 Credit (3 Labs)*

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)*

Intercollegiate Varsity Cross Country with application of theory in NJCAA events. *May be taken two times for credit. Prerequisite: PEV206 or instructor consent.*

# PHILOSOPHY (PHI)

## PHI101 Introduction to Philosophy

*3 Credits (3 Lectures)* ◎ *PHI 1101* ⓐ ℛ

Representative problems and theories regarding the nature of reality and the acquisition of knowledge including examination and development of personal philosophical positions. *Prerequisite: RDG100.*

## PHI103 Introduction to Logic

*3 Credits (3 Lectures)* ◎ *PHI 1103* ℛ

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: MAT118 or higher, RDG100.*

## PHI105 Introduction to Ethics

*3 Credits (3 Lectures)* ◎ *PHI 1105* ⓐ *IW*

Major philosophical theories of conduct with an emphasis on the application of normative ethical theory to contemporary topics. *Prerequisite: ENG101◎.Corequisite: ENG102◎.*

## PHI112 World Religions

*3 Credits (3 Lectures)* ⓐℛ

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: RDG100.*

# PHARMACY TECHNICIAN (PHT)

## PHT101 Introduction to Pharmacology

*6 Credit (5 Lectures, 3 Labs)*

An overview of pharmacy including history of pharmacy, pharmacy terminology, the role a responsibilities of a pharmacy technician compared to that of the pharmacist, and ethical and legal information. Also addressed, theory of procuring, manipulating, calculating, and preparing drugs for dispensing.

## PHT102 Advanced Pharmacy Technician Concepts

*6 Credit (5 Lectures, 3 Labs)*

Apply hands-on skills in small or large scale compounding, prescription procurement, quality control, record keeping, and insurance benefit coordination for observation, feedback, and evaluation from the instructor prior to practicum. *Prerequisite: PHT101.*

## PHT150 Pharmacy Calculations

*3 Credit (3 Lectures)*

Mathematical calculations essential to the duties of pharmacy technicians in a variety of contemporary settings are covered. Includes complete coverage of American Society of Health System Pharmacists (ASHP) Curriculum Standard 12 and business-related calculations for insurance processing, inventory management, and depreciation.

## PHT175 Practicum – Pharmacy Technician

**Previously known as HPM175H Practicum - Pharmacy Technician**

*4 Credits (4 Practica – 240 hours)*

Practical experience of 240 hours (120 hours in two separate practice settings) 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*

**ICON LEGEND:**     **AGEC:** ⓐ     **Intensive Writing:** *IW*     **Reading Required: RDG100:** ℛ     **SUN Course:** ◎

# 2022-2023 College Catalog     |     204

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course. Students who withdraw with instructor consent may retake this course only once with instructor consent. *Prerequisites: Mandatory requirements specific to PHT175 must be met before enrollment, all program courses must be successfully completed before enrollment, instructor consent.*

**For Physical Geography, see Geography.**

# PHYSICS (PHY)

## PHY111 College Physics I
*4 Credits (3 Lectures, 3 Labs)* ◎ *PHY1111* ⓐℛ
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: RDG100; MAT182 or MAT187* ◎.

## PHY112 College Physics II
*4 Credits (3 Lectures, 3 Labs)* ◎ *PHY1112* ⓐ
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)* ◎ *PHY1121* ⓐ
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* ◎.

## PHY122 University Physics II: Electricity and Magnetism
*4 Credits (3 Lectures, 3 Labs)* ◎ *PHY1131* ⓐ
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* ◎. *Prerequisite or corequisite: MAT231* ◎.

# POLITICAL SCIENCE (POS)

## POS101 American Politics
*3 Credits (3 Lectures)* ◎ *POS 1110* ⓐℛ
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 Arizona State Department of Education U.S. Constitution requirement for teacher certification. *Prerequisite or corequisite: RDG100.*

## POS104 Contemporary Issues in World Politics
*3 Credits (3 Lectures)* ◎ *POS 1120* ⓐℛ
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 or corequisite: RDG100.*

## POS220 U.S. and Arizona Constitutions
*3 Credits (3 Lectures)* ⓐℛ
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. *Recommended: This course meets the Arizona State requirements for teacher certification. This is a required course for the Corrections AAS Degree. Prerequisite or corequisite: RDG100.*

# PSYCHOLOGY (PSY)

## PSY101 Introduction to Psychology
*3 Credits (3 Lectures)* ◎ *PSY1101* ⓐℛ
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 or corequisite: RDG100.*

