2020-2021



College Catalog

Vision *Central Arizona's premier choice in education and career excellence.*

Mission *Central Arizona College serves as a* **TRUE** *Learning community by empowering our students and staff to succeed.*
Teaching. ***R****eaching.* ***U****nderstanding.* ***E****mpowering.* ***Learning****.*

Values *1. Accountability 2. Communities 3. Trust*

Published April 2, 2020


SMC Student Awards


2019 Graduates



CAC named Bellwether Award Winner

True Learning


Rodeo Team

Central Arizona College


FFA Field Day


BIO181 DNA Tree



Phi Theta Kappa Induction & Honors Convocation


CAC Connects Poston Butte H.S.

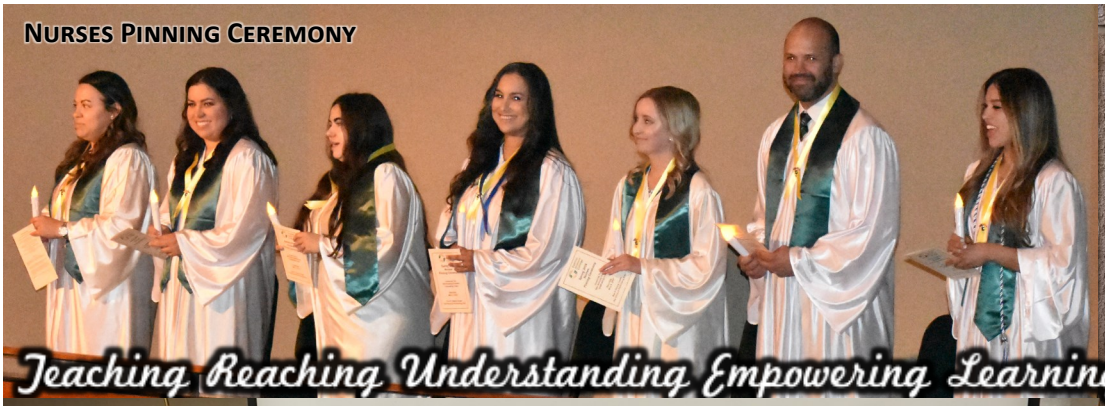

New Student Orientation

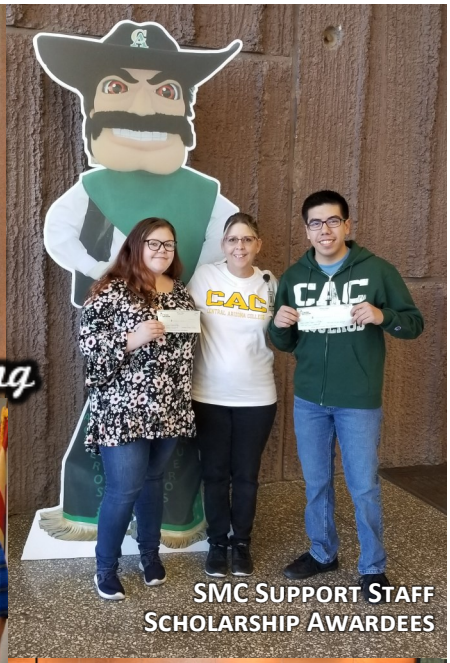

Vaqueras Softball Team


Students at Math Contest



Health Fair: Nursing Students


Nurses Pinning Ceremony
Teaching Reaching Understanding Empowering Learning

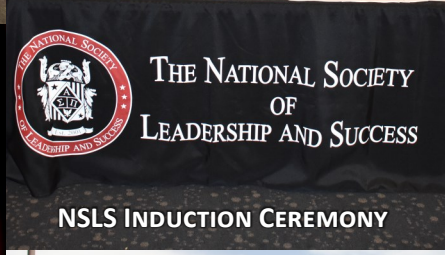

SMC Support Staff
Scholarship Awardees


Project Puente Presentations




SLAYED THE HESI!!
Radiological Technology Grad


TedX CAC Talks
SCIENTIST
Central Arizona College


The National Society of Leadership and Success
NSLS Induction Ceremony


Men & Women Cross Country
ACCAC Champions


Students Listen to
Information Session
TEAM IS WHAT IT TAKES


Vaquero Baseball Champions


Vaqueras Basketball Team

Welcome to Central Arizona College!



CAC is dedicated to providing a TRUE Learning community by empowering our students and staff to succeed.

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

Over the past 50 years, CAC has transformed the lives of over 21,000 graduates and has influenced hundreds of others through its educational, cultural, and community outreach programs and events.

Our history of providing quality education and supporting student's goals of achieving a certificate or two-year degree, transferring to a four-year institution, entering the career of their choice, or completing courses for personal enhancement remains our primary focus.

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.

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,

Jacki Elliott

President/CEO
Central Arizona College

COLLEGE CALENDAR 2020- 2021

FALL 2020

Faculty on Campus	August 10-20	M-Th
All College Day *(College Closed)*	August 17	M
Last Day of Online Fall Registration	August 23	Sun
Weekday & Online Classes Begin	**August 24**	**M**
Class Changes/Drop-Add	August 24-31	M-M
Weekend College Begins	**August 28**	**F**
Labor Day - *College Closed*	September 7	M
45 Day Census	October 7	W
Spring Registration Begins *(Continues through January 18)*	October 12	M
Mid-Term Week	October 12-17	M-Sat
Priority Deadline for May 2021 Graduation	October 19	M
Last Day to Withdraw from Semester Length Classes	October 29	Th
Veterans' Day *(College Closed)*	November 11	W
Thanksgiving Break *(College closed after 6 p.m. Wednesday Nov. 25)*	November 26-28	Th-Sat
Final Exams	December 7-12	M-Sat
Semester Ends	December 12	Sat
Grades due in Registrar's Office	December 15	T
Grades Available in Student Portal	December 17	Th
Winter Break - *College Closed*	Dec 21 – Jan 2	M-Sat

SPRING 2021

College Reopens	January 4	M
Faculty on Campus	January 11-14	M-Th
Last Day Online Spring Registration	January 18	M
Martin Luther King, Jr. Day *College Closed*	January 18	M
Weekday & Online Classes Begin	**January 19**	**T**
Class Changes/Drop-Add	January 19-26	T-T
Weekend College Begins	**January 22**	**F**
President's Day – *College Closed*	February 15	M
Development Day *(No classes prior to 6:00 pm)*	February 16	T
Priority Deadline for August 2021 Graduation	February 22	M
45 Day Census	March 4	Th
Mid-Term Week	March 8-13	M-Sat
Spring Break - *College Closed*	March 15-20	M-Sat
Summer/Fall Registration Begins *(Continues through August 22)*	March 22	M
Last Day to Withdraw from Semester Length Classes	March 25	Th
Final Exams	May 10-15	M-Sat
Semester Ends	May 15	Sat
Grades due in Registrar's Office	May 18	T
Grades Available in Student Portal	May 20	Th

Commencement

Signal Peak Campus 7:00 pm	May 14	F

SUMMER 2021

Last Day of Walk-In Summer Registration	May 27	Th
Last Day of Online Summer Registration	May 31	M
Memorial Day - *College Closed*	May 31	M
Summer Session Begins	**June 1**	**T**
1st 5-week and 8-week Classes Begin	**June 1**	**T**
Class Changes/Add Drop for 1st 5-week	June 1-2	T-W
Priority Deadline for December 2021 Graduation	June 3	Th
First 5-Week Classes End	July 1	Th
Independence Day Observed – *College Closed*	**July 5**	**M**
Second 5-week Classes Begin	**July 6**	**T**
Class Changes/Add Drop for 2nd 5-week Classes	July 7-8	T-W
8-Week Classes End	July 22	Th
Second 5-Week Classes End	August 5	Th
Grades Due in Registrar's Office	August 10	T
Grades Available in Student Portal	August 12	Th

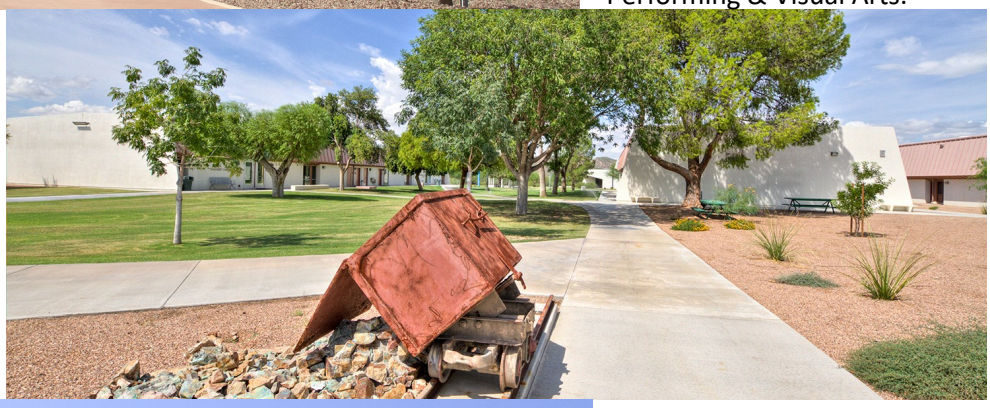


Signal Peak Campus

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, San Manuel & Winkelman.
Features: Education opportunities for residents living in the Copper Corridor. Community Room.





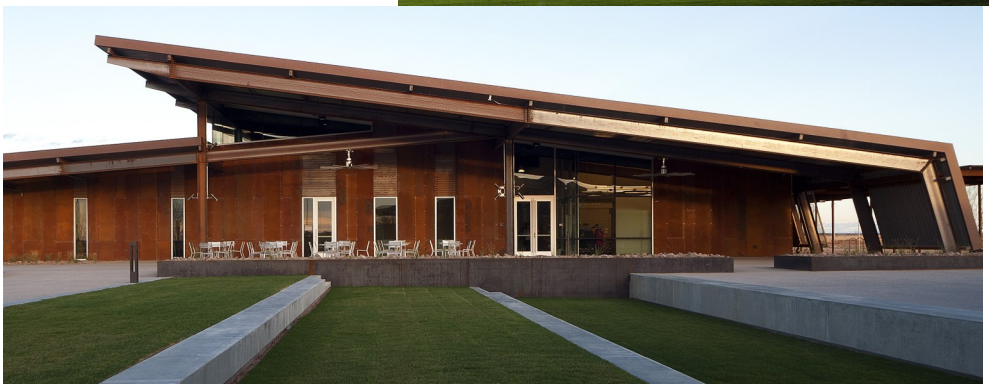
Superstition Mountain Campus

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

San Tan Campus

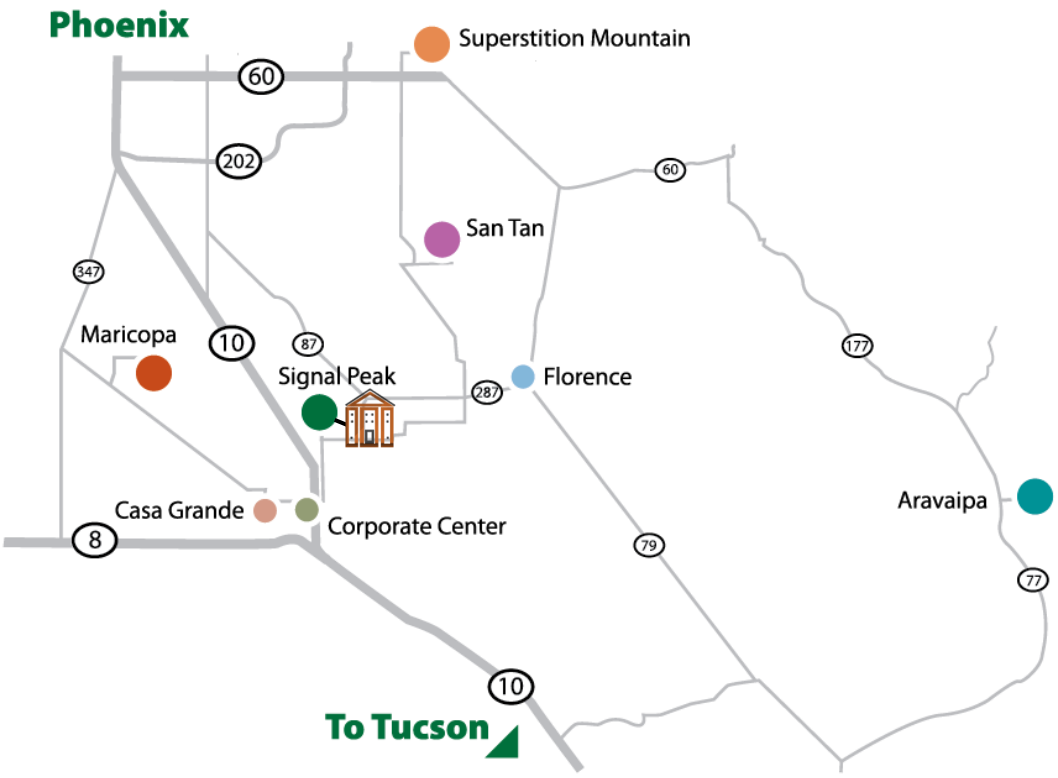
Location: San Tan Valley, AZ
Serving Queen Creek, San Tan Valley, & Florence.
Features: CAC's newest campus; Student Center, library, state-of-the-art classrooms & labs, culinary arts kitchen.





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.



Campus:

Signal Peak Campus
8470 N. Overfield Rd.
Coolidge, AZ 85128
520-494-5444
800-237-9814

Resident Life Housing
Signal Peak Campus
520-494-5470

Aravaipa Campus
80440 E. Aravaipa Rd.
Winkelman, AZ 85192
520-357-2800
866-869-6507

San Tan Campus
3736 E. Bella Vista Road
San Tan Valley, AZ 85143
480-677-7825
520-494-6725

Maricopa Campus
17945 N. Regent Drive
Maricopa, AZ 85138
520-494-6400

Superstition Mountain Campus
805 S. Idaho Road
Apache Junction, AZ 85119
480-677-7731

Centers:

Casa Grande Center
1015 E. Florence Blvd.
Casa Grande, AZ 85122
520-494-6050

Corporate Center
(Interstate 10 & Florence Blvd.)
540 N. Camino Mercado
Casa Grande, AZ 85122
520-494-6600

Florence Center
P.O. Box 707
800 E. Butte Avenue
Florence, AZ 85132
520-494-6801

Introduction

Welcome from the President i
Academic Calendar 2020-21 ii
Serving Pinal County iii

Table of Contents v

CAC Offerings: What Can I Study At CAC?

Degrees/Certificates 2
High School Equivalency (HSE/GED) Program 3
English as a Second Language (ESL) Program 3
Weekend College 3
Lifelong Learning 3

Admissions: How Do I Become A Student?

Enrollment Checklist 5
Admissions 6
Residency Guidelines 7
Classification of Students 8
Transfer Students 8
Transfer of Credits 9
Catalog Year of Admission 9
Program Requirements 9

Paying for College: What Are My Options?

Financial Aid 11
Federal Financial Aid Programs 11
General Eligibility 11
How to Apply 11
Academic Progress 11
Appealing a Decision 12
Payment of Financial Aid 12
Withdrawal/Repayment 12
Scholarship Opportunities 12
Foundation Scholarships 13
Financial Aid Contact Information 13
Veterans Educational Benefits 13
Career & Student Employment Services 14, 48
Payment Options 14

Tuition & Fees Schedule 15

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

Registration Information 26
Online Registration 26
Placement Testing 26
Academic Advising 26
Academic Load 27
New Student Orientation 27
Credit by Evaluation 27
Credit By Examination 28

High School Equivalency (HSE) Classes 3, 28
GED Tests 28
English as a Second Language (ESL) Classes 3, 28

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

Dropping or Adding a Class 30
Withdrawing from Classes/College 30
Tuition Refunds 30
Auditing 30
Repetition of Courses 30
University Department Time Limit for Coursework 31
Academic Calendar ..... ii, 31
Academic Honors Recognition 31
Graduation with Honors 31
Phi Theta Kappa (PTK) 31
Honors Program 31
Food Services 32
Meal Plan Options 32

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

Application for Graduation 34
Catalog under Which a Student Graduates 34
Conferring a Second Degree 34
Arizona Transfer Information 34
Arizona General Education Curriculum (AGEC) 35, 146
Arizona Shared Unique Numbering (SUN) System 35, 146
Transfer Agreement Options 35
Articulation and Transfer Options for Degree Completers 36
Arizona State University 37
Northern Arizona University 39
University of Arizona 40

Student Rights & Responsibilities: What Are They?

Academic Standards 42
Student Code of Conduct & Student Handbook 42
Plagiarism 42
Student Records 42
Family Educational Rights Privacy Act (FERPA) 42
Student Right to Know (SRTK) 42
Attendance 43
Absence Policy 43
Attendance Requirements 43
Grading Information 43
Grade Change/Appeal 44
Academic Progress 45
Title IX 45
Declaration of Civility for a Learning College 46
Student Services 46
Student Concern or Complaint with a Specific Office 46

Concern or Complaint regarding any Disability Accommodation (non-employee related) 46

Opportunities Beyond the Classroom: How Do I Get Involved?

Intercollegiate Athletics 48
Athletic Records.....48
Career & Student Employment Services.....14, 48
Housing & Residence Life 48
Intercultural Travel Programs 49
Center for Cultural & Civic Engagement.....49
TRIO Upward Bound.....49
TRIO Student Support Services 49
TRIO Summer Bridge.....49
Student Engagement and Activities 49
Student Government Association (SGA) 49
Student Clubs and Organizations 50

Student Resources: Where Do I Go For Help?

Central Help Desk Services 52
Information Services- Service & Support Desk 52
Bookstore 52
Learning Support Department.....53
Library 53
Student Accessibility Services 53
Arizona@Work Pinal County Youth Program (WIOA) 53

Accreditation

Our Vision.....55
Our Mission 55
Our Values 55
Our Directions.....55
Accreditation 55
Common Student Leaning Outcomes (CSLO.s).....56

Degrees & Certificates

Degree and Certificate Information.....58
Transferable Degrees 58
Additional Degrees 58
Physical and Biological Lab Science Courses 59
Associate of Arts (AA) Degree 59
Associate of Business (ABUS) Degree.....61
Associate of Science (AS) Degree. 62
Associate of Applied Science (AAS) Degree.....63
Associate of General Studies (AGS) Degree 64
Arizona General Education Curriculum (AGEC) 64
AGEC Course Designations 69
Certificates 74
Arizona General Education Curriculum for the Arts (AGEC-A Certificate) 74
Arizona General Education Curriculum for Business (AGEC-B Certificate) 75
Arizona General Education Curriculum for Science (AGEC-S Certificate) 76

Academic Offerings by Areas of Interest 77

Biological/Physical Sciences & Agriculture

Agriculture AA 80
Agriculture Business certificate..... 81
Agriculture General certificate 80
Agriculture Business AAS..... 82
Equine Management and Training certificate..... 83
Equine Management and Training AAS..... 83

Business & Professional Industries

Accounting certificate..... 84
Accounting AAS 84
Baking and Pastry certificate 87
Business certificate 85
Business AAS 85
Business ABus..... 86
Culinary Arts I certificate 88
Culinary Arts II certificate..... 88
Culinary Arts AAS 89
Hotel and Restaurant Management certificate 90
Hotel and Restaurant Management AAS..... 91
Management certificate 92
Recreation Management certificate 92
Recreation and Tourism Management AA 93
Sports Management AA 94

Communication & English

Communication Skills for the Professional certificate 95
Communication Studies certificate..... 96

Computer Technology, Engineering, & Math

Computer Business Applications Specialist certificate 96
Computer Business Applications AAS..... 97
Computer Programming certificate 99
Network Systems Administration certificate..... 97
Networking Technologies AAS..... 98
Software Development AAS 99
Web Design certificate 100

Education

Early Childhood Education AA..... 100
Early Childhood Education AAS..... 101
Early Childhood Education certificate..... 101
Early Childhood Education Infant Toddler AAS..... 103
Early Childhood Education Infant Toddler certificate..... 102
Early Childhood Education Professional Development certificate..... 103
Elementary Education AAEE..... 104

Industrial Technology & Skilled Trades

Advanced Structural Welding and Fabrication certificate ...113
Automated Industrial Technology I certificate 105
Automated Industrial Technology II certificate 106
Automated Industrial Technology AAS....106
Commercial Electrician Installer certificate....107
Computer Aided Drafting (CAD) certificate....107
Diesel Technology I certificate 107
Diesel Technology II certificate....108
Diesel Technology AAS 108
Entry Level Welder GMAW/FCAW certificate (Aravaipa Campus only) 114
Entry Level Welder SMAW certificate (Aravaipa Campus only) 114
Fundamentals of Pipe Welding certificate 111
Fundamentals of Structural Welding certificate....112
Heavy Equipment Operator Level I certificate 109
Heavy Equipment Operator Level II certificate 109
Heavy Equipment Operator AAS....110
Industrial Carpentry certificate 110
Pipefitting/Pipe Welding certificate 111
Pipefitting/Pipe Welding Technology AAS....112
Structural Welding Technology AAS 113
Sundt Construction Operator's Apprentice certificate 115
Welding Technology AAS (Aravaipa Campus only)....114

Nursing, Health, & Emergency Careers

Basic EMT certificate 130
Certified Dietary Manager, Certified Food Professional certificate....127
Clinical Laboratory Assistant certificate....116
Coding and Reimbursement certificate....120
Community Health Worker certificate....116
Community Nutrition Worker certificate....127
Community Public Health AA....117
Critical Care for Paramedics certificate 131
Diabetes Care and Education certificate 128
Driver Operator certificate 118
Fire Officer I certificate 118
Firefighter Operations certificate 119
Fire Science Technology AAS....120
Health Information Technology AAS....121
Massage Therapy certificate 122
Massage Therapy AAS 123
Medical Assistant AAS....124
Medical Assistant certificate....124
Medical Laboratory Technician AAS 125
Nursing AAS....126
Nutrition and Dietetic Technician AAS....129
Nutrition and Foodservice Professional Training Program certificate....128
Nutrition and Health Promotion certificate....129
Paramedicine certificate....131
Paramedicine AAS....131
Pharmacy Technician certificate....133
Radiologic Technology AAS 133
Wildland Firefighter I certificate 119

Social/Behavioral Sciences & Public Service

Administration of Justice certificate....135
Administration of Justice AA 135
Justice Studies AAS....136

Visual, Fine, and Performing Arts

Graphic Design certificate 138
Digital and Media Arts AAS 139
Live Audio and Lighting certificate....140
Live Audio and Lighting AAS 140
Fine Arts AA (Art and Music Pathway)....137
Popular Music Performance certificate....141
Popular Music Performance AAS....141
Recording Engineering certificate 142
Recording Engineering AAS 142

Course Descriptions

Course Delivery....145
Special Courses 146
Arizona General Education Curriculum (AGEC) 146
Arizona Shared Unique Numbering System (SUN) 35, 146

Approved Courses Table of Contents 147

ACC Accounting 148
AGB Agriculture Business 148
AGS Agriculture Science 148
AIT Automated Industrial Technology....150
AJS Administration of Justice....151
ANS Animal Science 152
ARH Archaeology 153
ART Art 154
ASB Anthropology 155
AST Astronomy....156
BCT Building Construction Technology 156
BIO Biology....157
BUS Business....157
CBA Computer Business Applications 160
CET Civil Technology....162
CHM Chemistry 162
CIS Computer Information Systems....163
CLA Clinical Laboratory Assistant....166
CNA Certified Nursing Assistant 167
COM Communication Studies 168
CPD Counseling/Personal Development 169
CPH Community Public Health....169
CRP Carpentry....170
CUL Culinary Arts....170
DFT Drafting 174
DIE Diesel/Heavy Equipment....174
DMA Digital Media Arts....172
ECE Early Childhood Education 179

ECN Economics 179
EDU Education 179
EGR Engineering 179
EIT Entertainment Industry Technology 180
ELC Electricity 182
ELT Electronics 182
EMS Emergency Medical Services 182
ENG English 185
ENV Environmental Science 186
ESL English as a Second Language 186
FSC Fire Science Technology 186
GED see HSE – General Education Development/ High School Equivalency 190
GEO Geography/Physical Geography 191
GLG Geology 191
HCC Health Careers Center 191
HEO Heavy Equipment Operations 192
HIM Health Information Management 193
HIS History 195
HMC Humanities: Communications 196
HMS Humanities: Social and Behavioral 196
HNR Honors 196
HRM Hospitality Management 197
HSE previously known as GED – General Education Development/High School Equivalency 198
IDS Interdisciplinary Studies 198
IRW Iron Working 198
LIT Literature 198
LMT Licensed Massage Therapy 199
MAT Mathematics 201
MDA Medical Assisting 203
MET Manufacturing Engineering Technology 204
MHL Music History and Literature 207
MLT Medical Lab Technician 206
MTC Music Theory and Composition 208
MUP Music Performance 208
NTR Nutrition/Dietetics 210
NUR Nursing 213
OAS Office Automation Systems 214
PAC Physical Education Activity 214
PED Physical Education 215
PEH Physical Education Health 216
PEV Physical Education Varsity Sports 216
PHI Philosophy 217
PHT Pharmacy Technician 217
PHY Physics 218
POS Political Science 218
PSY Psychology 219
RAD Radiology 220
RDG Reading 221
REC Recreation 222
RET Renewable Energy Technology 222
SCI Science 222
SLG Sign Language 222
SOC Sociology 223
SPA Spanish 223
SWU Social Work Undergraduate 224
THE Theater 224
WGS Women and Gender Studies 224
WLD Welding 224

Staff Catalog

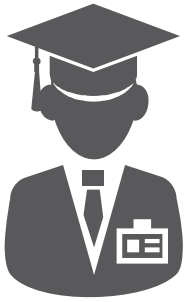
College Faculty & Staff 229

College Leadership 249

Index 250

CAC Offerings: What Can I Study At CAC:





40

Accredited Degrees to Work/Transfer

DEGREES BY AREA OF INTEREST

Biological/Physical Sciences & Agriculture
Agriculture AA
Agriculture Business AAS
Equine Management and Training AAS

Business & Professional Industries
Accounting AAS
Business AAS
Business ABus
Culinary Arts AAS
Hotel and Restaurant Management AAS
Recreation and Tourism Management AA
Sports Management AA

Computer Technology, Engineering, & Math
Computer Business Applications AAS
Networking Technologies AAS
Software Development AAS

Education
Early Childhood Education AA
Early Childhood Education AAS
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
Welding Technology AAS (Aravaipa Campus only)

Nursing, Health, & Emergency Careers
Community Public Health AA
Fire Science Technology AAS
Health Information Technology AAS
Massage Therapy AAS
Medical Assistant AAS
Medical Laboratory Technician AAS
Nursing AAS
Nutrition and Dietetic Technician AAS
Paramedicine AAS
Radiologic Technology AAS

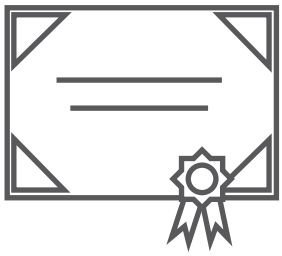
Social/Behavioral Sciences & Public Service
Administration of Justice AA
Justice Studies AAS

Visual, Fine, and Performing Arts
Digital and Media Arts AAS
Live Audio and Lighting AAS
Fine Arts AA (Art and Music Pathway)
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
Accounting certificate
Baking and Pastry certificate
Business certificate
Culinary Arts I certificate
Culinary Arts II certificate
Hotel and Restaurant Management certificate
Management certificate
Recreation Management certificate



Over 50 Accredited Certificates

Communication & English
Communication Skills for the Professional certificate
Communication Studies certificate

Computer Technology, Engineering, & Math
Computer Business Applications Specialist certificate
Computer Programming certificate
Network Administration certificate
Web Design certificate

Education
Early Childhood Education certificate
Early Childhood Education Infant Toddler certificate
Early Childhood Education Professional Development certificate

Industrial Technology & Skilled Trades
Advanced Structural Welding and Fabrication certificate
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Automated Industrial Technology II certificate
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Computer Aided Drafting (CAD) certificate
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Sundt Construction Operator's Apprentice certificate

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Coding and Reimbursement certificate
Community Health Worker certificate
Community Nutrition Worker certificate
Critical Care for Paramedics certificate
Diabetes Care and Education 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
Wildland Firefighter I certificate

Social/Behavioral Sciences & Public Service
Administration of Justice certificate

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

ACCREDITED
HIGHER LEARNING COMMISSION

High School Equivalency 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.:

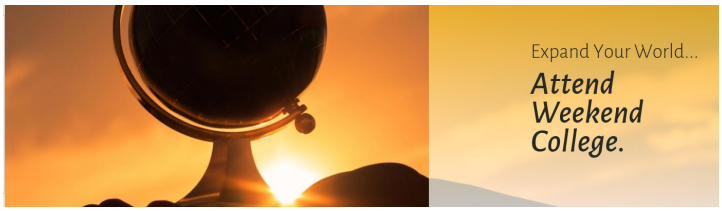
www.centralaz.edu/GED

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.:

www.centralaz.edu/ESL

A PROUD PARTNER OF ARIZONA@WORK™



Weekend College

Weekend College offers convenient class meeting times Friday evening 6pm to 9pm and Saturday morning 8:30am to 11:30am at CAC's Corporate Center. It's based on a cohort model whereby students support each other as they progress as a group through the same classes.

All Weekend College classes readily transfer to UA, NAU, ASU, and most other universities (grades of C or better required). It's designed as a guided pathway that leads to ASU's Organizational Leadership Bachelor's degree offered at CAC's Corporate Center.

Support services include: Personalized academic planning, financial aid, and career development.

Contact us:

- weekendcollege@centralaz.edu
- 520-494-6603 (Monday-Thursday)
- 520-494-6605 (Friday & Saturday)



Lifelong Learning

Discover something unique for your personal enrichment, insight that will help you launch a career, or even a way to tap into your creative side with a variety of non-credit workshops, seminars and courses in areas such as fine arts, fitness, computers, languages, music, dance, photography, and life enrichment. There are no entrance requirements for Community Education courses beyond an interest in the subject. Classes begin throughout the semester and vary in length and cost. This semester non-credit class offerings have expanded to include new classes.

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

Contact us:

- Joel Beck- Director of Lifelong Learning
  (480) 677-7721
  joel.beck@centralaz.edu
- Muriel Thomas- Coordinator of Lifelong Learning
  (520) 494-6659
  muriel.thomas@centralaz.edu
- April JacoRiggs- Secretary
  (520) 494-6603
  april.jacoriggs@centralaz.edu

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Admissions: How Do I Become A 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



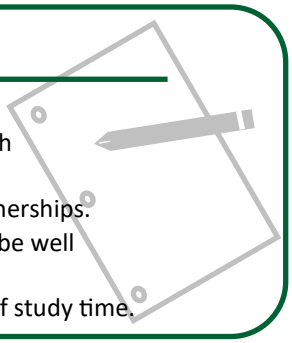
- Apply online at ***centralaz.edu/applynow*** or visit any of our 5 campuses to apply for admissions.
- Contact Financial Aid at **520-494-5425** or ***centralaz.edu/finaid***.
- Get your free student ID at any of our 5 campus locations.
- Register for new student orientation at ***centralaz.edu/orientation***.
- Stay Connected with CAC! Download the CAC app. & follow us on Facebook, Instagram, Twitter & 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! Call **520-494-5369** or ***campustours@centralaz.edu***.
- Upon admission, you obtain access to your CAC student portal for your student email, CAC computer labs & Blackboard.

2 TAKE THE PLACEMENT TEST



- The placement test helps to ensure you enroll in the appropriate level of class.
- The Placement Test is not a pass/fail exam.
- You can prepare to test by visiting ***accuplacerpractice.collegeboard.org.***
- Make an appointment to test. Contact our Testing Proctor at **520-494-5414** for more information.
- A photo ID is required to test at all CAC locations.
- Results are printed and distributed to you immediately.

3 MEET WITH YOUR ADVISOR & REGISTER FOR CLASSES



- Once you have your test scores make an appointment to see an advisor.
- Your advisor will help you identify classes, determine a potential major, & establish a career path beneficial to your goals.
- Speak to your advisor about Associate Degrees, Certificates, Transfer options, & University Partnerships.
- Register for classes early to ensure the best schedule, maximize your financial aid options, & to be well prepared for a successful semester.
- When choosing your classes, remember that 1 hour of class time usually means about 2 hours of study time.

4 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: **Central Arizona College, 8470 N. Overfield Rd., Coolidge, AZ 85128**
  Be sure to include your student ID # on all correspondence!
- Complete the ***free*** application for federal student aid at ***fafsa.gov***. CAC's financial aid team can help: **520-494-5425.**
- Use your class schedule to figure which textbooks to buy or rent through the bookstore or online at ***centralaz.edu/student-portal***. *If you have financial aid, you can charge your textbooks to your account.
- Manage your school expenses with CAC's tuition payment plan. Visit ***centralaz.edu/paying*** or email ***accounts.receivable@centralaz.edu***

*Central Arizona College prohibits discrimination in employment and educational programs based on race, religion, sex, age, disability, national origin, military status, genetic test information, sexual orientation, or gender identity or expression. 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 **www.ncahlc.org**.*
*Public Disclosure Documents: **www.centralaz.edu/srtk***

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.

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

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

- Completion of the Admission Form;
- Submission of a letter stating the reason for the special admission request;
- Completion of college placement exam;
- Consultation with a member of the college academic advising staff and/or;
- Consultation with an approved Special Admit designated official.
- Call 520-494-5470 for more information.

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

- Completion of Admission 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 Admission Form;
- Submission of completed Approval for Enrollment of High School Student Form;
- Submission of a letter stating the reason for the special admission request;
- Completion of the college placement exam (ACCUPLACER), 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.
- Call 520-494-5470 for more information.

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

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

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

- Completion of Admission/Registration Student Information Form.

Residency Guidelines

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

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

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

Resident status will be assigned under the following conditions:

- Students who are U.S. citizens;
- Dependent students who have lived in Arizona for less than a year, but reside with their parents or legal guardians who have established domicile in Arizona for one year and claim the student as an exemption for state and federal tax purposes;
- Financially independent students who have resided in Arizona for at least 12 months prior to the start of the semester in which they are enrolling and have established Arizona as their permanent domicile;
- Students who have transferred to Arizona by their employer for employment purposes;
- Students, spouses, dependents who are members of the Armed Forces of the United States, stationed in Arizona pursuant to military orders;
- Students who are members of Native American tribes whose reservation lands lie in Arizona and extend into another state and who are residents of that reservation.

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

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

Official Residency Guidelines

The following guidelines concerning the determination of residency for tuition purposes are a compilation of statutory law (and A.R.S. 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."

Please contact the Records Office for further details.

Implementation of Guidelines

- Each student shall have the question of legal residence determined prior to the time of registration and payment of fees. It is the responsibility of the student to register under the correct resident determination.
- Enforcement of residency requirements shall be the responsibility of the President of Central Arizona College. The President has designated the Records Office to make the initial domicile classification. In determining a student's classification, the college may consider all evidence, written or oral, presented by the student and any other information received from any source that is relevant to determining classification. The college may request written sworn statements or sworn testimony of the student.
- A request for a review of the initial classification may be made to the Records 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

Student who is honorably discharged from the armed forces and demonstrated evidence of intent to be a resident of Arizona.

Concurrent Enrollment: Non-resident Tuition

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

Western Undergraduate Exchange Program

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

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) (*www.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/current-students/grades-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. See the SUN List at *aztransfer.com/sun/*.

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.

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-
  Ricardo Torres, at 520-494-5524 or
  Ricardo.Torres@centralaz.edu

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.

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 *www.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 Scholarships
- CAC 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 Plus Parent 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
- Register with the Selective Service, if applicable
- 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 2020-21 FAFSA (to the Department of Education). It's available online at *www.fafsa.ed.gov*. Be sure to include the CAC School Code: 007283. The 2021-22 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 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 elsewhere. Please visit the Financial Aid website at: *www.centralaz.edu/finaid*.

Standards of 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 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 where the 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

- Upon receipt of the FAFSA and 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, Warning, or 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 Warning status for one semester.
  - -Students that do not meet SAP standards after the Warning semester are placed on suspension.
- Students on suspension must fund their education using their own resources, without the assistance of federal financial aid or VA Education Benefits. 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, a student may appeal that decision based on mitigating circumstances. Procedures and forms for the appeal process are available online at *www.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.

Payment 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 his or her 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. 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)

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 *www.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 *www.centralaz.edu/finaid* for scholarship details and application process.

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 Twitter at CAC TRIO.

The TRIO SSS Program at Central Arizona College is funded by a $1.3 million dollar grant from the U.S. Department of Education.

Financial Aid Contact Information:

Central Arizona College Financial Aid Office, M Bldg.
8470 N. Overfield Road
Coolidge, AZ 85128
Fax: 520-494-5091
E-Mail: *finaid@centralaz.edu*

Aravaipa Campus
520-357-2816

Maricopa Campus
520-494-6429

San Tan Campus
480-677-7830

Signal Peak Campus
520-494-5425

Superstition Mountain Campus
480-677-7708

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
- *nslds.ed.gov/* – National Student Loan Database System
- *studentloans.gov* – Federal Student Loan Information

Veterans Educational Benefits

Central Arizona College (CAC) is approved by the Arizona State Approving Agency (SAA), which is in authority to grant approval for 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 *www.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 *www.centralaz.edu/va*.

The SAA requires 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 II Veteran Services & Student Accessibility Services-
  Ricardo Torres, at 520-494-5524 or
  Ricardo.Torres@centralaz.edu

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.*

Career & Student Employment Services

Career and Student Employment Services (CSES) provides comprehensive guidance services to students as they pursue future college and career aspirations. The CSES is committed to providing resources, information and services for students to transition into the workplace and to further their academic studies.

Visit the Career & Student Employment Services web page: *https://centralaz.edu/current-students/career-student-employment/*



Student Employment

Student employment provides equitable hiring practices for all students seeking employment whether on- or off-campus, full-time, part-time, temporary or seasonal. This is an opportunity to gain practical work experience and knowledge in a specific career-related field.

In order to view available student employment positions go to the "Career & Student Employment Services" website. On the CAC website, under the "current student" tab, scroll down and select "Career & Student Employment Services" and follow the directions regarding "find a job": *https://centralaz.edu/current-students/career-student-employment/*. Should you require more information or assistance, call 520-494-5428.

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

Employment Eligibility Requirements

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

College Federal Work Study Program

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

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

College Funded Student Employee

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

Off-Campus Employment

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

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 *www.centralaz.edu/paying*.

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

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
2020-2021 Academic Year
Adopted Tuition & Fee Schedule

Credit Hours/ Semester	General Tuition & Fees Regular Courses	Western Undergraduate Education Program **(1)**	
Arizona Resident		Fall/Spring	**Summer**
1	86	N/A	N/A
2	172	N/A	N/A
3	258	N/A	N/A
4	344	N/A	N/A
5	430	N/A	N/A
6	516	N/A	**774**
7	602	N/A	**903**
8	688	N/A	**1032**
9	774	N/A	**1161**
10	860	N/A	**1290**
11	946	N/A	**1419**
12	1032	1548	1548
13	1118	1677	1677
14	1204	1806	1806
15	1290	1935	1935
16	1376	2064	2064
17	1462	2193	2193
18	1548	2322	2322
19	1634	2451	2451
20	1720	2580	2580
21 & up an additional	$86 p/hr	$129 p/hr	$129 p/hr

(1) Participating states: Alaska, Arizona, California, Colorado, Idaho, Hawaii, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming, Common Wealth of the Northern Marianas Islands.

Student pays 150% of normal stated fees. Must be a full time student & classes must be in AZ. To be considered full time you must be enrolled in at least 12 credits for Fall/Spring semester and at least 6 credits for Summer session only.