## PSY200 Social Psychology
*3 Credits (3 Lectures)* ⓐ*IW*
Students will acquire a scientific framework for interpreting social behavior by investigating theories, research, and

methods of social psychology. Topics include as applied to social perception (self and others); social influence (cultural sources of attitudes, conformity); social relations (attraction, altruism, aggression); and application (law, business, and well-being). *Prerequisite: PSY101 ◎. Prerequisite or corequisite: ENG102 ◎.*

## PSY202 Psychology of Abnormality
*3 Credits (3 Lectures)*
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*
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)* 🅰
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)* 𝓡
Provides a conceptual and practical introduction to statistics used in psychology and other behavioral sciences. Covers basic topics in statistics including: measures of central tendency and variability, probability and distributions, correlations and regression, hypothesis testing, t-tests, analysis of variance, and chi-square tests. Includes instruction in statistical analysis using statistical software. Geared specifically for students in the social and behavioral sciences professions. *Prerequisites: MAT121 or higher; RDG100.*

## PSY277 Human Sexuality
*3 Credits (3 Lectures)* 🅰
Exploration of sexual issues from psychological, physiological, and sociological perspectives. Historical, multicultural variation in sexuality, female and male reproductive anatomy, physiology, conception through birth, diseases, gender issues, sexual communication, sexual behavior patterns, love, sexual orientations, and sexual abuses are examined. *Prerequisite: SOC101 ◎ or PSY101 ◎. This class focuses upon sensitive material and may not be appropriate for younger students or* *students who find the study of sexuality uncomfortable or offensive.*

## PSY290 Research Methods
*4 Credits (3 Lectures, 3 Labs)* 🅰 *IW*
Principles of scientific inquiry in psychological research. Includes the review of current literature, hypothesis development, ethics (including CITI or NIH training), variables, measurement, validity, reliability, experimental designs, quasi-experimental designs, non-experimental designs (using SPSS statistical software), and conducting and writing a psychological study in APA format. This course includes lecture and lab. *Prerequisites: ENG101 ◎; PSY101 ◎; AND PSY230 (PREFERRED) OR BUS208 ◎ OR MAT162. Corequisite: ENG102 ◎.*

# RADIOLOGY (RAD)

## RAD100 Fundamentals of Radiologic Science and Healthcare
*1 Credit (1 Lecture)*
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. *Prerequisite: Radiologic Technology cohort student.*

## RAD110 Radiographic Positioning I Lecture
*2 Credits (2 Lectures)*
An introduction to the fundamental factors of digital image production, with related accessories and image analysis. *Prerequisite: Radiologic Technology cohort student.*

## RAD110LB Radiographic Positioning I Lab
*2 Credits (6 Labs)*
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)*
An introduction to the fundamental factors of digital image production with related accessories and image analysis. *Prerequisite: Radiologic Technology cohort student.*

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**ICON LEGEND:** **AGEC:** 🅰 **Intensive Writing:** *IW* **Reading Required: RDG100:** 𝓡 **SUN Course:** ◎

## RAD130 Patient Care in Radiologic Science

*2 Credits (2 Lectures)*

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)*

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)*

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 Lecture

**Previously known as RAD160 Radiograph Positioning II**

*2 Credits (2 Lectures)*

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.*

## RAD160LB Radiographic Positioning II Lab

*2 Credits (6 Labs)*

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)*

Digital image acquisition, image display and image analysis. *Prerequisites: RAD120 and Radiologic Technology cohort student.*

## RAD180 Practicum II

*3 Credits (3 Practica – 240 Hours)*

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)*

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.*

## RAD205 Ethical and Legal Issues for Imaging Professionals

*3 Credits (3 Lectures)*

Fundamental background in ethical and legal issues encountered in the field of radiography.

## RAD210 Radiation Physics II

*3 Credits (3 Lectures)*

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 Credit (3 Lectures)*

Building and expanding on the basic and radiation protection concepts presented in RAD100, Fundamentals of Radiologic Science and Health Care. 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)*

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.*

**ICON LEGEND:**     **AGEC:** a     **Intensive Writing:** *IW*     **Reading Required: RDG100:** *R*     **SUN Course:** ◎

## RAD250 Pharmacology and Venipuncture

*1 Credit (1 Lecture)*

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)*

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)*

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)*

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)*

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)

## RDG091 Reading Essentials

*3 Credits (3 Lectures)*

This course will increase reading comprehension, reading fluency, and college-level vocabulary while introducing students to the writing process. Emphasis will be on identifying the topic, main idea, and details in reading passages then using this knowledge for idea development and organization in writing. In addition, students will work on the development of grammar and punctuation skills as well as the revision process. *Prerequisite: Appropriate placement score.*

## RDG100 College Reading

*3 Credits (3 Lectures)*

Emphasizes effective reading, critical thinking, and study skills leading to increased reading comprehension necessary for college level texts in all subject areas. Successful use of Learning Management Systems (LMS) and navigating information technology is emphasized. Completion of this course with a grade of C or better fulfills the college reading proficiency requirement. *Prerequisite: RDG091 or appropriate placement score.*

## RECREATION
## (REC)

## REC101 Recreation, Leisure and the Quality of Life

*3 Credits (3 Lectures)* a R

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 or corequisite: RDG100.*

## REC108 Recreation Practicum

*3 Credits (1 Lecture, 6 Labs)*

Involves 120 hours of practical field experience in an approved recreation agency working with the special duties and problems of aides and supervisors of recreation programs, and observing and participating in assigned situations.

## REC203 Leisure Delivery Systems

*3 Credits (3 Lectures)* R

Development, management and organization of public, nonprofit and private sectors of the leisure services profession and industry. *Prerequisite or corequisite: RDG100. Offered every fall.*

## REC250 Leadership in Recreation

*3 Credits (3 Lectures)*

Theories and strategies for leadership in recreation and tourism settings, including communication skills, group dynamics, motivational processes and supervisory skills. *Offered every spring.*

# SCIENCE
# (SCI)

## SCI195 High Attitude Balloon Payload Project

*1 Credit (3 Labs)*

Develop and fly an experiment for a high-altitude balloon as part of an Arizona Space Grant Consortium project. Students will collect and analyze scientific data obtained by the balloon experiment and present their results at a meeting arranged by the Arizona Space Grant Consortium. *May be taken four times for credit.*

# SIGN LANGUAGE
# (SLG)

## SLG101 American Sign Language I

*4 Credits (4 Lectures)*

Introduction to the Deaf culture and the vocabulary and sentence structures of American Sign Language. Mastery of receptive and expressive basic communication skills.

## SLG102 American Sign Language II

*4 Credits (4 Lectures)*

Expanded American Sign Language 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)*

A continuation of the skills taught in SLG102. This course emphasizes improved fluency and comprehension of American Sign Language (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)* a R

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: RDG100, SLG201.*

# SOCIOLOGY
# (SOC)

## SOC101 Introduction to Sociology
**Previously known as SOC100 Introduction to Sociology**

*3 Credits (3 Lectures)* SOC 1101 a R

The systematic study of society; the role and impact of society on individual and group social interaction. *Prerequisites and corequisites; RDG100, and ENG100 or ENG121 or appropriate placement test score.*

## SOC200 Racial and Ethnic Minorities

*3 Credits (3 Lectures)* SOC 2215 a IW

Race and ethnicity in American society including such topics as discrimination, segregation, conflict, power and assimilation with an emphasis on contemporary issues. *Prerequisites: SOC101 and ENG101. Prerequisite or corequisite: ENG102.*

## SOC202 Contemporary Social Problems
**Previously known as SOC102 Contemporary Issues in Society**

*3 Credits (3 Lectures)* SOC 2250 a R

A systematic study of contemporary American and global social problems from a sociological viewpoint. *Prerequisite: SOC101. Prerequisite or corequisite: ENG101.*

## SOC203 Marriage and the Family

*3 Credits (3 Lectures)* a R

A comprehensive examination of marriage and the family as a cultural unit and a social institution. *Prerequisite: SOC101. Prerequisite or corequisite: ENG101..*

## SOC212 Gender in Society

*3 Credits (3 Lectures)* a R

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: RDG100.*

# SPANISH
# (SPA)

## SPA101 Elementary Spanish I

*4 Credits (4 Lectures, 1 Lab)* SPA 1101

The basic skills of understanding, speaking, reading and writing Spanish with a survey of cultural materials from Spanish-speaking countries.