	General Tuition	Out-of-State Tuition	**Total**
Out-of-State Student			
1	86	86	172
2	172	172	344
3	258	258	516
4	344	344	688
5	430	430	860
6	516	516	1032
7	602	602	1204
8	688	688	1376
9	774	774	1548
10	860	860	1720
11	946	946	1892
12	1032	1032	2064
13	1118	1118	2236
14	1204	1204	2408
15	1290	1290	2580
16	1376	1376	2752
17	1462	1462	2924
18	1548	1548	3096
19	1634	1634	3268
20	1720	1720	3440
21 & up an additional	$86 p/hr	$86 p/hr	$172 p/hr

* Tuition includes a Student Activities Fee of $1 p/hr, assessed to all students, based on a proposal from Student Government

2020-2021 Academic Year
Adopted Tuition & Fee Schedule

Special Fees	Current $
◆ AAMA Certification Exam	
Medical Assistant	125
◆ Arizona State Prison inmate (self-pay)	104 p/hr
◆ Assessment of Credit for prior Learning:	
Each Credit Hour Evaluated	86 p/hr
◆ Business & Industry Training	Negotiated
◆ Certificate/Degree Replacement Fee	10
◆ Certified mail fee	7
◆ Check non-sufficient funds	25
◆ CLEP Test & proctoring fee (non CAC tests)	114
◆ Conduct Education Student Sanction Fee	50
◆ Public/police records (paper or elctronic)	.50 p/page
◆ Copy of public/police records media fee	8
◆ Credit by examination	86 p/hr
◆ EMS 275 Certification Fee	450
◆ Express mail at student's request	30
◆ Fax Transcript, Letter of Acceptance, Enrollment Verification, other materials and personal use	3 p/page
◆ Fees for travel courses and lab's	Actual cost
◆ G.E.D. test	149
◆ G.E.D. test retake	35 p/test
◆ HESI Testing Fee:	
RN	45
◆ HESI A2 Testing Fee:	
Health Information Technology, Medical Assistant, & Pharmacy Technology	45
◆ I.D. Replacement	10
◆ Malpractice insurance fee - (E.M.T., I.E.M.T., Paramedic, First Responder)	See Schedule
◆ Malpractice insurance fee - (Nursing, D.E.P., & Athletic Training, Massage Therapy, Radiology, all Health Careers)	See Schedule
◆ Moving violations (stop sign, speeding)	25
◆ Parking fines	15
◆ Placement test retake	10
◆ Private music lesson	See Schedule
◆ Proctoring fee (non CAC students)	25
◆ Transcript Fee:	
In person	10
Online	7.50
◆ College for Kids:	
Aravaipa	210

2020-2021 Academic Year
Adopted Tuition & Fee Schedule

Special Fees	Current $
◆ Additional Course Fees	See schedule
◆ Internship/Seminar Fees:	
NTR 196; 295; 296; 272 courses	40 p/hr
NUR 121;122;221;222 courses	5 p/hr
◆ Massage fees:	
Hot rock	25
45 minutes	20
Residence Hall Fees	
◆ Room deposit	150
◆ Room per semester	1500
◆ Room per semester (single)	Room rate + 1350
◆ Summer Room only (weekly)	200
◆ Board per semester	2150
◆ Cleaning fee	100
◆ Replacement room lock - simple	75
◆ Replacement room lock - complex	100

2020-2021 Academic Year

Adopted Additional Course Fees

Course	Credit Hours	Additional Fee per Credit Hour	Additional Total Fee per Course	Malpractice Insurance Fee per Course	CNS Code	Equipment Fee	Lab and Cert Fee
CNA							
CNA 125	7.0	5.00	35.00	25.00		-	-
CNA 125A	6.0	5.00	30.00	25.00		-	-
CUL							
CUL 108	1.0	20.00	20.00	-		-	-
CUL 110	1.0	20.00	20.00	-		-	-
CUL 112	1.0	20.00	20.00	-		-	-
CUL 114	1.0	20.00	20.00	-		-	-
CUL 130	3.0	20.00	60.00	-		-	-
CUL 160	3.0	20.00	60.00	-		-	-
CUL 161	1.0	20.00	20.00	-		-	-
CUL 162	1.0	20.00	20.00	-		-	-
CUL 230	3.0	20.00	60.00	-		-	-
CUL 260	3.0	20.00	60.00	-		-	-
CUL 261	1.0	20.00	20.00	-		-	-
CUL 262	1.0	20.00	20.00	-		-	-
CUL 263	1.0	20.00	20.00	-		-	-
CUL 268	3.0	20.00	60.00	-		-	-
DIE							
DIE 216	8.0	6.25	50.00	-		-	-

2020-2021 Academic Year

Adopted Additional Course Fees

Course	Credit Hours	Additional Fee per Credit Hour	Additional Total Fee per Course	Malpractice Insurance Fee per Course	CNS Code	Equipment Fee	Lab and Cert Fee
EMS							
EMS 100	0.5	20.00	10.00	-		-	6.00
EMS 101	0.5	20.00	10.00	-		-	-
EMS 123	3.0	20.00	60.00	-		-	-
EMS 125	9.0	29.00	261.00	60.00	EMSE	25.00	-
EMS 190	1.0	23.00	23.00	-		-	10.00
EMS 191	1.0	23.00	23.00	-		-	35.00
EMS 200	2.0	23.00	46.00	-	EMSE	25.00	-
EMS 201	0.5	23.00	11.50	-		-	-
EMS 208	11.0	20.00	220.00	60.00		-	-
EMS 235	3.0	20.00	60.00	-		-	-
EMS 236	3.0	20.00	60.00	-		-	-
EMS 240	1.0	23.00	23.00	-		-	10.00
EMS 241	0.5	20.00	10.00	-		-	-
EMS 242	3.0	23.00	69.00	-		-	26.00
EMS 245	1.0	23.00	23.00	-		-	15.00
EMS 255	2.0	20.00	40.00	-		-	-
EMS 272A	13.5	23.00	310.50	-		-	415.00
EMS 272B	8.5	23.00	195.50	-		-	225.00
EMS 272C	8.5	23.00	195.50	-		-	-
EMS 272D	6.0	23.00	138.00	60.00		-	-
EMS 272E	6.0	23.00	138.00	60.00		-	-
EMS 275	5.5	23.00	126.50	-		-	450.00

2020-2021 Academic Year

Adopted Additional Course Fees

Course	Credit Hours	Additional Fee per Credit Hour	Additional Total Fee per Course	Malpractice Insurance Fee per Course	CNS Code	Equipment Fee	Lab and Cert Fee
FSC							
FSC 106	3.0	20.00	60.00	-		-	-
FSC 111	2.0	20.00	40.00	-		-	-
FSC 117	3.0	20.00	60.00	-		-	-
FSC 118	3.0	20.00	60.00	-		-	-
FSC 126	2.0	20.00	40.00	-		-	-
FSC 129	2.0	20.00	40.00	-		-	20.00
FSC 130	1.5	20.00	30.00	-		-	-
FSC 134	3.0	20.00	60.00	-		-	-
FSC 140	11.0	20.00	220.00	-		-	215.00
FSC 180	3.0	20.00	60.00	-		-	-
FSC 181	0.5	20.00	10.00	-		-	-
FSC 182	1.0	20.00	20.00	-		-	-
FSC 183	1.5	20.00	30.00	-		-	-
FSC 184	1.0	20.00	20.00	-		-	-
FSC 185	1.0	20.00	20.00	-		-	-
FSC 186	1.5	20.00	30.00	-		-	-
FSC 187	0.5	20.00	10.00	-		-	-
FSC 188	2.0	20.00	40.00	-		-	-
FSC 189	2.0	20.00	40.00	-		-	-
FSC 190	1.5	20.00	30.00	-		-	-
FSC 191	2.0	20.00	40.00	-		-	-
FSC 202	3.0	20.00	60.00	-		-	-
FSC 205	3.0	20.00	60.00	-		-	-
FSC 208	3.0	20.00	60.00	-		-	-
FSC 220	3.0	20.00	60.00	-		-	-
FSC 238	2.0	20.00	40.00	-		-	-
FSC 250	1.0	20.00	20.00	-		-	-
FSC 252	1.0	20.00	20.00	-		-	-
FSC 255	3.0	20.00	60.00	-		-	-
FSC 298B3	1.5	20.00	30.00	-		-	-

2020-2021 Academic Year

Adopted Additional Course Fees

Course	Credit Hours	Additional Fee per Credit Hour	Additional Total Fee per Course	Malpractice Insurance Fee per Course	CNS Code	Equipment Fee	Lab and Cert Fee
HCC							
HCC 100	3.0	5.00	15.00	-		-	-
HCC 111	2.0	5.00	10.00	-		-	-
HCC 112	2.0	5.00	10.00	-		-	-
HCC 113	1.0	5.00	5.00	-		-	-
HCC 116	3.0	5.00	15.00	-		-	-
HCC162	3.0	8.00	24.00	-		-	-
HCC173	3.0	8.00	24.00	-		-	-
HIM							
HIM 115	2.0		25.00	-		-	-
HIM 117	3.0		25.00	-		-	-
HIM 121	3.0		25.00	-		-	-
HIM 131	3.0	5.00	15.00	-		-	-
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 208	3.0		25.00	-		-	-
HIM 210	2.0		25.00	-		-	-
HIM 215	3.0		25.00	-		-	-
HIM 275Q	4.0		25.00	25.00		-	-

2020-2021 Academic Year

Adopted Additional Course Fees

Course	Credit Hours	Additional Fee per Credit Hour	Additional Total Fee per Course	Malpractice Insurance Fee per Course	CNS Code	Equipment Fee	Lab and Cert Fee
CLA							
CLA155	3.0	-	-	25.00		-	-
CLA255	3.0	-	-	25.00		-	-
CLA169	4.0	-	-	25.00		-	-
CLA170	4.0	-	-	25.00		-	-
HPM							
HPM175P	3.0	-	-	25.00		-	-
LMT							
LMT175	1.0	-	-	25.00		-	-
LMT176	1.0	-	-	25.00		-	-
LMT177	1.0	-	-	25.00		-	-
LMT178	1.0	-	-	25.00		-	-
MDA							
MDA140	5.0	5.00	25.00	-		-	-
MDA141	5.0	5.00	25.00	25.00		-	-
MDA171	4.0	5.00	20.00	-		-	-
MDA175	4.0	5.00	20.00	25.00		-	-
MLT							
MLT210	2.0	7.00	14.00	25.00		-	-
MLT220	7.0	7.00	49.00	25.00		-	-
MLT230	4.0	7.00	28.00	25.00		-	-
MLT240	7.0	7.00	49.00	25.00		-	-
MLT250	7.0	7.00	49.00	25.00		-	-
MLT275	7.0	7.00	49.00	25.00		-	-

2020-2021 Academic Year

Adopted Additional Course Fees

Course	Credit Hours	Additional Fee per Credit Hour	Additional Total Fee per Course	Malpractice Insurance Fee per Course	CNS Code	Equipment Fee	Lab and Cert Fee
MUP							
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							
NTR196	4.0	40.00	160.00	25.00		-	-
NTR272	6.0	40.00	240.00	-		-	-
NTR295	1.0	40.00	40.00	-		-	-
NTR296	6.0	40.00	240.00	25.00		-	-
NUR							
NUR121	8.0	5.00	40.00	25.00		-	-
NUR122	8.0	5.00	40.00	25.00		-	-
NUR221	8.0	5.00	40.00	25.00		-	-
NUR222	8.0	5.00	40.00	25.00		-	-
PHT							
PHT 105	3.0	8.00	24.00	-		-	-
PHT 105L	2.0	8.00	16.00	-		-	-
PHT 150	1.0	8.00	8.00	-		-	-
PHT 164	2.0	8.00	16.00	-		-	-
PHT 175	4.0	8.00	32.00	25.00		-	-
RAD							
RAD140	3.0	-	-	25.00		-	-
RAD180	3.0	-	-	25.00		-	-
RAD200	7.0	-	-	25.00		-	-
RAD240	4.0	-	-	25.00		-	-
RAD290	4.0	-	-	25.00		-	-

2020-2021 Academic Year

Adopted Additional Course Fees

Course	Credit Hours	Additional Fee per Credit Hour	Additional Total Fee per Course	Malpractice Insurance Fee per Course	CNS Code	Equipment Fee	Lab and Cert Fee
WLD							
WLD 078	3.0	20.00	60.00	-		-	-
WLD 118	1.0	20.00	20.00	-		-	-
WLD 129	6.0	20.00	120.00	-		-	-
WLD 130	6.0	20.00	120.00	-		-	-
WLD 143	5.0	20.00	100.00	-		-	-
WLD229	6.0	20.00	120.00	-		-	-
WLD230	6.0	20.00	120.00	-		-	-
WLD243	5.0	20.00	100.00	-		-	-

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 Business Office before students can register for classes. Photo identification is required for all transactions.
Tuition and fees must be paid in full at the time of registration: *https://centralaz.edu/admissions/paying-for-college/*

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* by accessing MyCAC. Most CAC courses have prerequisites. A prerequisite is a course or minimum placement score that you must have successfully completed before you can register in a higher-level course.

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-
  Ricardo Torres, at 520-494-5524 or
  Ricardo.Torres@centralaz.edu

Placement Testing

Placement tests measure students' current skill levels and enable students to select classes taught at an appropriate level of difficulty. Placement tests are not "passed" or "failed." Placement tests are required for:

- Students registering in English, mathematics, or reading classes;
- Students registering in courses with an English, mathematics, or reading prerequisite.

Placement testing is offered at multiple Central Arizona College sites. See *centralaz.edu/current-students/academic-proctored-testing/*.

A table listing placement test score ranges and corresponding recommended English, mathematics, and reading courses is available in the Advising Office. Students may need to enroll in developmental courses to help gain the academic skills necessary for success at the college level.

Students who have earned 9 or more academic credit hours from a regionally accredited college or university may be exempt from the reading placement test. 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 tests administered at institutions other than CAC are acceptable.

Reading Proficiency Requirement

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

- Earning a grade of "C" or better in RDG 100;
- Achieving a minimum score on a reading placement test;
- Transferring 9 or more academic credit hours from another college or university as described above;
- Earning a grade of "C" or better in 9 credit hours of CAC courses requiring RDG 100 as a prerequisite;
- 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.

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 test scores, 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 Master Academic Plan, a tool that shows which courses have been completed and which ones remain to be taken in order to finish a student's program. 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 should consult AZ Transfer online at *aztransfer.com/*.

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 minimum score on a placement test.

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.

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, division chairs, & deans is available at the bottom of the following web page: https://centralaz.edu/academics/divisions-programs/. Approvals may be in the form of e-mail messages from the instructor and division chair to the student's CAC e-mail address.

Contact information for part-time instructors may be obtained by calling the Student Services Help Desk at (520) 494-5111 or writing to *centralhelpdesk@centralaz.edu*.

Instructor Consent

If a course description indicates a prerequisite or corequisite course "or instructor consent" is required, then the instructor may waive the prerequisite or corequisite course and permit a student to register. Permission to register may be in the form of an e-mail message from the instructor to the student's CAC e-mail address.

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 and veterans' benefits.)

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.

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, and learn how to access academic resources and while navigating the Central Arizona College experience. New Student Orientation sessions last approximately one hour and forty-five minutes and are required for all first-time, degree-seeking students. Access *centralaz.edu/orientation* for more information on dates, times and locations.



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.

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.

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/*.

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*.

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: 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. Students must show proof of legal residence in the United States at the time of registration, and must pay a supplemental fee ($20, $35, or $50, depending on household income).

We are more than a GED program; we are a path to your future.: *https://centralaz.edu/community/education-outreach/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. Students must show proof of legal residence in the United States at the time of registration, and must pay a supplemental fee ($20, $35, or $50, depending on household income).

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

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 the form to the Records and Registration Office 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 the Records and Registration Office for processing. When the transaction is processed, there will be no record of the class on the college transcript. It is the student's responsibility to drop the class if they no longer want to attend. Please see the tuition and fee schedule for the appropriate tuition refund.

No Show During Drop/Add Period

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

Withdrawing from Classes/College

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

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

Administrative Withdrawal

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

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

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

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

The college operates on a semester calendar with two 16-week semesters (15 weeks instruction, 1 week exams) beginning in August and January and a shorter summer session beginning in May. View online or via pdf at *https://centralaz.edu/academics/academic-calendar/*

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.

Honors Program

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

Goals of the Program

The following goals have been established for the 18 credit-hour Honors Program:

- To extend the curriculum offering academically talented students intellectual opportunities beyond those found in the normal curriculum;
- To provide recognition for exceptional academic achievement;
- To provide a program to assist honors students in successfully transferring to honors programs at other institutions;
- To provide the greatest efficacy in learning through small classes and individualization;
- To provide a structured setting in which academically talented students can socially interact with one another and faculty.

Honors Scholarships

The honors scholarship may be used to cover registration fees, tuition, books and supplies. The student must maintain a 3.25 or better cumulative GPA and will receive a scholarship while at CAC and enrolled in at least one Honors course each semester.

Admission to the Honors Program

Applicants should meet any one of the following criteria:

- Top 5 percent or 3.5 grade point average at a Pinal County high school;
- 3.25 grade point average at Central Arizona College with a minimum of 12 transferable credits.

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

- Two or three current letters of recommendation (preferably from educators);
- A 500-word statement of the applicant's goals and his/her expectations of the Honors Program;
- Transcripts;
- A completed application form.

Retention in the Honors Program

- Students must maintain a 3.25 GPA.
- Students may be placed on probation for one semester if grade point average is between 3.0 and 3.24 and may be readmitted to regular status when the GPA returns to 3.25 or above.
- Students must complete an Honors course each semester with a grade of "B" or better.

Graduation from the *Honors Program*

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



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.

Meal Plan Options

Living On Campus

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: *www.centralaz.edu/reslife*

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

Catering

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

Get Connected with CAC today!



- **Download the CAC mobile app**
  - ANDROID APP ON Google play
  - Available on the App Store
- **Visit *www.centralaz.edu/applynow***
- **800-237-9814 ext. 5111**
- **Follow us:**



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. 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 *www.centralaz.edu/graduation*

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.

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 & Student Employment Services

Utilize the Career & Student Employment Services for assistance with career aspirations and obtain valuable resources for transitioning into the workplace &/or plan further academic studies: *https://centralaz.edu/current-students/career-student-employment/*

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

Transfer Index of Tools & Policies: *steeringcommittee.aztransfer.com/resources/*

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

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

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

Shared Unique Number (SUN) Course Matrix: *aztransfer.com/sun/*

Transfer Pathways: *aztransfer.com/transferpathways/*

Arizona State **Math Competencies** are identified at: *https://steeringcommittee.aztransfer.com/resources/mathcompetencies.html*

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

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 (U of A) 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)

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

Approved by APASC, April 29, 2011

Articulation and Transfer Options for Degree Completers

Albright College
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

Western International University
1601 W. Fountainhead Parkway, Tempe, AZ 85282
602-943-2311/866-984-4636
west.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.

Transfer Admission Guarantee (TAG)
The Transfer Admission Guarantee, or TAG, helps you plan and complete prescribed course work at your community college that meets the lower-division course requirements for your ASU major. When you complete your TAG, you will be on track and prepared for success in earning your bachelor's degree.

To sign up visit *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. You can outline your path to the major of your choosing by following the instructions provided.

Completing the TAG will make you eligible to receive your associate's degree and ensures that you will be on track to earning your ASU bachelor's degree. The benefits include:

- Guaranteed acceptance to your ASU degree program when all admission requirements are met. Enjoy a cost-effective path ensuring courses transfer and apply to your ASU degree.
- Support from ASU transfer specialists via in-person, phone or web-based appointments for pre-enrollment services
- Access to online tools such as My ASU and the Transfer Credit Guide
- Invitations to special events at ASU.

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.

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 through classes delivered at CAC's Corporate Center. Students can now earn a Bachelor of Arts in Organizational Leadership (BA) without leaving Pinal County. More information can be found at *transfer.asu.edu/pinal*.

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

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*.

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.

Contact Us

Our NAU Admissions Counselor at CAC will help you determine the best option for you. Stop by the CAC Signal Peak campus in the Advising office (M-115), Monday-Thursday from 7am-6pm, or call us at 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 UA transfer advisors;
- Affordable, accessible degree programs offered in Pinal County;
- Degree pathways from Associate of Science, Arts, and Applied Science degrees;
- UA Pinal Coordinator on-site at the CAC Signal Peak Campus to assist you with the transfer process 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
- UA 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 UA Pinal are eligible for the UA 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 UA main campus in Tucson: admissions.arizona.edu/transfer/steps-to-apply;
- Transfer to UA Pinal: uas.arizona.edu/admissions.

Programs/Special Programs/Cohorts:
A variety of transfer pathways are available for Bachelor's degree programs at the UA and through the branch campus, UA South: admissions.arizona.edu/how-to-apply/transfer/pathways-to-ua

Students completing AAS degrees at CAC have the option of transferring to a Bachelor of Applied Science (BAS) program through UA Pinal, including majors in Administration of Justice, Early Childhood Education, Human Services, Informatics, 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 UA.
Prospective transfer students are encouraged to visit:
admissions.arizona.edu/how-to-apply/transfer

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

Advising Information/Contact:

⇒ UA Pinal Coordinator available for assistance at the CAC Signal Peak Campus Advising Center:
- 520-840-4878
- advising.arizona.edu/

⇒ UA Advising Resource Center:
- sasteam@u.arizona.edu

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 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*. Complaints may be appealed to CAC's Governing Board at *https://centralaz.edu/about-cac/governance/board-of-governors/*. 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 submitted to AZ SARA at *https://azsara.arizona.edu/content/complaint-process*. Students may also contact the SARA Portal Agency of their home state at *http://nc-sara.org/content/state-portal-entity-contacts*. 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, 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 Classby Class		Total
_____	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 here *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 and 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 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. But will 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 VA Educational Benefits. See Financial Aid link for more information: 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 *www.centralaz.edu* under "Directories." 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 the bottom of the following web page: https://centralaz.edu/academics/divisions-programs/.

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*.

Title IX

Central Arizona College (CAC) seeks to foster a community Environment in which all members respect and trust each other. CAC has policies relative to Title IX that support non-discrimination and prohibit discriminatory behavior Including sexual harassment and sexual violence. Such policies apply to all educational programs, services, activities and facilities. For more information regarding Title IX processes and policies go to: *www.centralaz.edu/titleix*

A victim of sexual misconduct may file a complaint with the Title IX Coordinator, who will assist the victim with resources and information regarding the filing of charges. Any student or employee who becomes aware of an incident of sexual misconduct should contact the Title IX Coordinator immediately to ensure that the College responds timely and appropriately. The college may bring charges in the absence of a complaint from a victim.

When a victim reports Title IX related misconduct, the College will provide the victim written notification of available options, including information on filing a complaint within the College, information on filing a criminal complaint, and information on pursing both options at the same time. This notification will also include information about resources and supportive services available to the victim both on and off campus. Inquiries concerning Title IX policies or the filing of a specific complaint may be referred to CAC's Title IX Coordinator, Barrington Campbell, Signal Peak Campus, office O200B; 520-494-6456/520-494-5067; titleix@centralaz.edu or barrington.campbell@centralaz.edu.

DECLARATION OF CIVILITY FOR A LEARNING COLLEGE

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

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

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

Integrity, including
- Honesty
- Fairness
- Sincerity

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

Charity, including
- Kindness
- Caring
- Good will
- Tolerance
- Compassion

Responsibility, including
- Reliability
- Accountability
- Trustworthiness

Self-discipline, including
- Acting with reasonable restraint
- Not indulging in excessive behavior

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

Student Code of Conduct

CAC requires students to follow a code of conduct that emphasizes important values for both the classroom, workplace, and greater campus community. Learn more about the Student Code of Conduct, including student rights and responsibilities, reporting an incident/ concern, and the conduct process by visiting *https://centralaz.edu/current-students/student-support/student-handbook-forms/*.