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**ICON LEGEND:**    **AGEC:** a      **Intensive Writing:** *IW*      **Reading Required: RDG100:** R      **SUN Course:**

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## SPA102 Elementary Spanish II

*4 Credits (4 Lectures, 1 Lab)* ◎ *SPA 1102*
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.*

## SPA201 Intermediate Spanish I

*4 Credits (4 Lectures, 1 Lab)* ◎ *SPA 2201* ⓐ
Continuation of Spanish 101 and 102. An expanded and in-depth study of the Spanish language and culture. A content-based approach integrates grammar and culture in functional use through listening, speaking, reading, and writing. More complex and abstract foreign language situations are covered and language use is encouraged through communicative activities, audio, video, and computer-based materials. *Prerequisites: RDG100; SPA102* ◎ *or 4 semesters of high school Spanish with a grade of B or better.*

## SPA202 Intermediate Spanish II

*4 Credits (4 Lectures, 1 Lab)* ◎ *SPA 2202* ⓐ
Continuation of Spanish 101, 102, and 201. Further insight into the literature and culture of the Spanish speaking world through content-based cultural activities, authentic readings, discussions, writing, and investigation of a variety of contemporary issues. A review of grammatical concepts includes analyses of complex syntactic structures such as subjunctive moods. Functional use is stressed through listening, speaking, reading, and writing. Audio, video, and computer materials are incorporated. *Prerequisite: SPA201* ◎ *or instructor consent.*

# SOCIAL WORK UNDERGRADUATE (SWU)

## SWU171 Introduction to Social Work

*3 Credits (3 Lectures)* ⓐℛ
A descriptive and analytical historical perspective of the profession of social work, social problems and the social welfare system. *Prerequisite or corequisite: RDG100.*

## SWU250 Mindfulness for Stress Management

*3 Credits (3 Lectures)* ℛ
Introduction to the theory, research and practice behind mindfulness and stress management as it relates to quality of life issues and professional self-care. Focus on maintaining a healthy lifestyle and managing personal/professional stress by incorporating evidence based research on nutrition,

mindfulness, communication, positive psychology, exercise, environmental factors contributing to wellness and disease; immune system support, activity management and developing practices that facilitate maintaining living in balance. *Prerequisite or corequisite: RDG100.*

# THEATER (THE)

## THE100 Theater Appreciation

*3 Credits (3 Lectures)* ◎*THE1100*ⓐℛ
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 or corequisite: RDG100.*

## THE115 Introduction to Cinema

*3 Credits (3 Lectures)* ⓐℛ
Survey of the history and development of the art of motion pictures, including criticism of aesthetic and technical elements. *Prerequisite or corequisite: RDG100.*

## THE116 Contemporary Cinema

*3 Credits (3 Lectures)* ⓐℛ
Survey of various genres of motion picture films since 1960, including criticism of aesthetic and technical elements. *Prerequisite or corequisite: RDG100.*

# WOMEN AND GENDER STUDIES (WGS)

## WGS100 Introduction to Gender and Women's Studies

*3 Credits (3 Lectures)* ⓐℛ
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: RDG100.*

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**ICON LEGEND:**     **AGEC:** ⓐ     **Intensive Writing:** *IW*     **Reading Required: RDG100:** ℛ     **SUN Course:** ◎

# WELDING
# (WLD)

## WLD110 Survey of Welding Processes
*3 Credits (2 Lectures, 3 Labs)*
Introductory course with a focus on the fundamentals and safety related to the Oxyfuel, Plasma Arc, and Carbon Arc cutting processes. Also included are the welding processes of Shielded Metal Arc, Gas Metal Arc, and Flux-cored Arc welding. The course is designed for the beginner and other CTE majors that required a basic knowledge of welding. *Recommended: Basic knowledge of measuring tools.*

## WLD115 Welding NCCER Core
*5 Credits (3 Lectures, 6 Labs)*
Introduction to welding concepts and the National Center for Construction Education and Research (NCCER) core curriculum. Topics include knowledge of all safety rules; pre- and post-equipment inspections; fundamental welding processes and procedures; and basic shield arc, oxy-acetylene, tungsten inert gas, and metal inert gas welding using manual setting machines and digital machines.

## WLD118 Physical Characteristics and Mechanical Properties of Metals
*1 Credit (1Lecture)*
Focus on the various physical and mechanical characteristics of ferrous and nonferrous metals. Welders must be familiar with the metallurgical factors that need to be considered during welding activities. This course presents metal composition, properties, structural steel, and common milled shapes used for fabrication.