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.

STUDENT SERVICES

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

Student Concern or Complaint with a Specific Office

CAC promotes an open educational environment. The college encourages all students and community members to first direct their complaints and concerns to the staff, or administrator specifically involved. In addition, they may fill out the form below and their concern will be followed up by the appropriate supervisor: *cm.maxient.com/reportingform.php?CentralAZCollege&layout_id=2*.

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.

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/2018/05/ocr.pdf*.

If you need additional assistance, please contact the Dean of Student Life at 520-494-5341. An individual may file a discrimination complaint with the Office for Civil Rights, by visiting: *https://www2.ed.gov/about/offices/list/ocr/docs/howto.pdf*.

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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.

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 Affairs 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, 2014, 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*.

Career & Student Employment Services

Career and Student Employment Services (CSES) provides comprehensive guidance services to students as they pursue future college and career aspirations. The CSES is committed to providing resources, information and services for students to transition into the workplace and to further their academic studies.

Visit the Career & Student Employment Services web page: *https://centralaz.edu/current-students/career-student-employment/*

Career Exploration

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

Internships

Internships are supervised, practical training that provides students the opportunity to gain valuable "on-the-job" experience while pursuing an education in a related field. Central Arizona College offers internship courses for academic credit.

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.

For more information about Housing & Residence Life, or to obtain a copy of the housing application, please visit the Residence Life website at *centralaz.edu/reslife* or contact the office directly at 520-494-5470.

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.



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 www.centralaz.edu/community/education-outreach/community-education.



Center for Cultural & Civic Engagement

The Center for Diversity and Inclusion (CDI) is a welcoming space, open to and accepting of all individuals. As such, CDI provides educational opportunities for the students, staff, and faculty of our greater Central Arizona College community. These opportunities promote deeper understanding and appreciation for differences among all people through engagement in meaningful conversations about issues of diversity, including race, ethnicity, gender, ability, orientation, age, religion, language, or status.

The CDI offers opportunities for engagement at all district campuses. To connect with the CDI, visit *https://centralaz.edu/current-students/student-support/center-cultural-civic-engagement/* for contact information and scheduled events.

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, located on the Signal Peak Campus, is designed to assist students to transfer to a four-year institution within guidelines set by the U.S. Department of Education. TRIO applicants maintaining academic progress and meeting certain criteria, such as first generation college student, or low-income student, or student with a documented disability may apply. 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 participants. For more information visit the TRIO webpage at *centralaz.edu/trio* or call (520) 494-5007. TRIO is on Facebook and Twitter at CAC TRIO.

The TRIO SSS Program at Central Arizona College is funded by a $1.3 million dollar grant from the U.S. Department of Education.

TRIO Summer Bridge

The Summer Bridge program is an exciting and valuable five-day college orientation program designed to give incoming freshmen 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, go through several workshops, participate in discussion groups, join in social activities, and explore college life.

This program is a full week where participants will meet other first-year students and interact with faculty and staff at Central Arizona College. For more information, please visit the TRIO Summer



Bridge website at *centralaz.edu/summerbridge* 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 containing information about activities of the Student Government Association, the Campus Activities Board, and other events.

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.

Benefits to taking on a leadership role in SGA:

- Scholarships
- Prescott Leadership Camp
- Leadership Training & National Conferences
- Community Involvement
- National recognition for leadership excellence

Student Clubs and Organizations

Student Clubs and Organizations (SCO) are organized student groups with a common interest and a shared goal. Clubs and Organizations provide students opportunities for social interaction, recreation, leadership training and enhancement of career-academic interests. Each group has a faculty or staff advisor 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.



Not all clubs are available at each campus. Any student interested in starting a club or organization can do so by having five (5) students in officer positions and an advisor. For more information, check our webpage at https://centralaz.edu/campus-life/student-activities/.

Campus Leadership Opportunities

- **Adulting 101** - Workshops on life skills and career development.
- **Araviapa Campus SkillsUSA & American Welding Society** - Helps to empower its members to become world-class workers, leaders and responsible American citizens.
- **Beta Epsilon Sigma/ Phi Beta Lambda (Business Club)** - Build leaders with our students through community service, education and leadership.
- **Book Club** - Read and participate in literary discussions.
- **Campus Activities Board** - Provides activities throughout the District with movies, social events, and school spirit.
- **Central Arizona Student Nurses Association (CASNA)** - Promotes community involvement for nursing students through health fairs, community events, community service, and volunteering.
- **CAC DREAMers** - Provides academic and social support and scholarship information to CAC students with Deferred Action for Childhood Arrivals (DACA) and undocumented students.
- **CAC GIVES** - Groups Involved in Volunteer Efforts - Serves the Pinal County Community through volunteer work.
- **CAC Posse (Spirit Squad)** - Supports CAC Athletics with our own student section.
- **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.
- **Computer Club** - Students learning technical skills and being sustainable.
- **Culinary Club** - Promotes skills through culinary and hospitality to serve the community & participate in competitions.
- **Disability Advocacy Student Alliance** - Addresses the needs and concerns of the disability community and its allies on the University of Washington campus regarding the issue of disability.
- **Earth Club** - Promotes learning about the current climate events that are happening today, inform ourselves more about climate change, and the little things we can do to make a difference.
- **Residence Hall Association** - Brings community engagement towards residence life.
- **Film Club** - Watches and discusses films from a variety of genres, and allows you to make your own films in order to get feedback.
- **Gaming Club** - Participates in board and role-play games.
- **Graphic Design Club** - Works on portfolio projects and attends trips.
- **Hunger Awareness Club** - Supports the CAC Food Pantries and Hunger Initiatives.
- **Male Empowerment Network (MEN)** - Creates a culture of success and empowerment among male students.
- **National Alliance on Mental Illness (NAMI)** - Finds innovative ways to educate, advocate, and improve mental health services for students at Central Arizona College, as well as offer peer-to-peer support and a safe environment for students to share common experiences.
- **National Society of Leadership & Success (NSLS)** - Assists people 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.
- **Native American Club** - Celebrates culture and sharing awareness through events and workshops.
- **Newman Club** - (named after Cardinal John Henry Newman) A faith group for students of Central Arizona College who want to socialize in a Christian environment and are interested in spiritual growth and community service opportunities.
- **Phi Theta Kappa** - The honors organization for community colleges. The four Hallmarks of PTK are Scholarship, Leadership, Service, and Fellowship. We welcome all interested students to join us for volunteer opportunities and educational events.
- **PRIDE Student Union** - Advocates for, empower and provide community spaces for lesbian, gay, bisexual, transgender and queer people in Pinal County.
- **PROMISE Club** - For students who committed to Promise for the Future to serve as an Ambassador to Pinal County and receive mentoring.
- **Speech & Debate Club** - Connects, supports, and inspires a diverse community committed to empowering students through competitive speech and debate.
- **Student Government Association** - Serves as the voice of students across the District by bringing concerns and issues to administration.
- **Video Game Club** - Explores new games and compete.
- **Women of Color** - Offers opportunities to affirm and share your own culture, learn about other cultures, gain leadership skills that can be developed through co-curricular activities, and get involved in the campus at-large in the context of a supportive environment.
- **Writer's Guild** - This creative writing community provides fun and enriching opportunities for members to grow artistically while being part of a sustaining fellowship.

Anyone interested in joining or starting their own group can email *Kimberly.david@centralaz.edu*

Student Resources: Where Do I Go For Help?



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, resetting Online Services passwords, understanding Online Student Services features, troubleshooting Blackboard, using CAC e-mail, and 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.

There are several methods to access assistance:

- Phone: 520-494-5111 or 1-800-237-9814, ext. 5111
- Email: centralhelpdesk@centralaz.edu.
- Central Arizona College Website: Help and FAQs provide a list of frequently asked questions. See front page of the CAC website.

Locations and Hours of Operation:

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

This is the primary point of contact for issues related to Student Services including:

- Online services assistance
- General customer service
- Tutoring
- 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

Information Services – Service and Support Desk

- Work Phone: 520-494-5678
- Ticket submission: https://whd.centralaz.edu
- Service Desk Location: Signal Peak Campus, O 108
- Office Hours: Monday - Thursday, 7:30 am- 6 pm

The Information Services - Service Desk troubleshoots technical issues for the following:

- Computer account password resets (including Blackboard and E-mail)
- 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

Bookstore

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

Bookstore Refund Policy

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

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- Ricardo Torres, at 520-494-5524 or Ricardo.Torres@centralaz.edu

Career & Student Employment Services

Utilize the Career & Student Employment Services for assistance with career aspirations and obtain valuable resources for transitioning into the workplace &/or plan further academic studies: https://centralaz.edu/current-students/career-student-employment/

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 Twitter at CAC TRIO.

The TRIO SSS Program at Central Arizona College is funded by a $1.3 million dollar grant from the U.S. Department of Education.

Learning Support Department

Central Arizona College provides free tutoring for students in most academic areas of study through the Learning Support Department. The tutors work with students individually and/or in small groups to address the various learning needs of students. In addition, tutors use several modalities including, but not limited to, face to face, online, interactive television, tutor stations, email, and phone to assist students in their academic endeavors. The Learning Support Department via the Learning Centers has customized success skills workshops and computerized tutorials for many CAC courses as well as computer-assisted instructional programs for coursework and/or independent study.

Academic & Proctored Testing

https://centralaz.edu/current-students/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, M115-B

- 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, Ricardo Torres, at 520-494-5524 or *Ricardo.Torres@centralaz.edu*.

For additional assistance, please contact the Dean of Student Life, Tramaine Rausaw, at 520-494-5345 or *Tramaine.Rausaw@centralaz.edu*.

ARIZONA@WORK Pinal County Youth Program

ARIZONA@WORK PINAL COUNTY Innovative Workforce Solutions

The Workforce Innovation & Opportunity Act (WIOA) legislation requires the ARIZONA@WORK Pinal County Youth Program to enroll out of school youth 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.

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 520-494-5444. 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)
1313 L. Street NW, Suite 500
Washington, DC 20005-4101
202-350-8862
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
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

Health Careers

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

Dietetic Technician Degree
Accreditation Council for Education in Nutrition and Dietetics (ACEND)
120 S. Riverside Plaza, Suite 2000
Chicago, IL 60606-6995
800-877-1600
eatright.org/ACEND/

Dietary Managers Training Program Certificate
Association of Nutrition and Foodservice Professionals (ANFP)
406 Surrey Woods Drive
St. Charles, IL 60174
800-323-1908
anfponline.org/home

Health Information Technology Degree
The Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)
233 N. Michigan Ave. 21st Floor
Chicago, IL 60601-5800
312-233-1100
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)
25400 US Highway 19 N, Suite 158
Clearwater, FL 33763
727-210-2350 OR 727-210-2350
caahep.org

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 and Degree

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 DVA 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/college/
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/college/.

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*

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.

- 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)
ASB101 Physical Anthropology and Archaeology: Bones, Stones and Human Evolution (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)
PHY100 Physical Universe (4)
PHY111 College Physics I (4)
PHY112 College Physics II (4)
PHY121 University Physics I: Mechanics (4)
PHY122 University Physics II: Electricity & Magnetism (4)
PHY223 University Physics III: Thermodynamics, Optics and Waves (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 areas of study such as: Administration of Justice, Advertising, Agri-Business, Agriculture, American Studies, Anthropology, Art, Art History, Broadcasting, Communication Studies, Creative Writing, Dramatic Theory, Early Childhood Education, Economics, Elementary Education, English, Exercise Science, Fine Arts, Geography, History, Hotel/Restaurant Management, Interdisciplinary

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Arts/Performance, Interdisciplinary Studies, Journalism, Languages, Liberal Arts, Mathematics, Media Arts, Music, Philosophy, Physical Education, Political Science, Psychology, Public Programs, Public Relations, Recreation and Tourism, Religious Studies, Secondary Education, Social and Behavioral Sciences, Social Work, Sociology, and Theater.

For a list of Common Courses associated with specific programs of study, go to the Common Course Matrix Archives and select the current year or the year the course was completed: *https://aztransmac2.asu.edu/cgi-bin/WebObjects/ATASS.woa/wa/CCMArchives*.

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/generaleducation/*.

General Education (35-36)

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

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

Oral Communications (3 Credits)
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 Credits)
Select AGEC courses.

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

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

Mathematics (3-4 Credits)
MAT141 College Mathematics, Standard (4)
MAT1142 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/college/

Special Awareness Requirements (0-9)

Select AGEC courses to fulfill these requirements.

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

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences, or Transfer Electives, may also be used to satisfy the three (3) Special Awareness Requirements categories. A course may 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*: *http://aztransmac2.asu.edu/cgi-bin/WebObjects/CEG*.

Other AA Degree Requirements

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

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

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

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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.

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

ASSOCIATE OF BUSINESS (ABUS) DEGREE

(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 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 or higher (4)

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

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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.

ASSOCIATE OF SCIENCE (AS) DEGREE (60-64 Credits)

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

Arizona General Education Curriculum (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/generaleducation/.

General Education (29-30)

Written Communications (6 Credits)
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 Credits)
Select AGEC courses.

Social and Behavioral Sciences (6 Credits)
Select AGEC courses.

Physical and Biological Sciences (8 Credits)
BIO181 General Biology I (4) **AND**
BIO182 General Biology II (4)
OR
CHM151 General Chemistry I (4) **AND**
CHM152 General Chemistry II (4)
OR
PHY121 University Physics I: Mechanics (4) **AND**
PHY122 University Physics II: Electricity and Magnetism (4)

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Mathematics (3-4 Credits)

MAT221 Analytical Geometry and Calculus I (4) or higher

Subject Options (6-8)

Based on your major, consult the Transfer Guides at aztransfer.com/college/.

Students may select mathematics or science courses. Select Mathematics courses above the first course in the calculus sequence and/or Science courses from: Agriculture, Astronomy, Biology, Botany, Chemistry, Engineering, Environmental Science, Geology, Nutrition, Physical Geography, Physics, or Zoology.

Special Awareness Requirements (0-9)

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 AA 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 Credits)

Written Communications (3 Credits)

Select one:

ENG101 College Composition I (3)
ENG121 Applied Technical Writing (3)

Oral Communications (3 Credits)

COM100 Fundamentals of Human Communication (3) or higher

Arts and Humanities (3 Credits)

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 Credits)

Select a course numbered 100 or above from the following: ASB, 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 Credits)

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 Credits)

Select one:

BUS101 Business Mathematics (3)
MAT106 Technical Math (3)
MAT118 Essential Mathematics (4) or higher

Core and Elective Requirements (41 or More Credits)

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

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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 Credits)

Written Communications (3 Credits)

ENG101 College Composition I (3)

Oral Communications (3 Credits)

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 Credits)

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 Credits)

Select courses numbered 100 or above from the following: ASB, 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 Credits)

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 Credits)

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) 2020-2021

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.

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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)
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)
HNR255 Leadership Development (3)
LIT101 Introduction to Literature (3)
LIT201 American Literature I (3)
LIT202 American Literature II (3)
LIT203 English Literature I (3)
LIT204 English Literature II (3)
LIT206 World Literature (3)
LIT232 African American Literature (3)
LIT233 American Ethnic Literature (3)
LIT234 United States Latinx Literature and Culture (3)
LIT254 Literature and Film (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)
ARH200 Principles of Archaeology (3)
ASB101 Physical Anthropology and Archaeology: Bones, Stones, and Human Evolution (4)
ASB102 Cultural Anthropology (3)
ASB201 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)
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)

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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 Family (3)
SOC212 Gender in Society (3)
SOC250 Family Violence (3)
SWU171 Introduction to Social Work (3)
SWU242 Introduction to Child Welfare Service in a Diverse World (3)
SWU291 Social Service Delivery (3)
SWU295 Foundations of Social Work Practice: Effective Helping in a Diverse World (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)
ASB101 Physical Anthropology and Archaeology: Bones, Stones, and Human Evolution (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)
GLG101 Physical Geology (4)
GLG102 Historical Geology (4)
GLG110 Geological Hazards and Disasters (4)
NTR141 Nutrition and Wellness (4)
PHY100 Physical Universe (4)
PHY111 College Physics I (4)
PHY112 College Physics II (4)
PHY121 University Physics I: Mechanics (4)
PHY122 University Physics II: Electricity and Magnetism (4)
PHY223 University Physics III: Thermodynamics, Optics And Waves (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)
MAT212 Brief Calculus, Accelerated (3)
MAT215 Math for Business Analysis (4)
MAT221 Analytical Geometry and Calculus I (4)
MAT231 Analytical Geometry and Calculus II (4)
MAT241 Analytical Geometry and Calculus III (4)
MAT262 Ordinary Differential Equations (3)
MAT275 Modern Differential Equations (4)

Special Awareness Requirements

Courses used in general education areas such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences, or Transfer Electives may also be used to satisfy the three (3) Special Requirements categories. A course may be used to satisfy more than one Special Requirements category.

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Intensive Writing/Critical Inquiry

AGS122 Natural Resources and Conservation (3)
AJS225 Criminology (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)
LIT254 Literature and Film (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)
SOC200 Racial and Ethnic Minorities (3)

Cultural Awareness

AGS235 Principles of Sonoran Horticulture (3)
AJS270 Community Relations (3)
ART207 Art History I (3)
ART208 Art History II (3)
ASB102 Cultural Anthropology (3)
ASB201 Indians of the Southwest (3)
COM100 Fundamentals of Human Communication (3)
COM101 Interpersonal Communication (3)
COM202 Small Group 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)
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)
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)
ART207 Art History I (3)
ART208 Art History II (3)
ASB102 Cultural Anthropology (3)
COM100 Fundamentals of Human Communication (3)
COM202 Small Group 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)
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)
ART207 Art History I (3)
ART208 Art History II (3)
ASB201 Indians of the Southwest (3)
GEO101 Introduction to Cultural/Historical Geography (3)
HIS101 United States History I (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.

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)
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 2020-2021 † See the Code Legend at the end of this grid.

See AGEC-Web for current information: aztransfer.com/generaleducation/			Core Areas					Awareness Areas			
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
ARH200	3	Principles of Archaeology				SB					
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
ASB101	4	Physical Anthropology and Archaeology				SB	BS				
ASB102	3	Cultural Anthropology				SB			CU	GI	
ASB201	3	Indians of the Southwest				SB			CU		HI
AST101	4	Survey of Astronomy					PS				
BIO100	4	Biology Concepts					BS				

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AGEC Course Designations 2020-2021 † See the Code Legend at the end of this grid											
See AGEC-Web for current information: aztransfer.com/generaleducation/			Core Areas					Awareness Areas			
Course #	Credit	Course Title	CM	MA	AH	SB	PBS	IW	CU	GI	HI
BIO109	4	Natural History of the Southwest					BS				
BIO156	4	Introductory Human Biology					BS				
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								
COM259	3	Professional Communication	OR								
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		

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AGEC Course Designations 2020-2021 † See the Code Legend at the end of this grid											
See AGEC-Web for current information: aztransfer.com/generaleducation/			Core Areas					Awareness Areas			
Course #	**Credit**	**Course Title**	**CM**	**MA**	**AH**	**SB**	**PBS**	**IW**	**CU**	**GI**	**HI**
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						
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	HI
HIS104	3	History of Western Civilization II				SB				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			
HNR255	3	Leadership Development			AH						
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			

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AGEC Course Designations 2020-2021 † See Code Legend at the end of this grid											
			Core Areas					Awareness Areas			
Course #	Credit	Course Title	CM	MA	AH	SB	PBS	IW	CU	GI	HI
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
LIT254	3	Literature and Film			AH			IW			
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		
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							
MAT212	3	Brief Calculus, Accelerated		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							
MAT262	3	Ordinary Differential Equations		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	
PHY100	4	Physical Universe					PS				
PHY111	4	College Physics I					PS				
PHY112	4	College Physics II					PS				
PHY121	4	University Physics I: Mechanics					PS				

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AGEC Course Designations 2020-2021 † See Code Legend at the end of this grid											
			Core Areas					Awareness Areas			
Course #	**Credit**	**Course Title**	**CM**	**MA**	**AH**	**SB**	**PBS**	**IW**	**CU**	**GI**	**HI**
PHY122	4	University Physics II: Electricity & Magnetism					PS				
PHY223	4	University Physics III: Thermodynamics, Optics					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		
REC101	3	Recreation, Leisure, and the Quality of Life				SB					
SLG202	4	American Sign Language IV							CU		
SOC101	3	Introduction to Sociology				SB					
SOC200	3	Racial and Ethnic Minorities				SB		IW	CU		
SOC202	3	Contemporary Social Problems				SB					
SOC203	3	Marriage and the Family				SB					
SOC212	3	Gender in Society				SB			CU		
SOC250	3	Family Violence				SB					
SPA201	4	Intermediate Spanish I								GI	
SPA202	4	Intermediate Spanish II								GI	
SWU171	3	Introduction to Social Work				SB					
SWU242	3	Introduction to Child Welfare Service in a Diverse World				SB					
SWU291	3	Social Service Delivery				SB					
SWU295	3	Foundations of Social Work Practice: Effective Helping in a Diverse World				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.

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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 or higher plus 32 credits. The AGEC block transfers to any Arizona public or tribal community college and to the three Arizona public universities. Students who intend to transfer into liberal arts majors should select the AGEC-A.

General Education (35-36)

Subject Area Requirements

An approved AGEC-A, together with the number of courses and number of semester credits, must contain the following Subject Areas. Select only AGEC courses.

Written Communications (6 credits)

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

Oral Communications (3 credits)

Select an AGEC course

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

Arts and Humanities (6-9 credits)

Select 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/college/.

Special Awareness Requirements (0-9 Credits)

Select AGEC courses to fulfill these requirements.

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

Note: Courses used in other areas such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences, or Transfer Electives may also be used to satisfy the three Special Awareness Requirements categories.
A course may 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.

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Arizona General Education Curriculum for Business (AGEC-B Certificate)

(35-36 semester credits)

General Education (35-36)

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.

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/college/.

Special Awareness Requirements (0-9)

Select AGEC courses to fulfill these requirements.

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

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences, or Transfer Electives may also be used to satisfy the three Special Awareness Requirements categories. A course may 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.

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

(35-37 semester credits)

General Education

The Arizona General Education Curriculum focused on the Sciences (AGEC-S) is a 35-37 semester credit block that fulfills the lower division general education requirements of many science programs and other programs that articulate with the Associate of Science Degree. The block transfers to any Arizona public or tribal community college, to the three Arizona public universities, and other higher education institutions. The AGEC-S requires a minimum of Analytical Geometry and Calculus I plus 32 credits from specific AGEC categories, including rigorous science requirements.

Subject Area Requirements

An approved AGEC-S, together with the number of courses and number of semester credits, must contain the following Subject Areas. Select AGEC courses only.

Written Communications (6)

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
PHY121 University Physics I: Mechanics (4) **AND**
PHY122 University Physics II: Electricity & Magnetism (4)

Mathematics (3-4)

MAT221 Analytical Geometry and Calculus I (4) or higher

Subject Options (6-8 credits)

Based on your major, consult the Transfer Guide at aztransfer.com/college and select mathematics courses above the first course in the calculus sequence and/or Science courses from: Agriculture, Astronomy, Biology, Botany, Chemistry, Environmental Science, Geology, Physical Geography, Nutrition, Physics, or Zoology.

Special Awareness Requirements (0-9)

Select AGEC courses to fulfill these requirements.

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.

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2020-2021 ACADEMIC OFFERINGS BY AREAS OF INTEREST

Biological/Physical Sciences & Agriculture

Agriculture AA 80
Agriculture Business certificate 81
Agriculture General certificate 80
Agriculture Business AAS 82
Equine Management and Training certificate 83
Equine Management and Training AAS 83

Pathways are available in Biology AS and Chemistry AS. Please refer to the college's website or an advisor.

Business & Professional Industries

Accounting certificate 84
Accounting AAS 84
Baking and Pastry certificate 87
Business certificate 85
Business AAS 85
Business ABus 86
Culinary Arts I certificate 88
Culinary Arts II certificate 88
Culinary Arts AAS 89
Hotel and Restaurant Management certificate 90
Hotel and Restaurant Management AAS 91
Management certificate 92
Recreation Management certificate 92
Recreation and Tourism Management AA 93
Sports Management AA 94

Communication & English

Communication Skills for the Professional certificate 95
Communication Studies certificate 96

Pathways are available in Communication AA, English (Literature) AA, English Education AA, Spanish AA. Please refer to the college's website or an advisor.

Computer Technology, Engineering, & Math

Computer Business Applications Specialist certificate 96
Computer Business Applications AAS 97
Computer Programming certificate 99
Network Systems Administration certificate 97
Networking Technologies AAS 98
Software Development AAS 99
Web Design certificate 100

Pathways are available in Math Education AA and Statistics AA. Please refer to the college's website or an advisor.

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Education

Early Childhood Education AA 100
Early Childhood Education AAS 101
Early Childhood Education certificate 101
Early Childhood Education Infant Toddler AAS 103
Early Childhood Education Infant Toddler certificate 102
Early Childhood Education Professional Development certificate* 103
Elementary Education AAEE 104

Industrial Technology & Skilled Trades

Advanced Structural Welding and Fabrication certificate 113
Automated Industrial Technology I certificate 105
Automated Industrial Technology II certificate 106
Automated Industrial Technology AAS 106
Commercial Electrician Installer certificate 107
Computer Aided Drafting (CAD) certificate 107
Diesel Technology I certificate 107
Diesel Technology II certificate 108
Diesel Technology AAS 108
Entry Level Welder GMAW/FCAW certificate*(Aravaipa Campus only) 114
Entry Level Welder SMAW certificate* (Aravaipa Campus only) 114
Fundamentals of Pipe Welding certificate 111
Fundamentals of Structural Welding certificate 112
Heavy Equipment Operator Level I certificate 109
Heavy Equipment Operator Level II certificate 109
Heavy Equipment Operator AAS 110
Industrial Carpentry certificate 110
Pipefitting/Pipe Welding certificate 111
Pipefitting/Pipe Welding Technology AAS 112
Structural Welding Technology AAS 113
Sundt Construction Operator's Apprentice certificate 115
Welding Technology AAS (Aravaipa Campus only) 114

Nursing, Health, & Emergency Careers

Basic EMT certificate* 130
Certified Dietary Manager, Certified Food Professional certificate* 127
Clinical Laboratory Assistant certificate 116
Coding and Reimbursement certificate 120
Community Health Worker certificate 116
Community Nutrition Worker certificate 127
Community Public Health AA 117
Critical Care for Paramedics certificate* 131
Diabetes Care and Education certificate* 128

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.

Driver Operator certificate* 118
Fire Officer I certificate 118
Firefighter Operations certificate 119
Fire Science Technology AAS 120
Health Information Technology AAS 121
Massage Therapy certificate 122
Massage Therapy AAS 123
Medical Assistant AAS 124
Medical Assistant certificate 124
Medical Laboratory Technician AAS 125
Nursing AAS 126
Nutrition and Dietetic Technician AAS 129
Nutrition and Foodservice Professional Training Program certificate 128
Nutrition and Health Promotion certificate 129
Paramedicine certificate 131
Paramedicine AAS 131
Pharmacy Technician certificate 133
Radiologic Technology AAS 133
Wildland Firefighter I certificate* 119

A Pathway is available in Nursing Concurrent Enrollment to Northern Arizona University. Please refer to the college's website or an advisor.

Social/Behavioral Sciences & Public Service

Administration of Justice certificate 135
Administration of Justice AA 135
Justice Studies AAS 136

Pathways are available in History AA, Political Science AA, Psychology AA, and Sociology AA. Please refer to the college's website or an advisor.

Visual, Fine, and Performing Arts

Graphic Design certificate 138
Digital and Media Arts AAS 139
Live Audio and Lighting certificate 140
Live Audio and Lighting AAS 140
Fine Arts AA (Art and Music Pathway) 137
Popular Music Performance certificate 141
Popular Music Performance AAS 141
Recording Engineering certificate 142
Recording Engineering AAS 142

*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)

AGB124 Microcomputers in Agriculture (3)
AGS240 Plant Biology (4)
ANS101 Animal Industry (3)

Agriculture Electives (19)

Select from the following courses:

AGB100 Intro to Agriculture Business (3)
AGB121 Fundamental of Agricultural and Environmental Economics (3)
AGB123 Agriculture Accounting (3)
AGB213 Introduction to Agricultural Commodity and Food Marketing (3)
AGB225 Agriculture Business Analysis (3)
AGB234 Agricultural Leadership Development (3)
AGS101 World of Plants (4)
AGS104 Agricultural Environmental Science (4)
AGS106 Entomology (4)
AGS122 Natural Resources and Conservation (3) *IW*
AGS195A Careers in Environmental Science (1)
AGS196 Agriculture Internship (1)
AGS204 Environmental Sustainability (3)
AGS221 Soil Science (4)
AGS235 Principles of Sonoran Horticulture (3)
AGS296 Agriculture Internship (3)
ANS102 Horsemanship I (3)
ANS104 Human/Animal Interrelationship (3)

ANS110 Horse Event Production (3)
ANS111 Horseshoeing I (3)
ANS121 Equine Facilities Management I (3)
ANS122 Equine Facilities Management II (3)
ANS131 Equine Behavior and Training I (3)
ANS195 Careers in Veterinary Science (1)
ANS200 Introduction to Equine Science (3)
ANS202 Horsemanship II (3)
ANS211 Advanced Horseshoeing (3)
ANS213 Animal Genetics (3)
ANS215 Anatomy and Physiology of Domestic Animals (4)
ANS216 Equine Anatomy and Physiology (3)
ANS220 Artificial Insemination (3)
ANS223 Advanced Equine Training (3)
ANS226 Feeds and Feeding (3)
ANS231 Equine Behavior and Training II (3)

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 minimum of 32 semester 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 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.*

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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)
(Also fulfills Core Requirement)
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*.
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender) Recommended: AGS235 Principles of Sonoran Horticulture.
3. At least three semester credits of coursework emphasizing Global/International Awareness or Historical Awareness. Recommended: ANS104 Human and Animal Interrelationships.

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)
AGS240 Plant Biology (4)
(Fulfills one Physical and Biological Sciences requirement)
ANS101 Animal Industry (3)

Electives (15-19)
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 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.

Core Requirements (27-28)
AGB100 Introduction to Agriculture Business (3)
AGB124 Microcomputers in Agriculture (3)
AGB225 Agriculture Business Analysis (3)

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

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

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

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

Select one:
COM100 Fundamentals of Human Communication (3)
COM206 Public Speaking (3)
Or an AGEC COM course (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.

AGRICULTURE BUSINESS AAS

Total Credits: 63

This Degree provides students with specialized agricultural workplace skills for entry and mid-level agribusiness positions.

General Education Requirements (27)

Written Communications (6)

Select two:
ENG101 College Composition I (3)
ENG102 College Composition II (3)
ENG121 Applied Technical Writing (3)

Oral Communications (3)

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

Arts and Humanities (3)

ANS104 Human Animal Relationships (3)
(*recommended)*
Select a course numbered 100 or above from the following ART, HMC, LIT, MHL, PHI, and THE. The students may also select any course from the Art and Humanities AGEC list.

Social and Behavioral Science (3)

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

Physical and Biological Sciences (8)

Select two:
AGS100 World of Plants (4)
AGS106 Entomology (4)
AGS240 Plant Biology (4)
AGS221 Soil Science (4)

Mathematics (3-4)

MAT 118 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)
BUS101 Business Mathematics (3)
ECN201 Principles of Macroeconomics (3)

Elective Requirements (12)

Select four:
ACC100 Fundamentals of Accounting (3)
ACC201 Financial Accounting (3)
ACC202 Managerial Accounting (3)
AGB234 Agriculture Leadership and Development (3)
AGS122 Natural Resources and Conservation (3) *IW*
AGS235 Principles of Sonoran Horticulture (3)
AGS296 Agriculture Internship (3)
ANS101 Animal Industry (3)
ANS104 Human Animal Relationships (3)
ANS110 Horse Event Production (3)
ANS121 Equine Facility Management (3)
ECN202 Principles of Microeconomics (3)

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 63 semester credits.

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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)

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: ASB, 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)
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)

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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

ACCOUNTING CERTIFICATE

Total Credits: 18

The Accounting Certificate prepares individuals for entry-level positions in accounting or bookkeeping.

Recommended Proficiencies

Students should be able to identify and solve basic business problems in operations, finance and accounting, handle business data and human relations.

Core Requirements (18)

ACC121 Income Tax Fundamentals (3)
ACC201 Financial Accounting (3)*
ACC202 Managerial Accounting (3)
ACC226 Accounting with QuickBooks Pro® (3)

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

Select one:
ACC222 Payroll Accounting (3)
ACC227 Accounting with Sage 50 Complete® (3)

**Students may be advised to complete ACC100 prior to completing ACC201.*

Other Requirements

Students must earn:

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

ACCOUNTING AAS

Total Credits: 64

The Accounting AAS Degree is designed for students seeking entry-level accounting positions. Proficiencies include analyzing and interpreting accounting records, legal and regulatory practices, and effective communication skills necessary for success in business environments.

The Accounting AAS Degree is appropriate for students who do not plan to transfer to a university and directly enter the workforce. Students interested in pursuing a baccalaureate degree may consider the Associate of Business Degree.

However, choosing the Accounting AAS Degree and fulfilling the Arizona General Education Curriculum (AGEC) requirements provides a pathway to attend an Arizona public university in the future. Students should consult an academic advisor regarding transfer. Students who wish to receive both the AAS Degree and the AGEC Certificate must complete the required documentation in the Registrar's Office following established timelines.

Recommended Proficiencies

A solid background in reading, math, and analytical skills.

General Education Requirements (19)

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

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Arts and Humanities (3)
Select courses numbered 100 or above from the following areas: 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:
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.

Mathematics (3)
BUS101 Business Mathematics (3)

Core and Elective Requirements (45)
ACC121 Income Tax Fundamentals (3)
ACC201* Financial Accounting (3)
ACC202 Managerial Accounting (3)
ACC222 Payroll Accounting (3)
ACC226 Accounting with QuickBooks Pro® (3)
ACC227 Accounting with Sage 50 Complete® (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 – Excel (3)

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

Select 6 credits of electives from the following areas:
ACC Accounting
BUS Business
CBA Computer Business Applications
CIS Computer Information Systems
ECN Economics

**Students may be advised to complete ACC100 prior to completing ACC201.*

Other Requirements
Students must earn:
- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 64 semester credits.

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)
ACC201 Financial Accounting (3)

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

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

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: 63
The Business AAS Degree prepares students for entry-level positions in business and provides skills necessary for helping them begin their own business.

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Recommended Proficiencies

A solid background in reading, math, and analytical skills.

General Education Requirements (19)

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 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:
BUS190 Principles of Management and Leadership (3)
ECN200 Contemporary Economic Issues (3)
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. Students may also select a course from the Biological and Physical Lab Science AGEC list.

Mathematics (3)

BUS101 Business Mathematics (3)

Core and Elective Requirements (44)

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)

Select (14) credits of electives from the following list:
ACC Accounting
AGB Agriculture Business
BUS Business
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 63 semester credits.

The Associate of Arts Degree requires 60-64 semester 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)

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Oral Communications (3 Credits)
Select an AGEC 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 or higher (4)

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

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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.

Prerequisites

RDG100 College Reading
OR
equivalent reading assessment test score

MAT082 Basic Arithmetic
OR
equivalent math assessment test score

Recommended Proficiencies

Math and English college level placement test scores, or unofficial college transcript.

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 CERTIFICATE I

Total Credits: 16-17

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

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 CERTIFICATE II

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.

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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)

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: 61-66

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 (19-20)

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: ASB, 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:
NTR141 Nutrition and Wellness (4) *(recommended)*
(*May fulfill Core Requirement)*
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 (27)
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 one:
CUL268 Special Dietary Baking and Advanced Techniques (3)
AND CUL elective (1)

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CUL142 Applied Food Science (4)
(fulfills the Physical and Biological Sciences Requirement)

NTR141 Nutrition and Wellness (4)
(fulfills Physical and Biological Sciences Requirement)

If the Physical and Biological Sciences requirement is fulfilled by CUL142 or NTR141, select four (4) additional credits.

Electives (15-19)

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

Baking and Pastry Electives

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)
CUL268 Special Dietary Baking and Advanced Techniques (3)

Business Electives

ACC100 Fundamentals of Accounting (3)
BUS100 Introduction to Business (3)
BUS122 Small Business Management (3)
BUS123 Business Relations (3)
BUS201 Legal Environment of Business (3)
BUS250 Business Entrepreneurship (3)

Culinary Arts Electives

CUL110 Asian Cuisine (1)
CUL112 Italian Cuisine (1)
CUL114 Mexican and Latin American Cuisine (1)
CUL116 French Cuisine (1)
CUL142 Applied Food Science (3)

Hospitality Electives

HRM100 Introduction to Hospitality (3)
HRM101 Facilities Management (3)
HRM102 Management of Guest Services (3)
HRM145 Convention and Meeting Management (3)
HRM252 Managing Hospitality Human Resources (3)

Nutrition and Dietetics Electives

NTR135 Healthy Weight for Adults (1)
NTR191 Nutrition Counseling Skill Development (3)
NTR232A Food and Culture (1)
NTR240 Clinical Nutrition (3)

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.

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)

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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)

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)
PHY100 Physical Universe (4)

Mathematics (3-4)

MAT141 College Mathematics, Standard (4)
or higher

Subject Options (0-6)

Based on your major, review the specific 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

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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.

MANAGEMENT CERTIFICATE

Total Credits: 24-25

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)
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:
BUS190 Principles of Management and Leadership (3) *(recommended)*
BUS292 Fundamental of Logistics – Organizational Management (3)

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

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 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

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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.

RECREATION AND TOURISM MANAGEMENT AA
Total Credits: 62-63

This AA Degree prepares students for professional positions of employment in Parks, Recreation, and Tourism Management program areas. The recreation related professions represent a diverse field focusing on: the role of leisure in youth and adult development; parks/open space to community quality of life; leisure, sports and natural resource tourism to economic and community development; and providing human services in meeting community needs. Students will be ready for program delivery positions in diverse public, nonprofit and private organizations of Parks, Recreation, and Tourism. This program also prepares students for transfer into Parks, Recreation, and Tourism upper level degree programs.

Recommended Proficiencies
College level reading, writing and oral communication skills.

Prerequisite
RDG100 College Reading R

General Education Requirements (35-36)

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

Oral Communications (3)
Select one:
COM263 Intercultural Communication (3)
COM206 Public Speaking (3)

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

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

Social and Behavioral Sciences (6-9)
ECN202 Principles of Microeconomics (3)
REC101 Recreation, Leisure, and the Quality of Life (3)

Physical and Biological Sciences (8)
ENV101 Environmental Science (4) *(rrecommended)*
AND
NTR141 Nutrition and Wellness (4) *(recommended)*
OR
Select any two Physical and Biological Science AGEC courses.

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 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.

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

Core Requirements (27)

CIS120 Survey of Computer Information Systems (3)
HRM100 Introduction to Hospitality (3)
HRM145 Convention and Meeting Management (3)
HRM252 Managing Hospitality Human Resources (3)
PEH101 Personal Health (3)
REC108 Recreation Practicum (3)
REC203 Leisure Delivery Systems (3)
REC250 Leadership in Recreation (3)

Select one:
ACC201 Financial Accounting (3)
BUS190 Principles of Management and Leadership (3)
HRM101 Facilities Management (3)
HRM102 Management of Guest Services (3)
PEH111 Nutrition for Health, Fitness and Sport (3)

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 62 credits.

SPORTS MANAGEMENT AA

Total Credits: 69

Formerly known as Sports Management AAS

The Sports Management Degree prepares individuals to meet the needs of the sports industry. Students completing this degree will be exposed to sport promotion, health and fitness center management, sporting goods management/sales, and the successful operation of numerous types of sport organizations, ranging from various professional teams/leagues, to many national and international amateur sports organizations, federations, conferences, and associations.

The program's Business core focuses on the basics of accounting, computer information systems, marketing, management, the legal environment of business, human relations, and supervisory techniques. The program's Sports/Fitness core focuses on the basics of the history/philosophical foundations of sport/physical education, strength/athletic training, sports nutrition, lifetime fitness/wellness, sports safety training, and physical activity.

Recommended Proficiencies

High School diploma or GED; College-level reading, writing and oral communication skills recommended.

General Education Requirements (35-36)

Written Communications (6)

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

Oral Communications (3)

COM263 Intercultural Communication (3)
This course also satisfies the Special Awareness Requirement for Cultural Awareness (Ethic/Race/Gender)

*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 one:
MHL100 Music Appreciation (3)
MHL207 Survey of Jazz/Popular Music (3)
These courses also satisfy the Special Awareness Requirement for Global/International and Historical Awareness.

AND

PHI105 Introduction to Ethics (3) *IW (recommended)*
This course also satisfies the Special Awareness Requirement for Intensive Writing/Critical Inquiry.

Social and Behavioral Sciences (9)

ECN201 Principles of Macroeconomics (3)
DMA101 Media and Society (3)
PEH101 Personal Health (3)

Physical and Biological Sciences (8)

NTR141 Nutrition and Wellness (4)
BIO160 Introduction to Human Anatomy and Physiology (4)

Mathematics (3-4)

MAT141 College Mathematics, Standard (4) or higher

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 (Fulfilled by the General Education Humanities Requirement)

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2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender) (Fulfilled by the General Education Oral Communication Requirement)
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness (Fulfilled by the General Education Arts Requirement)

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

Core Requirements (34)

Business Core Requirements (15)

ACC201 Financial Accounting (3)
BUS123 Business Relations (3)
BUS190 Principles of Management and Leadership (3)
BUS201 Legal Environment of Business (3)
CIS120 Survey of Computer Information Systems (3)

Sports and Fitness Core Requirements (19)

PED100 History and Philosophical Foundations of Sport and Physical Education (3)
PED102 The Management of Sport (3)
PED101 History of Intercollegiate Athletics (3)
PED105 Women and Sport in the United States (3)
PED112 Introduction to Strength Training (3)
PEH200 Sports Safety Training (3)
Any PAC course (1)

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 69 semester credits.