## WLD120 Thermal Cutting Processes
*3 Credits (2 Lectures, 3 Labs)*
Focus is on the most commonly used thermal cutting processes: Oxy-Fuel Cutting (OFC); Plasma arc cutting (PAC); carbon arc cutting/gouging (CAC); and machine cutting, with an emphasis on the proper set-up, use, and care of equipment and safety procedures.

## WLD121 Shielded Metal Arc Welding I
*3 Credits (2 Lectures, 3 Labs)*
Focus on the Shielded Metal Arc Welding (SMAW) process using DCEN, and DCEP modes. Skills include basic equipment set-up, electrode selection, proper arc starts, re-starts, and terminations, and basic Oxy-Fuel cutting, and material identification. Welding experiences with overlap padding in the flat and horizontal positions are provided. Also covered are AWS typical fillet and lap joint designs in the flat and horizontal positions with an emphasis on proper use and care of equipment and safety procedures.

## WLD122 Shielded Metal Arc Welding II
*3 Credits (2 Lectures, 3 Labs)*
Focus on the Shielded Metal Arc Welding (SMAW) process for out of position welding. This will include an introduction to fabrication, weld procedure specifications, and base metal preparation. Welding will include AWS typical fillet and lap joint designs in the flat, horizontal, vertical, and overhead positions with an emphasis on proper use and care of equipment and safety procedures. *Prerequisites: Specialization #1; WLD121.*

## WLD124 Flux Cored Arc Welding I
*3 Credits (2 Lectures, 3 Labs)*
Focus on Flux-cored Arc Welding (FCAW) using the FCAW-G, and FCAW-S processes. Welding will be in the flat, horizontal, vertical, and overhead positions. Also covered: AWS typical joint designs using the fillet, lap, and T-joint, with an emphasis on proper use and care of equipment and safety procedures. *Prerequisite: Specialization #1- WLD121, 122, 222, 225, or instructor consent.*

## WLD125 Pipe Welding I
*5 Credits (3 Lectures, 6 Labs)*
Basic pipe welding of underground and industrial pipelines. Students will cut, bevel, fit, and weld open root pipe joints. Primary focus will be the practice of the welding techniques needed to produce an acceptable root pass. This course will introduce pipe fitting tools along with common work site safety practices. Pipe fitting trade math will also be introduced to assist students with the fit up and fabrication of various pipe joint designs.

## WLD128 Introduction to Structural Drawings and CAD
**Previously known as WLD128 Blueprint Reading for Welders**
*4 Credits (3 Lectures, 3 Labs)*
Focus on the understanding and interpretation of structural fabrication, steel erection, and structural contract drawings including analysis, identification, and application of proper interpretation and use of weld symbols. Computer-Aided Drafting (CAD) will be introduced - computer technology for creation and documentation of 2D drawings utilizing available CAD software. This includes operation and capabilities of computers in CAD, drafting fundamentals, dimensioning, annotating, management of CAD files, and printing.

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**ICON LEGEND:**     **AGEC:** a     **Intensive Writing:** *IW*     **Reading Required: RDG100:** *R*     **SUN Course:** 

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## WLD129 Intro to Shielded Metal Arc Welding and Thermal Cutting Processes

*6 Credits (3 Lectures, 9 Labs)*

Focus on the Shielded Metal Arc Welding (SMAW) process using Direct Current Electrode Negative (DCEN), and Direct Current Electrode Positive (DCEP) modes. Skills include basic equipment set-up; electrode selection; proper arc starts, re-starts, and terminations; basic Oxy-Fuel Cutting (OFC); Plasma Arc Cutting (PAC); Carbon Arc Cutting (CAC); and material identification. Welding experiences with overlap padding in the flat and horizontal positions are provided. Also covered are American Welding Society (AWS) typical fillet and groove joint designs in the flat and horizontal positions with an emphasis on proper use and care of equipment and safety procedures.

## WLD130 Intro to Flux Cored Arc Welding and Fabrication

*6 Credits (3 Lectures, 9 Labs)*

Focus on Flux-cored Arc Welding (FCAW) using the Flux Cored Arc Welding with gas (FCAW-G), and Flux Cored Arc Welding self shield (FCAW-S) processes. Welding will be in the flat, horizontal, vertical, and overhead positions. Also covered: American Welding Society (AWS) typical joint designs using the fillet, lap, and T-joint, with an emphasis on proper use and care of equipment and safety procedures. Welding design, layout and fabrication processes with job/shop-oriented environment and emphasis on instructor pre-approved individual and group projects.