COMMUNICATION & ENGLISH

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
equivalent writing assessment test score

Core Requirements (15)

COM259 Professional Communication (3)
COM276 Communication Skills for the Professional 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 one elective related to your career of choice.
Suggested electives might include:
DMA120 Graphic Design and Adobe InDesign (3)
DMA122 Introduction to Web Design (3)
CIS120 Survey of Computer Information Systems (3)
CIS210 Cloud Computing (3)
Or any three (3) credit business course

Other Requirements

Students must earn:

- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;

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- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 18 semester credits.

COMMUNICATION STUDIES CERTIFICATE

Total Credits: 16

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 (7)

COM100 Fundamentals of Human Communication (3)
COM275 Communication Studies Capstone (1)
ENG101 College Composition I (3)

Select three:

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)

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, COM 259, 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 16 semester credits.

COMPUTER TECHOLOGY, ENGINEERING & MATH

COMPUTER BUSINESS APPLICATIONS SPECIALIST CERTIFICATE

Total Credits: 24

The Computer Business Applications Specialist Certificate provides the skills in business application software required for entry-level employment in an office environment.

Prerequisite

RDG100 College Reading
OR
equivalent reading assessment test score

Recommended Proficiencies

Keyboarding skills of 35+ wpm
Ten-Key skill of 6000+ kph

Core Requirements (24)

BUS101 Business Mathematics (3)
CBA114A MS Access - Basics (1)
CBA114B MS Access - Intermediate (1)
CBA114C MS Access - Advanced (1)
CBA116A MS PowerPoint – Basic (1)
CBA116B MS PowerPoint – Advanced (1)
CBA117A MS Publisher – Basic (1)
CBA117B MS Publisher – Intermediate (1)
CBA118 MS Outlook (1)
CBA122A MS Word – Module 1 (2)
CBA122B MS Word – Module 2 (2)
CBA133A Spreadsheet Applications in Excel (3)
CIS113 E-Commerce and Social Media (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;

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- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 24 semester credits.

COMPUTER BUSINESS APPLICATIONS AAS

Total Credits: 60

Previously known as Microcomputer Business Applications AAS

The Computer Business Applications AAS Degree is designed to provide the skills needed for those who are interested in becoming part of the support system in almost any office configuration in a wide variety of business areas. Coursework will provide a variety of computer application skills and general business knowledge. The general education courses provide business-related skills. Courses in the program prepare students for the Microsoft examinations for certification as a Microsoft Office Specialist (MOS).

Recommended Proficiencies

Keyboarding skills of 35+ wpm
Ten-Key skill of 6000+ kph
Complete CIS120 in the first semester

General Education Requirements (19)

Written Communications (3)

ENG101 College Composition I (3)

Oral Communications (3)

COM259 Professional Communication (3)

Arts and Humanities (3)

PHI105 Introduction to Ethics (3) *IW*

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

Mathematics (3)

BUS101 Business Mathematics (3)

Core and Elective Requirements (30)

ACC100 Fundamentals of Accounting (3)
BUS123 Business Relations (3)
CBA112A MS Word Basics (1)
CBA112B MS Word Intermediate (1)
CBA112C MS Word Advanced (1)
CBA113A MS Excel Basics (1)
CBA113B MS Excel Intermediate (1)
CBA113C MS Excel Advanced (1)
CBA114A MS Access Basics (1)
CBA114B MS Access Intermediate (1)
CBA114C MS Access Advanced (1)
CBA116A MS PowerPoint Basics (1)
CBA116B MS PowerPoint Advanced (1)
CBA117A MS Publisher Basics (1)
CBA117B MS Publisher Intermediate (1)
CBA118 MS Outlook (1)
CBA119 MS Project (1)
CIS112 Web Design Fundamentals with HTML (3)
CIS113 E-Commerce and Social Media (3)
CIS120 Survey of Computer Information Systems (3)

Electives (11)

Select college-level courses numbered 100 or above to meet the 60-credit degree requirement.

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.

NETWORK SYSTEMS ADMINISTRATION CERTIFICATE

Total Credits: 30

Formerly known as Network Administration with Cyber-Security Fundamentals Certificate

The Network Systems Administration Certificate prepares students for responsibilities in creating a network, configuring a network and incorporating cyber-security fundamentals, which leads to an entry-level position as a network administrator. Successful completion may lead to Microsoft Certified System Administration, Network+ Certification, and CCNA Certification.

Recommended Proficiencies

RDG100 College Reading
OR
equivalent reading assessment test score

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Core Requirements (30)

CIS120 Survey of Computer Information Systems (3)
CIS121 Windows Operating System and Hardware Maintenance (3)
CIS130 Networking Essentials (3)
CIS135 Principles of Telephony and Telecommunications (3)
CIS146 Virtualization Tools (3)
CIS150 Windows Server (3)
CIS152 Windows Network Infrastructure (3)
CIS153 Network Security (3)
CIS213 Linux Server (3)
CIS215 CISCO CCNA Routers (3)

Other Requirements

Students must earn:

- a cumulative grade point average (CGPA) or 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.

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 specializations: 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 specializations 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 (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)

Select one:
Networking Administration Specialization:
BUS101 Business Mathematics (3)

Cyber Security Specialization:
MAT121 Intermediate Algebra, Standard (4) or higher

Core and Elective Requirements (39)

CIS120 Survey of Computer Information Systems (3)
CIS121 Windows Operating System and Hardware Maintenance (3)
CIS123 Introduction to Programming (3)
CIS130 Networking Essentials (3)
CIS150 Windows Server (3)
CIS152 Windows Network Infrastructure (3)
CIS153 Network Security (3)
CIS210 Cloud Computing (3)
CIS213 Linux Server (3)
CIS215 CISCO Routers (3)
CIS253 Advanced Microsoft Server (3)

Networking Administration Specialization:
CIS146 Visualization Tools (3)
CIS176 Python Programming (3)

Cyber Security Specialization:
CIS157 Computer Forensics and Investigation (3)
CIS225 Practical Applications in CyberSecurity (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;

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- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 61 semester credits.

COMPUTER PROGRAMMING CERTIFICATE

Total Credits: 26

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 (26)

CIS112 Web Design Fundamentals with HTML (3)
CIS120 Survey of Computer Information Systems (3)
CIS121 Windows Operating System and Hardware Maintenance (3)
CIS123 Introduction to Programming (3)
CIS162 Computer Programming Languages (3)
CIS178 Database Fundamentals and Programming (3)
CIS181 C# .Net (4)
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 26 semester credits.

SOFTWARE DEVELOPMENT AAS

Total Credits: 61-63

Previously two separate degrees: Computer Programming AAS and Web Development AAS
The Software Development AAS has two specializations: 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 Specialization
BUS101 Business Mathematics (3)
OR
Computer Programming Specialization
MAT151 College Algebra, Standard (4) or higher

Core and Elective Requirements (39-40)

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 (4)
CIS178 Database Fundamentals and Programming (3)
CIS216 Java Programming (4)
CIS218 C++ Programming (4)
CIS233 Web Application Development Using PHP (3)

Web Development Specialization
CIS114 Web Development Tools (3)
CIS170 JavaScript Programming (3)

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CIS232 Advanced Web Development (3)

Computer Programming Specialization
CIS121 Windows Operating System (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.

WEB DESIGN CERTIFICATE

Total Credits: 25

The Web Design Certificate offers students preparation for an entry-level position in Web design and UI (User Interface) design.

Recommended Proficiencies

RDG100 College Reading (3)

Core Requirements (25)

CIS112 Web Design Fundamentals with HTML (3)
CIS113 E-Commerce and Social Media (3)
CIS114 Web Development Tools (3)
CIS120 Survey of Computer Information Systems (3)
CIS123 Introduction to Programming (3)
CIS170 JavaScript Programming (3)
CIS178 Database Fundamentals and Programming (3)
CIS181 C#.Net (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.

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.

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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 Effective Curriculum Design (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

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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: ASB, 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 Effective Curriculum Design for Teachers of Young Children (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)
ECE277 Responsive Curriculum and Environments for Infants and Toddlers (3)
ECE283 Building Family and Community Partnerships (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;

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- 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)
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)
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.

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)
(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)

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

*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. *Corequisite: Enrollment in a Pinal County High School CTE program.*

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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

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

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.

*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 (9)

Select AGEC courses.
LIT291 Children's Literature for Educators (3) *IW*
(Also fulfills AGEC Intensive Writing Requirement)

Social and Behavioral Sciences (6)

HIS101 United States History I (3)
(Also fulfills AGEC Global Awareness Requirement)
OR
POS220 United States and Arizona Constitution (3)
(recommended)
Note: POS220 is required to meet the Arizona State Department of Education United States Constitution and Arizona Government requirements for teaching certification.
AND
PSY101 Introduction to Psychology (3)
(recommended)

Note: PSY101 is a university transferable course recommended for future teachers in understanding the nature of human growth, development, behavior, and cognition.

Biological/Life Lab Sciences (4)

Select one (Consult the CEG):
AGS101 World of Plants (4)
AGS104 Agricultural Environmental Science (4)
AGS106 Entomology (4)
AGS221 Soil Science (4)
AGS240 Plant Biology (4)
BIO100 Biology Concepts (4)
BIO156 Introductory Human Biology (4)
BIO160 Introduction to Human Anatomy/Physiology (4)
BIO181 General Biology I (4)
BIO182 General Biology II (4)

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BIO201 Human Anatomy and Physiology I (4)
BIO202 Human Anatomy and Physiology II (4)
BIO205 Microbiology (4)
NTR141 Nutrition and Wellness (4)

Physical Lab Sciences (4)

Select one:
AST101 Survey of Astronomy (4)
CHM130 Fundamental Chemistry (4)
CHM151 General Chemistry I (4)
CHM152 General Chemistry II (4)
CHM235 General Organic Chemistry I (4)
CHM236 General Organic Chemistry II (4)
ENV101 Environmental Science (4)
GLG101 Physical Geology (4)
GLG102 Historical Geology (4)
GLG110 Geological Hazards and Disasters (4)
PHY100 Physical Universe (4)
PHY111 College Physics I (4)
PHY112 College Physics II (4)
PHY121 University Physics I: Mechanics (4)
PHY122 University Physics II: Electricity and Magnetism (4)

Mathematics (3-4 Credits)

MAT141 College Mathematics, Standard (4)
or higher four credit MAT course

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) *IW*
   (Also fulfills AGEC Arts and Humanities Requirement)
2. Cultural Awareness (Ethnic/Race/Gender) (3)
   EDU230 Cultural Values in Education (3)
   (Also fulfills Core Requirement)
3. Global/International/Historical Awareness (3)
   HIS101 United States History I (3)
   (Also fulfills AGEC Social/Behavioral Sciences Requirement)

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences, Core, Specialty Area or Transfer Electives, may also be used to satisfy the three (3) Special Awareness Requirements categories. A course may be used to satisfy more than one Special Awareness Requirements category.

Core Requirements (24)

EDU221 Introduction to Education (3)
EDU222 Introduction to Special Education (3)
EDU225 Relationships in the Classroom (3)
EDU228 Behavior Management (3)
EDU230 Cultural Values in Education (3)
(Also fulfills AGEC Cultural Awareness Requirement)
EDU240 Structured English Immersion (SEI) (3)
(Fulfills course requirement for SEI Endorsement on Arizona Teacher Certification)
MAT201 Math for Elementary Teachers I (3)
MAT202 Math for Elementary Teachers II (3)

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.

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 NIMS Industrial Safety (1)
AIT105 Maintenance Operations (3)
AIT110 Mechanical Systems (3)
AIT115 Hydraulic Systems (3)

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AIT120 Pneumatic Systems (3)
AIT125 Electrical Systems (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)

AIT130 Maintenance Piping (3)
AIT205 Electronic Control Systems I (3)
AIT210 Electronic Control Systems II (3)
AIT215 Process Control Systems (4)
AIT225 Electrical Systems II (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: 60

The Automated Industrial Technology AAS 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.

Recommended Proficiencies

Fundamental computer skills

General Education Requirements (19)

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: ASB, 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)

MAT106 Technical Math I (3)

Core Requirements (35)

AIT100 NIMS Industrial Safety (1)
AIT105 Maintenance Operations (3)
AIT110 Mechanical Systems (3)
AIT115 Hydraulic Systems (3)
AIT120 Pneumatic Systems (3)
AIT125 Electrical Systems (3)
AIT130 Maintenance Piping (3)
AIT205 Electronic Control Systems I (3)
AIT210 Electronic Control Systems II (3)
AIT215 Process Control Systems (4)
AIT220 Fanuc Operations and Programming (3)
AIT225 Electrical Systems II (3)

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Core Electives (6)

Select two:

AIT230 Robot Vision (3) *(recommended)*
MET232 Solids Modeling - Solidworks (3)
MET240 DeviceNet (3)
MET250 Factory Talk (3)
MET289 Advanced Technology Capstone (3) *(recommended)*
WLD221 Gas Tungsten Arc Welding (3) *(recommended)*

Students must earn:

- a grade of C or better in all required courses;
- a minimum of 3 earned CAC credits numbered a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 60 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.

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.

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 CERTIFICATE I

Total Credits: 17

The Diesel Technology Certificate I prepares students for entry level employment as diesel technician's/mechanic's helper with an array of career opportunities within the industry. A typical graduate will seek entry level employment with an equipment dealer, equipment rental company, or a highway heavy construction company.

The Diesel Technology Certificates I and II are accredited by the Associated Equipment Distributors Foundation (AEDF) located at 600 22nd Street Suite 220 Oak Brook, IL 60523; 630-574-0650; *aedfoundation.org/*

Core Requirements (17)

AGB124 Microcomputers in Agriculture (3)
MAT106 Technical Math (3)

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Select one:
DIE132 Diesel Engines and Fuel Systems (8)
DIE133 Diesel Power Trains (8)

Select one:
DIE116 Introduction to Diesel Technology (3)
DIE118 Computer Systems for Equipment Technicians (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 17 semester credits.

DIESEL TECHNOLOGY CERTIFICATE II

Total Credits: 46

The Diesel Technology Certificate II 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 Certificates I and II are 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 17 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: ASB, 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)

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.

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 (30-31)

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)

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

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- 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: ASB, 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)
PHY100 Physical Universe (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)
WLD Any Welding course (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.

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)

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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.

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.

Core Requirements (18-19)

WLD115 Welding NCCER Core (5)
WLD125 Pipe Welding I (5)
MAT106 Technical Math I (3)

Select one (3):
ART103 Beginning Jewelry and Metalwork (3) *(recommended)*
EIT100 History of Rock n' Roll (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.

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.

Core Requirements (17)

PEH101 Personal Health (3)
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;

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- a minimum of 17 semester credits.

PIPEFITTING/PIPE WELDING TECHNOLOGY AAS

Total Credits: 61-62

The Pipefitting/Pipe Welding AAS prepares students for employment as an 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 piping, and related maintenance and construction industries.

General Education Requirements (19-20)

Written Communications (3)

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

Oral Communications (3)

COM259 Professional Communication (3) *(recommended)*

Arts and Humanities (3)

ART103 Beginning Jewelry and Metalwork (3) *(recommended)*
OR
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)

PEH101 Personal Health (3) *(recommended)*
OR
Select courses 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.

Physical and Biological Sciences (4)

AGS221 Soil Science (4) *(recommended)*
OR
AGS240 Plant Biology (4) *(recommended)*
OR
Select a 4-credit course with lab numbered 100 or above.

Mathematics (3-4)

Select one:
MAT106 Technical Math I (3) *(recommended)*
MAT118 Essential Mathematics (4) 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)

WLD110 Survey of Welding Processes (3)
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)

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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)
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)*
EIT100 History of Rock n' Roll (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: ASB, 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)
MAT118 Essential Mathematics (4) 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

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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.

ENTRY LEVEL WELDER GMAW/FCAW CERTIFICATE (ARAVAIPA CAMPUS ONLY)* Total Credits: 15

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

The Entry Level Welder GMAW/FCAW Certificate prepares students for employment as an entry level welder/fabricator with an array of career opportunities within the industry. Topics include: quality control, thermal cutting processes, flux-cored arc welding with gas, flux-cored arc welding without gas, and using engine driven welding machines with portable semi-automatic wire feeders. Students will gain proficiency through various course activities and projects. A typical graduate seeks employment in mining, steel fabrication, and steel erection industries. After completion of this certificate, students may continue on to the Welding Technology AAS.

Core Requirements (15)

WLD110 Survey of Welding Processes (3)
WLD124 Flux Cored Arc Welding I (3)
WLD222 Gas Metal Arc Welding (3)
WLD224 Flux Cored Arc Welding II (3)
WLD227 Welding Design and Fabrication (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 15 semester credits.

ENTRY LEVEL WELDER SMAW CERTIFICATE (ARAVAIPA CAMPUS ONLY)* Total Credits: 15

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

The Entry Level Welder I SMAW Certificate prepares students for employment as an entry level welder with an array of career opportunities within the industry. Topics include: survey of welding processes, study of the shielded metal arc welding process, thermal cutting processes and use of engine driven welding machines used in the construction industry. Students will gain proficiency in shielded metal arc welding through various training activities and projects. A typical graduate seeks employment in mining, steel fabrication, and steel erection industries. After completion of this certificate, students may continue on to the Welding Technology AAS.

Core Requirements (15)

WLD110 Survey of Welding Processes (3)
WLD120 Thermal Cutting Processes (3)
WLD121 Shielded Metal Arc Welding I (3)
WLD122 Shielded Metal Arc Welding II (3)
WLD225 Shielded Metal Arc Welding III (3)

Other Requirements

Students must earn:

- a cumulative grade point average (CGPA) of at least a 2.0 on a 4.0 scale;
- a minimum of 3 earned CAC credits numbered 100 or above;
- a minimum of 15 semester credits.

WELDING TECHNOLOGY AAS (ARAVAIPA CAMPUS ONLY) Total Credits: 62-63

The Welding Technology AAS Degree prepares students for employment as a welder/fabricator with an array of career opportunities within the industry. Topics include welding processes of shielded metal arc welding, gas tungsten arc welding, gas metal arc welding, pipe welding, welding design and fabrication, blueprint reading for welders and CAD skills. A typical graduate seeks employment in mining, steel fabrication, steel erection, process piping, pipeline and related facilities, aerospace, manufacturing industries and other industries.

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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: ASB, 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:

MAT106 Technical Math I (3)
MAT118 Essential Mathematics (4) or higher

Core and Elective Requirements (43)

DIE116 Introduction to Diesel Technology (3)
WLD120 Thermal Cutting Processes (3)
WLD121 Shielded Metal Arc Welding I (3)
WLD122 Shielded Metal Arc Welding II (3)
WLD124 Flux Cored Arc Welding I (3)
WLD128 Introduction to Structural Drawings and CAD (4)
WLD222 Gas Metal Arc Welding (3)
WLD224 Flux Cored Arc Welding II (3)
WLD225 Shielded Metal Arc Welding III (3)
WLD227 Welding Design and Fabrication (3)
WLD228 Welding Inspection Technology (3)
WLD244 Flux Cored Arc Welding III (3)

Select two courses (6) from the following list:

AGB100 Introduction to Agriculture Business (3)
AGB225 Agriculture Business Analysis (3)
BUS100 Introduction to Business (3)
BUS122 Small Business Management (3)

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 62 semester credits.

SUNDT CONSTRUCTION OPERATOR'S APPRENTICESHIP CERTIFICATE

Total Credits: 29

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

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.

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NURSING, HEALTH & EMERGENCY CAREERS

CLINICAL LABORATORY ASSISTANT CERTIFICATE

Total Credits: 29

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;
MAT082 Basic Arithmetic or equivalent math assessment test score;
RDG100 College Reading or equivalent reading assessment test score

Pre-Program Requirements

Students must apply for admission to the Clinical Laboratory Assistant Certificate (CLA) program with the CLA Preceptor or Health Careers Division Chair before enrollment in the Certificate's Specialty Requirements courses. Certified Phlebotomist or completion of both CLA155 and CLA255 required.

Pre-Program Requirements (7)

HCC111 Healthcare Law and Ethics (2)
HCC112 Therapeutic Communication (2)
HCC116 Medical Terminology (3)

Specialty Requirements (22)

BIO181 General Biology I (4)
BIO205 Microbiology (4)
CIS120 Survey of Computer Information Systems(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 29 semester credits.

COMMUNITY HEALTH WORKER CERTIFICATE

Total Credits: 18

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)

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HCC103 Introduction to Medical Terminology (1)

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 18 semester credits.

COMMUNITY PUBLIC HEALTH AA

Total Credits: 60

Formerly known as Community Public Health AS

The Community Public Health Associate of Arts degree establishes a foundational understanding of health and disease factors with an introduction to community and public health. The degree prepares graduates for transfer to a state university.