## WLD143 Pipefitting I

*5 Credits (3 Lectures, 6 Labs)*

This course is an introduction to the techniques and skills required as a pipe-fitter/welder. Topics include orientation to the pipefitting trade along with training on use of hand and power tools typically used within the pipefitting industry. Oxyfuel cutting, working at heights, and common motorized equipment will be discussed. Shielded Metal Arc Welding (SMAW) of pipe test joints will be performed in the 5G and 6G positions. Students will practice pipe fabrication exercises using various piping system components. Emphasis will be placed on proper use and care of tools and equipment along with worksite safety issues. Special attention to performance standards required on critical pressure piping and cross-country pipeline welding will be stressed. *Prerequisites: WLD115, WLD125 or instructor consent. Corequisite: WLD243.*

## WLD196 Welding Technology Internship

*3 Credits (3 Internships – 135 hours)*

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 sheer 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)*

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)*

Focus 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. *May be taken three times for credit. Prerequisite: WLD110.*

## WLD223 Automatic Welding Processes I

*3 Credits (2 Lectures, 3 Labs)*

Focus on the Submerged Arc Welding process (SAW), including the types and uses of automated welding processes. Topics to be covered are: electrical characteristics and power supplies, set up and operation of a single wire submerged arc welding system, basic troubleshooting, and weld quality evaluation. Students will interpret and develop weld procedure specifications/performance qualification records for the SAW process. *Prerequisite: A fundamental knowledge of welding processes.*

## WLD224 Flux Cored Arc Welding II

*3 Credits (2 Lectures, 3 Labs)*

Focus on Flux-cored Arc Welding (FCAW) using the FCAW-G, and FCAW-S processes. Welding will be in the flat, horizontal, vertical, and overhead positions. Also covered: AWS typical joint designs using groove welds, with an emphasis on the proper use and care of equipment and safety procedures. *Prerequisite: Specialization #1- WLD121, 122, 222, 225. WLD124, or instructor consent.*

## WLD225 Shielded Metal Arc Welding III

*3 Credits (2 Lectures, 3 Labs)*

Focus on advanced Shielded Metal Arc Welding (SMAW) for out-of-positions welding. This will include a focus on weld joint design and fit-up, weld quality, and an introduction to

destructive and non-destructive testing. Welding will include AWS typical groove welds in the flat, horizontal, vertical, and overhead positions per AWS D1-1 Guided Bend Test with an emphasis on proper use and care of equipment and safety procedures. *Prerequisite: Specialization #1; WLD121, 122, 222, or instructor consent.*

## WLD227 Welding Design and Fabrication

*3 Credits (2 Lectures, 3 Labs)*
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.*

## WLD228 Welding Inspection Technology

*3 Credits (2 Lectures, 3 Labs)*
Focus is on the importance of quality in the welding industry, including basic concepts and tools of visual weld inspection, weld procedure specifications, and industry code interpretation. Also covered are non-destructive testing, destructive testing, and the requirements for becoming a certified welding inspector. *Recommended: Prior welding or inspection experience.*

## WLD229 Advanced Shielded Metal Arc Welding

*6 Credits (3 Lectures, 9 Labs)*
Focus on advanced Shielded Metal Arc Welding (SMAW) for out-of-positions welding. This will include a focus on weld joint design and fit-up, weld quality, and an introduction to destructive and non-destructive testing. Welding will include American Welding Society (AWS) typical groove welds in the flat, horizontal, vertical, and overhead positions per AWS D1-1 Guided Bend Test with an emphasis on proper use and care of equipment and safety procedures. *Prerequisite: WLD129.*

## WLD230 Advanced Flux Cored Arc Welding

*6 Credits (3 Lectures, 9 Labs)*
Focus on Flux-cored Arc Welding (FCAW) using the Flux Cored Arc Welding gas shielded (FCAW-G), and Flux Cored Arc Welding self-shielded (FCAW-S) processes. Welding will be in the flat, horizontal, vertical, and overhead positions. Also covered: American Welding Society (AWS) typical joint designs using groove welds, with an emphasis on the proper use and care of equipment and safety procedures per NCCER Curriculum. *Prerequisite: WLD130.*

## WLD243 Pipefitting II

*5 Credits (3 Lectures, 6 Labs)*
This course will introduce students to piping systems, drawings, and component identification. Students will practice

layout and fabrication using GTAW and SMAW processes on various piping systems. Carbon steel and stainless steel pipe welding procedures will be practiced. Focus will be on welding techniques and procedures used in high pressure piping and pressure vessels according to applicable codes. Special attention will be given to quality control and safety practices. Students will practice butt weld pipe fabrication exercises using fittings such as flanges, elbows, and saddle connections. Code requirements, inspection methods, and welder qualifications will be discussed. *Prerequisites: WLD115, WLD125 or instructor consent. Corequisite: WLD143.*

## WLD244 Flux Cored Arc Welding III

*3 Credits (2 Lectures, 3 Labs)*
Focus on Flux-cored Arc Welding (FCAW) using the FCAW-G, and FCAW-S processes. Welding will be in the flat, horizontal, vertical, and overhead positions. Also covered: AWS typical joint designs using groove welds, with an emphasis on the proper use and care of equipment and safety procedures. *Prerequisite: Specialization #1; WLD121, 122, 222, 225, or instructor consent.*

## WLD246 Pipefitting III

*5 Credits (3 Lectures, 6 Labs)*
This course will introduce students to rigging equipment and field practices common to the pipe industry. Advanced pipefitting trade math applications will be discussed as well as compliance to industry standards and specifications. Underground and above ground pipe installation practices as well as pipeline testing equipment will be discussed and demonstrated. Advanced pipefitting tools and techniques will be discussed. *Prerequisite: WLD255 or instructor consent. Corequisite: WLD247.*

## WLD247 Pipefitting IV

*5 Credits (3 Lectures, 6 Labs)*
This course will introduce students to advanced blueprint reading for pipe and pressure vessel fabrication. Specialty piping components and procedures will be explained and demonstrated. Safety procedures and issues specific to critical pipe systems will be discussed. Students will also be introduced to employability and leadership skills needed to progress in the profession. *Prerequisite: WLD255 or instructor consent. Corequisite: WLD246.*

## WLD255 Advanced Pipe Welding II

*8 Credits (4 Lectures, 12 Labs)*
This course prepares students for welder qualifications in several codes to meet the required standards of the pipe industry. The focus of this course is the welding procedures used on smaller diameter and heavier wall thickness piping. Students will practice butt welds, socket welds, tube welding

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**ICON LEGEND:** **AGEC:** 🅐 **Intensive Writing:** *IW* **Reading Required: RDG100:** *R* **SUN Course:** 🔅

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and advanced pipe fabrication. Specialty industry procedures such as hot tapping, heat treatment and stress relieving will be discussed. Special safety procedures such as fall protection, cranes and rigging, confined space and excavations will be discussed. *Prerequisite: WLD243 or instructor consent.*

# College Faculty & Staff

# BOARD OF GOVERNORS



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District 1

**Dr. David Odiorne**
District 2

**Mrs. Evelyn Casuga**
District 3

**Mr. Dan Miller**
District 4

**Mr. Jerry Walker**
District 5

# COLLEGE ADMINISTRATION

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President/CEO

**Jenni Cardenas, Ed.D.**
Vice President of Student Services

**Mary Kay Gilliland, Ph.D.**
Vice President of Academic Affairs

**Chris Wodka, M.B.A., CPA**
Vice President/CFO of Business Affairs

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**Domingo Barragan**
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Academic Dean

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**Gregory Lee Roberts, B.A.**
Chief of Police

**Cameron Sanders, B.S.B.A.**
Chief Information Officer of Information Technology Services

**Jody Travis, M.B.A., CPA**
Executive Director of Budget and Accounting Services

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Assistant Coach – Women's Basketball, SPC
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M.A., Concordia University, Irvine

Aaron, Tramaine
Sports & Fitness Specialist/
Head Men's Basketball Coach, SPC
B.S., Berry College

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M.A., University of Arizona

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M.S., Missouri Baptist University

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B.A., The University of Arizona

Anderson, Gregory
Facilities Foreman, SPC

Andrews, Blake
Police Officer II, District
Arizona POST Certified Officer

Angle, Brenin
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M.Ed., American College of Education
M.B.A., University of Dubuque

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B.I.S., Northern Arizona University

Apodaca, Sarah
Financial Aid Assistant II, District/SPC
A.A., Central Arizona College

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Law Enforcement Certificate, Pima Community College

Arnold, Garry
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Arizona POST Certified Officer

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M.Ed., University of Hawai'i at Manoa
Ph.D., University of Hawai'i at Manoa

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