Prerequisites

High School Diploma or GED

General Education Requirements (35-36)

Written Communications (6)

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

Oral Communications (3)

Select one Oral Communications AGEC course (3)
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)

Select AGEC courses.
PHI105 Introduction to Ethics (3) *IW*
(recommended)

Social and Behavioral Sciences (6-9)

Select AGEC courses .
PSY101 Introduction to Psychology (3)
(Also fulfills Core Requirement)
SOC101 Introduction to Sociology (3)
(Also fulfills Core Requirement)

Physical and Biological Sciences (8)

CHM151 General Chemistry I (4)
(Also fulfills Core Requirement)
CHM152 General Chemistry II (4)
(Also fulfills Core Requirement)

Mathematics (3-4)

MAT151 College Algebra (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 *http://aztransfer.com/college/*

Special Awareness Requirements (0-9)

Select AGEC courses to fulfill these requirements:

1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry
   (May be fulfilled by PHI105 IW)
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender)
   (May be fulfilled by COM263)
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 Requirements categories. A course may be used to satisfy more than one Special Requirements category.

Core Requirements (24)

BIO181 General Biology (4)
BIO201 Human Anatomy and Physiology I (4)
BIO202 Human Anatomy and Physiology II (4)
CHM151 General Chemistry I (4)
(Also fulfills Physical and Biological Sciences)
CHM152 General Chemistry II (4)
(Also fulfills Physical and Biological Sciences)
CPH178 Personal Health and Community Wellness (3)
CPH200 Community and Public Health (3)
NTR200 Human Nutrition (3)
PSY101 Introduction to Psychology (3)
(Also fulfills Social and Behavioral Sciences)
SOC101 Introduction to Sociology (3)
(Also fulfills Social and Behavioral Sciences)

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Select one:

MAT162 Applied Statistics (3)
PSY230 Introduction to Statistics (3)

Electives (0-1)

Select an approved elective course which transfers as "elective or better" to at least one of the three Arizona public universities to complete the required credits. Students must complete a total of 60 credits to earn the Community Public Health Associate of Arts Degree.

For transfer into the School of Public Health at the University of Arizona, a grade of B or better is required for ENG102.

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 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.

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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 (FSC 140), 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.

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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: ASB, 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 (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.

CODING AND REIMBURSEMENT CERTIFICATE

Total Credits: 34

The Coding and Reimbursement Certificate prepares entry-level medical coders and reimbursement specialists. The competencies covered in this program include revised coding standards, health records, data content, accreditation standards, reimbursement methodologies, privacy, confidentiality, legal and ethical issues.

The certificate prepares students to sit for the Certified Coding Associate (CCA) credentialing exam from AHIMA at the national level as well as the AMBA Certified Medical Reimbursement Specialist (CMRS).

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Pre-Program Requirements

Students must apply for admission to the Coding and Reimbursement Certificate program with the HIM Director. HESI score of 70% or higher required. High School diploma or GED required. Students accepted in to the Coding and Reimbursement Certificate program may then request permission from the director to enroll in courses with an HIM prefix.

Prerequisites

MAT082 Basic Arithmetic or equivalent math assessment test score;
CIS120 Survey of Computer Information Systems (3)

Core Requirements (34)

BIO160 Introduction to Human Anatomy and Physiology (4)
HCC116 Medical Terminology (3)
HCC162 Basic Pharmacology for Health Occupations (3)
HCC173 Pathophysiology (3)
HIM115 Health Information Technology I (2)
HIM121 Legal Aspects of Health Information (3)
HIM131 Introduction to Insurance and Insurance Billing I (3)
HIM138 ICD Coding (3)
HIM158 CPT Coding (3)
HIM161 Introduction to Insurance and Insurance Billing II (3)
HIM175I Practicum Coding and Reimbursement (4)

Elective (Optional)

HIM208 Advanced Coding (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 34 semester credits.

HEALTH INFORMATION TECHNOLOGY AAS

Total Credits: 69-70

The Health Information Technology AAS Degree program prepares students with the knowledge and technical skills necessary for managing and improving the quality of information within the healthcare delivery system. The degree focal points are the American Health Information Management Association (AHIMA) entry-level competencies.

The Health Information Technology Degree is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM); graduates from this program are eligible to sit for the Registered Health Information Technician (RHIT) credentialing exam. Graduates from this program are eligible to sit for the Registered Health Information Technician (RHIT) credentialing exam.

Prerequisites

High School Diploma or GED; MAT082 Basic Arithmetic; RDG100 College Reading

Pre-Program Requirements

Students must apply to the Health Information Director for admission to the Health Information Technology (HIT) Degree program and earn a cumulative score of 70% or above on the HP HESI A2 test. Accepted HIT students may then request written permission from the director to enroll in courses with an HIM prefix. BIO 156 recommended.

General Education Requirements (23-24)

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) *(recommended)*
COM206 Public Speaking (3) (*recommended)*
Or select a COM 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 from the Arts and Humanities AGEC list.

Social and Behavioral Sciences (3)

Select a course numbered 100 or above from the following: ABS, 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)

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Mathematics (3-4)

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

Core and Elective Requirements (46)

CBA113A MS Excel Basic (1)
CBA114A MS Access Basic (1)
CIS120 Survey of Computer Information Systems (3)
HCC116 Medical Terminology (3)
HCC162 Basic Pharmacology for Health Occupations (3)
HCC173 Pathophysiology (3)
HIM115 Health Information Technology I (2)
HIM117 Health Information Technology II (3)
HIM121 Legal Aspects of Health Information (3)
HIM138 ICD Coding (3)
HIM158 CPT Coding (3)
HIM160 Health Data Management (2)
HIM 200 Healthcare Reimbursement (2)
HIM 205 Healthcare Statistics and Research (2)
HIM208 Advanced Coding (3)
HIM210 Supervision and Quality (2)
HIM215 Health Information Systems (3)
HIM275Q Health Information Technology 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 69 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.

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)
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.

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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.

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: ASB, 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;

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- 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 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

High School Diploma or GED;
MAT082 Basic Arithmetic or equivalent math assessment test score
RDG100 College Reading or equivalent reading assessment test score

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)
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 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

High School Diploma or GED;
MAT082 Basic Arithmetic or equivalent math assessment test score
RDG100 College Reading or equivalent reading assessment test score
Attendance at a Medical Assisting program information session within the past year
Successful completion of the HESI Entrance Test (within 2 attempts, 30 days apart; may repeat after one year)
Program Director approval for admission after completion of other prerequisites

Pre-Program Requirements

After successful completion of all the General Education requirements, students must apply for admission to the program with the Medical Assisting Program Director before enrollment in the degree program. High School Diploma or GED; MAT082, RDG100R.

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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 and Elective 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: 64.5-65.5
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.

Prerequisites
High School Diploma or GED;
MAT092 Introductory Algebra
OR
equivalent math assessment test score;

CLA155 Introduction to Phlebotomy
AND
CLA255 Phlebotomy Practicum
OR
Certified Phlebotomist

Corequisite
RDG100 or equivalent reading assessment test score .

Pre-Program Requirements
Up-to-date fingerprint card and current immunization records are required to apply to the program. Student must pay for and pass a background check and urinalysis.

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.

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Social and Behavioral Sciences (3)

Or select a course numbered 100 or above from the following: ASB, 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 and Specialty Requirements (45.5)

Core Requirements

BIO181 General Biology (4)
(Also fulfills Physical and Biological Sciences requirement)
CHM130 Fundamental Chemistry (4)
EMS100 CPR for Professionals (.5)
HCC111 Healthcare Law and Ethics (2)
HCC112 Therapeutic Communication (2)
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 (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 64.5 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:

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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)
NUR121 Introduction to Nursing Transitions (8)
NUR122 Nursing Health Illness Transitions (8)
NUR126 Principles and Application of Drug Dosage Calculations (2)
NUR145 Pathopharmacology (4)
NUR200 Advanced Medical Terminology for Clinical Nurses (1)
NUR221 Nursing Developmental 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.

CERTIFIED DIETARY MANAGER, CERTIFIED FOOD PROTECTION PROFESSIONAL CERTIFICATE*

Total Credits: 7
*This program is not eligible for federal financial aid (Pell Grant and/or direct loans).

The Certified Dietary Manager, Certified Food Protection Professional Certificate in 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 certification exam through the Certifying Board for Dietary Managers.

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 Technician AAS Degree. Students interested in working towards this degree are encouraged to contact the Nutrition and Dietetic Technician advisor at diettechadvisor@centralaz.edu.

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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: 16

Previously known as Dietary Manager Training Program Certificate
The Nutrition & Foodservice Professional (NFP) Training Program Certificate prepares food service workers and/or supervisors for management in health care facilities and various other food service establishments.

The Nutrition & Foodservice Professional Training Program Certificate has been approved by the Association of Nutrition and Foodservice Professionals (ANFP) located at 406 Surrey Woods Drive, S. Charles, IL 60174; 800-323-1908; *anfponline.org*. Upon successful completion, graduates are eligible to take the National Certification exam for the Certified Dietary Manager and the Certified Food Protection Professional credentials (CDM, CFPP).

Recommended Proficiencies
High school diploma or GED.

Core Requirements (16)
NTR104 Nutrition (3)
NTR156 Foundations of Dietary Manager Internship (2)
NTR196 Dietary Manager Internship (4)
NTR223 Food Service Management (3)
NTR240 Clinical Nutrition (3)
NTR255 Medical Terminology, Labs & Food Drug Interaction (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 16 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 2000, 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 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: ASB, 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)
AND
CHM130 Fundamentals of Chemistry (4) or higher

OR
BIO160 Introduction to Human Anatomy/Physiology (4)
AND
CHM138 Chemistry for Allied Health (4) or higher

OR
BIO201 Human Anatomy and Physiology I (4)
AND
BIO202 Human Anatomy and Physiology II (4)
AND
CHM130 Fundamentals of Chemistry (4) or higher

OR
BIO201 Human Anatomy and Physiology I (4)
AND
BIO202 Human Anatomy and Physiology II (4)
AND
CHM138 Chemistry for Allied Health (4) 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)
(ADHS 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)

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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: ASB, 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

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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: 33-34

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
MAT086 Pre-Algebra
RDG100 College Reading R

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.

Core Requirements (21-22)

HCC111 Health Care Law and Ethics (2)
HCC116 Medical Terminology (3)
HCC162 Basic Pharmacology for Health Occupations (3)
HCC173 Pathophysiology (3)
BIO181 General Biology I (4)
BIO201 Human Anatomy and Physiology I (4)

Select one:
COM263 Intercultural Communication (3)
HCC112 Therapeutic Communication (2)

Specialty Requirements (12)

PHT105 Pharmacy Techniques (3)
PHT105LL Pharmacy Techniques Lab (2)
PHT150 Pharmacy Calculations (1)
PHT164 Pharmacy Certification Review (2)
PHT175 Practicum - Pharmacy Technician (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 33 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

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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
- 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: ASB, 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

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.

ADMINISTRATION OF JUSTICE STUDIES AA

Total Credits: 60-61

The Administration of Justice Studies AA Degree prepares students to transfer to an accredited university for a higher level degree or to immediately pursue a career in specific criminal justice occupations. Note: Many occupations require a bachelor's degree. Also note that many justice-related occupations require a background check.

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 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 and Humanities (6)

AJS123 Ethics and the Administration of Justice (3)
Select an AGEC course.

Social and Behavioral Sciences (9)

AJS101 Introduction to Administration of Justice (3)
(Also fulfills Global Awareness or Historical Awareness requirement)
PSY101 Introduction to Psychology (3)
SOC101 Introduction to Sociology (3)

Physical and Biological Sciences (8)

Select Physical and Biological Science 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/college/*.

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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. *(Fulfilled by AJS225 IW).*
2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender). *(Fulfilled by AJS270).*
3. At least three semester credits of coursework in Global/International Awareness or Historical Awareness. *(Fulfilled by AJS101).*

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and Behavioral Sciences or Transfer Electives, may also be used to satisfy the three Special Awareness Requirements categories. A course may 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 (24)

AJS200 Current Issues in Administration of Justice (3)
AJS209 Substantive Criminal Law (3)
AJS225 Criminology (3) *IW*
(Also fulfills Intensive Writing requirement)
AJS230 The Police Function (3)
AJS240 The Corrections Function (3)
AJS260 Procedural Criminal Law (3)
AJS270 Community Relations (3)
(Also fulfills Cultural Awareness requirement)
AND
Select one:
AJS212 Juvenile Justice Procedures (3)
AJS224 Criminal Justice Administration (3)
AJS275 Criminal Investigations (3)

Electives (0-1)

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 (CEG).

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.

JUSTICE STUDIES AAS
Total Credits: 61-63
(CLOSED ENROLLMENT)

Previously two separate degrees: Corrections AAS and the 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 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 Specialization:

Law Enforcement Specialization (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 (39-40)

COTA Certification-minimum 280 hour academy (18)

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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: 60-64

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 Art Specialization or Music Specialization. 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.

For the following two categories, take the required course(s) for each category and select Arts and Humanities or Social and Behavioral AGEC courses to total 15 credits.

Arts and Humanities (6-9)

For Art Specialization
ART100 Art Appreciation (3)
Also select from Arts and Humanities AGEC courses (May be fulfilled by the Specialization Core Requirements)

For Music Specialization
Select one:
MHL100 Music Appreciation (3)
MHL207 Survey of Jazz and Popular Music (3)

AND
THE100 Theater Appreciation (3)
Student may also select from Arts and Humanities AGEC courses

Social and Behavioral Sciences (6-9)

Select Social and Behavioral Sciences AGEC courses

Physical and Biological Sciences (8)

Select Physical and Biological Sciences 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/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

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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.

Art Specialization Core (18)

ART101 Two Dimensional Design (3)
ART102 Three Dimensional Design (3)
ART107 Drawing I (3)
ART109 Color Theory (3)
ART207 Art History I (3)
ART208 Art History II (3)
Fulfillment of the Core Requirements may also fulfill the AGEC-A Arts and Humanities requirements.

Art Specialization Electives (12-13)

Select from the following
ART103 Beginning Jewelry and Metalwork (3)
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)

Music Specialization 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)
MUP 110 must be taken 4 times, fulfilling 4 credit hours
AND
Select one of the following to be taken 2 times for 2 credits
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 Specialization Electives (3)

Select from the following:
MTC100 Music Fundamentals (3)
This is a prerequisite for MTC102, student may test out
MTC101 Aural Fundamentals (.5)
This is a prerequisite for MTC 102, student may test out
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

Many four-year degrees require either a second semester or fourth semester of a second language and students are encouraged to complete this requirement at the community college prior to transfer. CAC offers Spanish and Sign Language. Check your university catalog, Transfer Guides at *aztransfer.com/college/* or meet with an academic advisor. Students may demonstrate proficiency by completion of coursework and/or a proficiency test.

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)

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DMA120 Graphic Design and Adobe InDesign (3)
DMA122 Introduction to Web Design (3)
DMA223 Designing with Type (3)
DMA125 Introduction to Illustrator (3)
DMA220 Advanced Graphic Design (3)
DMA130 Digital Photography I (3)
DMA230 Digital Photography II (3)
DMA205 Portfolio Development (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: ASB, 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 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)

ART101 Two-Dimensional Design (3)
ART102 Three-Dimensional Design (3)
ART107 Drawing I (3)
ART109 Color Theory (3)
DMA101 Media and Society (3)
DMA205 Portfolio Development (3)

Select one Specialization:

Specialization #1 – Graphic Design (21)

DMA115 Digital Imaging (3)
DMA120 Graphic Design and Adobe InDesign (3)
DMA122 Introduction to Web Design (3)
DMA125 Introduction to Illustrator (3)
DMA210 Publications & Packaging Design (3)
DMA220 Advanced Graphic Design (3)
DMA223 Designing with Type (3)

Specialization #2 – Digital Photography and Video Production (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.

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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)
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 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: ASB, 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.

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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: ASB, 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)
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)

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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 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 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: ASB, 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.

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Mathematics (3-4)

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

Core Requirements (442)

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.

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Course Descriptions



Course Delivery

Central Arizona College offers classes in a variety of modalities and formats including on-site, face-to-face, hybrid, online, synchronous videoconferencing, open entry/closed exit and accelerated. While assignments and methods vary, all classes, regardless of modality or format, hold students to the same rigorous, high academic standards. The 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.

Accelerated = Course is compressed into shorter sessions.

Face to Face = Instructors interact with students in the same physical space for 75% or more of the instructional time.

Hybrid =

- Face to Face/Online: Instructors interact with students in the same physical space for less than 75% of the instructional time with the remainder of the instructional time provided through online education.
- Face to Face/Interactive Television: Instructors interact with students in the same physical space for less than 75% of the instructional time with the remainder of the instructional time provided through interactive television education.

Interactive Television = Courses consisting of individuals or groups in more than one location. The instructor and students interact through a two-way broadcast. Each of Central Arizona College's sites have specially equipped distance learning (DL) classrooms that can accommodate this type of broadcast.

Online = Credit-granting education or training courses delivered to remote (off-campus) location(s) via audio, video, or computer technologies, such as the Internet. Includes both synchronous and asynchronous instruction.

Online/Interactive Television = Course content is partially delivered to remote (off-campus) location(s) via audio, video, or computer technologies, such as the Internet, and partially delivered through a two-way broadcast between specially equipped distance learning (DL) classrooms that can accommodate this type of broadcast.

Online/Synch = Courses delivered synchronously to remote (off-campus) location(s) via audio, video, or computer technologies, such as the Internet.

On-site: Courses delivered at a Central Arizona College Campus or Center.

Open Entry/Closed Exit: Course content is made available on a specific date and remains available until a specific end date. Students may work at their own pace within that time frame.

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.

ICON LEGEND: **AGEC:** **Intensive Writing: *IW*** **Reading Required: RDG100:** **SUN Course:**

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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 Developmental

Credit Varies

Courses between 080 and 099 are considered developmental, offering pre-college level learning competencies. They are 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 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" 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. For specific course transferability status consult the Course Equivalency Guide (**CEG**) on the AZTransfer website: aztransmac2.asu.edu/cgi-bin/WebObjects/CEG.

ICON LEGEND: **AGEC:** **Intensive Writing:** ***IW*** **Reading Required: RDG100:** R **SUN Course:**

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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

ACC Accounting 148
AGB Agriculture Business 148
AGS Agriculture Science 148
AIT Automated Industrial Technology 150
AJS Administration of Justice 151
ANS Animal Science 152
ARH Archaeology 153
ART Art 154
ASB Anthropology 155
AST Astronomy 156
BCT Building Construction Technology 156
BIO Biology 157
BUS Business 157
CBA Computer Business Applications 160
CET Civil Technology 162
CHM Chemistry 162
CIS Computer Information Systems 163
CLA Clinical Laboratory Assistant 166
CNA Certified Nursing Assistant 167
COM Communication Studies 168
CPD Counseling/Personal Development 169
CPH Community Public Health 169
CRP Carpentry 170
CUL Culinary Arts 170
DFT Drafting 174
DIE Diesel/Heavy Equipment 174
DMA Digital Media Arts 172
ECE Early Childhood Education 179
ECN Economics 179
EDU Education 179
EGR Engineering 179
EIT Entertainment Industry Technology 180
ELC Electricity 182
ELT Electronics 182
EMS Emergency Medical Services 182
ENG English 185
ENV Environmental Science 186
ESL English as a Second Language 186
FSC Fire Science Technology 186
GED see HSE – General Education Development/ High School Equivalency 190
GEO Geography/Physical Geography 191
GLG Geology 191
HCC Health Careers Center 191
HEO Heavy Equipment Operations 192
HIM Health Information Management 193
HIS History 195
HMC Humanities: Communications 196
HMS Humanities: Social and Behavioral 196
HNR Honors 196
HRM Hospitality Management 197
HSE previously known as GED – General Education Development/High School Equivalency 198
IDS Interdisciplinary Studies 198
IRW Iron Working 198
LIT Literature 198
LMT Licensed Massage Therapy 199
MAT Mathematics 201
MDA Medical Assisting 203
MET Manufacturing Engineering Technology 204
MHL Music History and Literature 207
MLT Medical Lab Technician 206
MTC Music Theory and Composition 208
MUP Music Performance 208
NTR Nutrition/Dietetics 210
NUR Nursing 213
OAS Office Automation Systems 214
PAC Physical Education Activity 214
PED Physical Education 215
PEH Physical Education Health 216
PEV Physical Education Varsity Sports 216
PHI Philosophy 217
PHT Pharmacy Technician 217
PHY Physics 218
POS Political Science 218
PSY Psychology 219
RAD Radiology 220
RDG Reading 221
REC Recreation 222
RET Renewable Energy Technology 222
SCI Science 222
SLG Sign Language 222
SOC Sociology 223
SPA Spanish 223
SWU Social Work Undergraduate 224
THE Theater 224
WGS Women and Gender Studies 224
WLD Welding 224

ICON LEGEND: **AGEC:** **Intensive Writing: *IW*** **Reading Required: RDG100:** **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. Consult an academic advisor as to how this course meets CAC's Computer Competency degree requirement.*

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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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

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described. Includes aspects of plant physiology, photosynthesis, respiration, transpiration, integrated pest 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 NIMS Industrial Safety

1 Credit (1 Lecture)

Application of all safety, health, and environmental requirements associated with all of the NIMS (National Institute for Metalworking Skills) Duty Areas.

AIT105 Maintenance Operations

3 Credits (2 Lectures, 3 Labs)

Overview of the area of maintenance operations of a manufacturing facility. Preparation to sit for the NIMS (National Institute for Metalworking Skills) Duty Area 1: Maintenance Operations Certification Exam. *Prerequisite or corequisite: AIT100.*

AIT110 Mechanical Systems

3 Credits (2 Lectures, 3 Labs)

Overview of the area of basic mechanical systems of a manufacturing facility. Preparation to sit for the NIMS (National Institute for Metalworking Skills) Duty Area 2: Basic Mechanical Systems Certification Exam. *Prerequisite or corequisite: AIT100.*

AIT115 Hydraulic Systems

3 Credits (2 Lectures, 3 Labs)

Overview of the NIMS area of hydraulic systems of a manufacturing facility. Preparation to sit for the NIMS (National Institute for Metalworking Skills) Duty Area 3: Basic Hydraulics Systems Certification Exam. *Prerequisite or corequisite: AIT100.*

AIT120 Pneumatic Systems

3 Credits (2 Lectures, 3 Labs)

Overview of the NIMS area of pneumatic systems of a manufacturing facility. Preparation to sit for the NIMS (National Institute for Metalworking Skills) Duty Area 4: Pneumatic Systems Certification Exam. *Prerequisite or corequisite: AIT100.*

AIT125 Electrical Systems I

3 Credits (2 Lectures, 3 Labs)

Overview of the area of electrical systems of a manufacturing facility. Preparation to sit for the NIMS (National Institute for Metalworking Skills) Duty Area 5: Electric Systems Certification Exam. *Prerequisite or corequisite: AIT100.*

AIT130 Maintenance Piping

3 Credits (2 Lectures, 3 Labs)

Overview of the area of maintenance of piping systems for manufacturing or industrial facilities. Preparation to sit for the NIMS (National Institute for Metalworking Skills) Duty Area 9: Maintenance Piping Certification Exam. *Prerequisite or corequisite: AIT100.*

AIT205 Electronic Control Systems I

3 Credits (2 Lectures, 3 Labs)

Overview of the area of Electronic Control Systems I of a manufacturing or industrial facility. Preparation to sit for the NIMS (National Institute for Metalworking Skills) Duty Area 6: Electronic Control Systems Certification Exam. *Prerequisite or corequisite: AIT125.*

AIT210 Electronic Control Systems II

3 Credits (2 Lectures, 3 Labs)

Continuation of AIT205. Overview of the area of Electronic Control Systems II of a manufacturing or industrial facility. Preparation to sit for the NIMS (National Institute for Metalworking Skills) Duty Area 6: Electronic Control Systems Certification Exam. *Prerequisite: AIT205.*

AIT215 Process Control Systems

4 Credits (3 Lectures, 3 Labs)

Overview of the area of Process Control Systems of a manufacturing or industrial facility. Preparation to sit for the NIMS (National Institute for Metalworking Skills) Duty Area 7: Process Control Systems Certification Exam. *Prerequisite: AIT125*

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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 Electrical Systems II

3 Credits (2 Lectures, 3 Labs)

Continuation of AIT125 Overview of the area of electrical systems of a manufacturing facility. Preparation to sit for the NIMS (National Institute for Metalworking Skills) Duty Area 5: Electrical Systems Certification Exam. *Prerequisite or corequisite: AIT100.*

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 or corequisite: AIT220.*

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 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)

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)

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) 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)

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.*

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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)
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)
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*.

AJS295 Internship
3 Credits (Internship)
Internship in the Criminal Justice field to provide employment experience. *May be taken two times for credit. Prerequisite: AJS101*.

ANIMAL SCIENCE (ANS)

ANS101 Animal Industry
3 Credits (2 Lectures, 3 Labs)
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)
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.*

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.*

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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) 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.

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.*

ARCHAEOLOGY (ARH)

ARH200 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.

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Theories in archaeology, including theories of cultural evolution. *Prerequisite: 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.*

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*
Introductory study of linear perspective, classical shading theory and composition using basic drawing media, including perspective theory, local values of objects, depiction of 3-dimensional space and the basic principles of design. *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.*

ART203 Life Drawing I
Previously known as ART203 Life Drawing
3 Credits (2 Lectures, 3 Labs)
An introduction to drawing the human figure emphasizing form, structure, anatomy, gesture, value, and composition. *May be taken four times for credit. Prerequisite: ART107. Recommended: ART108.*

ART204 Watercolor I
Previously known as ART204 Watercolor Painting
3 Credits (2 Lectures, 3 Labs)
The basic techniques of watercolor emphasizing use of materials, water media techniques, value, color, illusion of space and volume, and composition. *May be taken four times for credit. Prerequisite: ART107. Recommended: ART101 and ART109.*

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ART205 Intermediate Painting
3 Credits (2 Lectures, 3 Labs)
Advanced projects in painting with emphasis on composition and personal stylistic development. *May be taken four times for credit. Prerequisite: ART202.*

ART206 Portrait Drawing
3 Credits (2 Lectures, 3 Labs) R
Drawing the human figure with emphasis on the structure and anatomy of the face. *May be taken up to four times for credit. Prerequisites: ART107, RDG100.*

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.*

ART209 Visual Art, Music and Learning
3 Credits (3 Lectures) R
An introduction to the effects of the arts on learning, student learning styles, visual culture and visual arts, and music theory and culture. *Prerequisite: RDG100. Cross Listed: MHL209.*

ART215 Printmaking
3 Credits (2 Lectures, 3 Labs)
An introduction to two or more methods of producing fine art prints. *May be taken up to four times for credit. Recommended: ART101, ART107.*

ART220 Character Design and Modeling
3 Credits (2 Lectures, 3 Labs)
An introduction to designing, developing, and modeling a character for illustration, artistic, entertainment or game purposes. The course places an emphasis on the figure in two-dimensional and three-dimensional media. *May be taken four times for credit. Prerequisites: ART107 and ART203. Recommended: ART101, ART102, ART109.*

ART221 Sequential Art and Visual Narrative
3 Credits (2 Lectures, 3 Labs)
An introduction to the basic components of sequential art and visual narrative through the use of graphic illustration for artistic, illustration, entertainment, or game purposes. Sequential art is any type of visual storytelling done in a series of panels such as comic books or strips. This course places an emphasis on non-digital two-dimensional mediums. *May be taken up to four times for credit. Prerequisites: ART101, ART107 and ART203. Recommended: ART108, ART207 ART208.*

ANTHROPOLOGY (ASB)

ASB100 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.

ASB101 Physical Anthropology and Archaeology: Bones, Stones and Human Evolution
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.*

ASB102 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.*

ASB201 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.*

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ASB203 Introduction to the Principles of Human Rights
3 Credits (3 Lectures)
Introduction to the principles and concepts of human rights. Various human rights issues are explored within economic, social, and cultural contexts. Students will acquire skills to articulate effective and thoughtful solutions to human rights topics. *Prerequisite: ASB102.*

ASTRONOMY (AST)

AST101 Survey of Astronomy
4 Credits (3 Lectures, 3 Labs) AGEC 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, MAT092.*

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, 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.

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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. CHM130 or one year of high school chemistry is recommended. Field trips may be required at student expense *Prerequisite: RDG100.*

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.*

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 R

Structure and function of micro-organisms and the role they play in the environment and human disease, with emphasis on the medical importance of microbes. Laboratory work includes the handling and identification of micro-organisms. *Prerequisites: RDG100 and (BIO156 or BIO181 or a grade of C or better on the Introductory Biology Assessment).*

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

A review of arithmetical fundamentals, fractions, decimals and percentages as applied in cash and trade discounts, business statements, commissions, depreciation, interest, negotiable instruments and payroll problems. *Prerequisite: MAT082 or higher. Prerequisite or corequisite: RDG100.*

ICON LEGEND: **AGEC:** **Intensive Writing: *IW*** **Reading Required: RDG100: R** **SUN Course:**

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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.

BUS119 Career Exploration and Readiness

1 Credit (1 Lecture)

Development of career and learning goals. Focus is on the common requirements of all jobs, the skills basic to employment success, and the formal and informal learning necessary for career advancement. Topics include learning and the world of work, careers in Logistics, and skill development in context.

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) AGEC 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. *Prerequisites: MAT086 with a C or better, or equivalent mathematics placement score; CIS120* SUN.

BUS125 Contracts and Freight Claims

3 Credits (3 Lectures)

Study of the considerations involved in the drafting and negotiation of freight and logistics contracts, and of loss avoidance and mitigation in transit. Includes legal and regulatory requirements applicable to contracts for product transportation, and logistics functions and considerations for drafting and negotiating contracts with freight carriers, warehouse workers and other logistics service providers. Also includes customer satisfaction, claim preparation, filing procedures, and claim dispute resolution.

BUS144 Logistics Management Systems

3 Credits (2 Lectures, 3 Labs)

A hands-on introduction to available logistics technologies used for scheduling, reporting, resource planning, inventory management, transportation management, and project management. The relationship to productivity, customer service, and security is also covered. *Prerequisite: CIS120* SUN.

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) AGEC 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.*

BUS196 Applied Business Internship

1 Credit (1 Internship)

Designed for students who have successfully completed at least 15 college credits toward a certificate or degree, this job readiness and internship course helps students develop professional job skills and apply those skills to a 45-hour internship. CAC's Student Services Experiential Learning Coordinator will provide assistance in locating internship site. *May be taken three times for credit. Prerequisite: Successfully complete a minimum of 15 college-level credits.*

ICON LEGEND: **AGEC:** AGEC **Intensive Writing:** *IW* **Reading Required: RDG100:** R **SUN Course:** SUN

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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).*

BUS215 Warehouse Management
3 Credits (3 Lectures)
Survey of warehouse function, process, organization, and operations. Includes analysis of warehouse location, operation, and management. Also includes controls and procedures, financial analysis, security, cargo/materials handling, and productivity.

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. *Prerequisite: BUS122.*

BUS250 Introduction to Entrepreneurship
3 Credits (3 Lectures)
Research, develop and write detailed start-up business plans to create a successful business. Note: this course is a combination of BUS250A, BUS250B, BUS250C, and BUS250D.

BUS250A Entrepreneurship - Introduction
.75 Credit (.75 Lecture)
Investigate business ideas, examine traits of successful entrepreneurs, assess business opportunities and feasibility, and evaluate legal structures and management infrastructure.

BUS250B Entrepreneurship – Market Planning
.75 Credit (.75 Lecture)
Conduct research on a chosen product/service in relation to the industry, competition and other market considerations. *Prerequisite: BUS250A.*

BUS250C Entrepreneurship – Financial Planning
.75 Credit (.75 Lecture)
Project the financial situation of a business concept including needed start-up funds, pricing strategies and sources of financing using break-even analysis, basic cash accounting systems and financial ratios. *Prerequisite: BUS250B.*

BUS250D Entrepreneurship – The Business Plan
.75 Credits (.75 Lecture)
Prepare a business plan required to successfully launch a new business venture. *Prerequisite: BUS250C.*

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

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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 Fundamentals of Logistics – Organizational Management

3 Credits (3 Lectures) R

Introduction to the fundamentals of logistics, including procurement, inventory, transportation, warehousing, materials handling, packaging, information management, sustainability and international logistics of supply chain and management. *Prerequisite: RDG100. Offered every fall.*

COMPUTER BUSINESS APPLICATIONS (CBA)

CBA102A Workshop for MS Word

.5 Credit (.5 Lecture)

Introduction to MS Office Word using basic skills needed to create, format and edit business documents. *Satisfactory/ Unsatisfactory grading option is available. Prerequisites: Basic Windows and file management knowledge.*

CBA110A Computers for Beginners

1 Credit (1 Lecture)

Introduction to microcomputers, Microsoft Windows operating system, Microsoft programs and accessories, and Internet Explorer. *Satisfactory/ Unsatisfactory grading option is available.*

CBA110C MS Windows Basic

1 Credit (3 Labs)

Introduction to Microsoft Windows operating system, system programs and file management.

CBA111A Internet

Previously known as CBA111A Internet Explorer

1 Credit (3 Labs)

An introduction to the internet using browsers, searches and emails. *Recommended: Basic Windows and file management knowledge.*

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: 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.*

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CBA116A MS PowerPoint Basic
1 Credit (3 Labs)
Introduction to creating, editing and delivering basic presentations using MS PowerPoint. Recommendations: CBA110C or 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. *Recommendations: CBA110C or 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. Recommendations: CBA110C or 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.*

CBA122A MS Word Module 1
2 Credits (1 Lecture, 3 Labs)
Basic features of Microsoft Word necessary to create business, educational, and personal documents that include tables, citations, graphics, and templates. *Recommended: Basic Windows and file management knowledge.*

CBA122B MS Word Module 2
2 Credits (1 Lecture, 3 Labs)
Advanced features of Microsoft Word for mailings, directories, collaboration, productivity, web publishing, forms, and macros. *Prerequisite: CBA122A.*

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 OR MAT092.*

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.*

CBA134A Database Management in Access
3 Credits (2 Lectures, 3 Labs)
Design and create relational databases. Produce the following database objects: a query, report, and form on the data and publish to the Web. Skills learned will cover the Core Level skills for Microsoft Office Specialist (MOS) Certification: Microsoft Office Access 2013. *Prerequisites: Basic Windows and file management knowledge.*

CBA134B Advanced Database Management in Access
3 Credits (2.75 Lectures, 1 Lab)
Use of advanced features of software to customize a database, do advanced queries and reports, automate tasks and prepare supporting documentation. *Prerequisite: CBA134A.*

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CIVIL TECHNOLOGY (CET)

CET101 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)

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: MAT092, 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 MAT092 OR MAT118 or higher; RDG100.*

CHM151 General Chemistry I

4 Credits (3 Lectures, 2 Labs, 1 Recitation) CHM 1151 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: RDG100; MAT121 or MAT122; CHM130 or CHM138 or one year of high school chemistry with a grade of C or better.*

CHM152 General Chemistry II

4 Credits (3 Lectures, 2 Labs, 1 Recitation) CHM 1152
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.*

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.*

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COMPUTER INFORMATION SYSTEMS (CIS)

CIS110 Fundamentals of Computer Literacy

3 Credit (2 Lectures, 3 Labs) R
Introduction to microcomputer technology, including terminology, software applications, operating systems, tools, basic set up and maintenance. Also includes Internet searches, and evaluation of websites' validity and reliability of information. Use Microsoft (MS) Word, MS Excel, MS Access, and MS PowerPoint to analyze data, solve problems, and present solutions. *Not designed for CIS degree or CIS Certificate seekers. Prerequisite: RDG100. Consult an academic advisor as to how this course meets CAC's Computer Competency degree requirement.*

CIS112 Web Design Fundamentals with HTML

Previously known as CIS112 Web Page Design Fundamentals
3 Credits (2 Lectures, 3 Labs)
Design and build web pages using HTML5 and Cascading Style Sheets. *Prerequisite: CBA110C or CIS110 or CIS120. Recommended: Computer proficiency, file management, and technical terminology.*

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.*

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. Consult an academic advisor as to how this course meets CAC's Computer Competency degree requirement.*

CIS121 Windows Operating System and Hardware Maintenance

Previously known as CIS121 Microcomputer Operating System Fundamentals
3 Credits (2 Lectures, 3 Labs)
Installations, administrations, upgrades, configuration and diagnostics of a currently-supported microcomputer operating system and the hardware equipment used in business organizations. *May lead to Microsoft and A+ Certification. Prerequisite or Corequisite: CIS120.*

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. *May lead to Network+ Certification. Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS120. Offered every spring.*

CIS135 Principles of Telephony and Telecommunications

3 Credits (3 Lectures)
The history of telecommunications and telephony technologies, including the underlying electronics, transmission media, voice, wireless, data communication solution functions and features. This course also covers wide area connectivity, Internet-enabled communications, telephony network

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management, policies and contracts. *Satisfactory/ Unsatisfactory grading option is available. Prerequisite: CIS120. Offered every spring.*

CIS146 Virtualization Tools

Previously known as CIS146 VMWare Development

3 Credit (2 Lecture, 3 Labs)

Introduction to virtualization, including Vsphere, Hyper-V, and Hypervisor. Hands-on experience installing, configuring, maintaining, and securing virtualization solutions. Explore virtualization solutions used in business. *Prerequisite: CIS120*

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. Satisfactory/Unsatisfactory grading option is available. Prerequisites: CIS120, CIS121.*

CIS152 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. Satisfactory/Unsatisfactory grading option is available. Prerequisites: CIS130 and CIS150. Offered every spring.*

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.*

CIS157 Computer Forensics and Investigation

3 Credits (2 Lectures, 3 Labs)

Introduction to the acquisition, authentication, reconstruction, examination, and analysis of data stored on electronic media. Topics include: ethics, rules of evidence, hardware and software tools, various operating systems, forensic lab setup, and the investigational process. *Satisfactory/Unsatisfactory grading option is available. Prerequisites: CIS120, CIS121.*

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.*

CIS172 Fundamentals of Ruby Programming

3 Credits (2 Lectures, 3 Labs)

Fundamentals of the Ruby programming language. Course covers the most important features of Ruby, object-oriented design, regular expressions, operators, arrays, file processing, classes and modules, exception handling, and various toolkits and frameworks. *Satisfactory/Unsatisfactory grading option available. Prerequisite: 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.*

ICON LEGEND: **AGEC:** **Intensive Writing: *IW*** **Reading Required: RDG100: R** **SUN Course:**

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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. *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. There is an emphasis on the command-line BASH shell command interface, and also an introduction to the GUI options with Linux. Students learn about initialization options, how to manage processes and operating system utilities, and administration tasks, including network configurations. *May lead to Linux Certification. Prerequisites: CIS130 and CIS150. Offered every fall.*

CIS215 CISCO CCNA 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 status and dynamic routing with various protocols including RIP, RIPv2, EIGRP and OSPF. *May lead to CISCO CCNA (Cisco Certified Network Associate) Certification. Prerequisites: CIS130 and CIS150. Offered every spring.*

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.*

CIS219 Exchange Server

3 Credits (2 Lectures, 3 Labs)

Using a currently-supported version of Exchange software, students learn how to load and configure an Exchange environment to support a highly-available resilient e-mail environment. Students learn how to administer Exchange, including designing an e-mail solution, configuring connectors, client access and work with recipients and mailboxes. Skill development in security and the use of hub and edge transport servers is included. *May lead to Microsoft Certification. Satisfactory/Unsatisfactory grading option available. Prerequisites: CIS120, CIS150, CIS152. Offered every spring.*

CIS220 Security for Wireless Networks

3 Credits (2 Lectures, 3 Labs)

Identify security risks, plan and design wireless security solutions based on security models (transitional, enterprise, personal) and security policies - acceptable use policy, password management policy, public access network use policy and virtual private network (VPN) policy. Discuss authentication, encryption, passive discovery, active attacks, monitoring and maintenance. *Supports preparation for Certification Wireless Service Providers (CWSP) certification.*

ICON LEGEND: **AGEC:** **Intensive Writing: *IW*** **Reading Required: RDG100:** **SUN Course:**

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Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS153. Offered every spring.

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. *Prerequisites: CIS152 and CIS153. 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.*

CIS253 Advanced Microsoft Server

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. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: CIS152.*

CIS270 Object-Oriented Design and Programming

3 Credits (2 Lectures, 3 Labs)
Fundamentals of object-oriented analysis, design, and development using an object-oriented iterative process for application development. Includes design principles, inheritance, polymorphism, Unified Modeling Language (UML), event-driven programming with graphical user interfaces, applications of design patterns, and use of existing frameworks. *Prerequisite: CIS231.*

CLINICAL LABORATORY ASSISTANT (CLA)

CLA15 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.*

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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 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) 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, MAT082, and RDG100, or appropriate math and reading placement test scores.*

CNA125A Nursing Assistant Advanced Placement

6 Credits (5 Lectures, 3 Labs) 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, MAT082 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

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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 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 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 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. *Prerequisite: ENG101.*

COM207 Introduction to Communication Inquiry

3 Credits (3 Lectures)
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, ENG101. 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. *Prerequisite: 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.*

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COM275 Communication Studies Capstone

1 Credit (1 Recitation)
Complete a final project for Communication Studies certificate. Project must demonstrate synthesis and application of discipline knowledge. *Prerequisite: Completion of 9 credits of COM courses.*

COM276 Communication Skills for the Professional Capstone

3 Credits (3 Recitations)
Complete a final project for Communication Studies A.A. degree. Project must demonstrate synthesis and application of discipline knowledge. *Prerequisite: Completion of COM 259 and 75% of the Communication Skills for the Professional certificate must be completed prior to taking this capstone course.*

COUNSELING/PERSONAL DEVELOPMENT (CPD)

CPD101 Orientation to Student Development

1 Credit (1 Lecture) R
Exploration of campus, college, academic resources for student success, and development of the characteristics and strategies of lifelong learning. Includes an introduction to the learning technologies associated with academic success. *Prerequisite or corequisite: RDG100. Recommended for students in the first-semester of college or transferring from another institution.*

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*.

CPD120 Career Awareness

2 Credits (2 Lectures) R
Designed to assist students in career exploration through an awareness of self and educational planning. Includes topics such as current occupational trends, personal/vocational skills and interests and career planning. *Satisfactory/Unsatisfactory grading option is available. Corequisite: RDG100.*

CPD164 Research Skills in the Digital Age

1 Credit (1 Lecture) R
Research strategies and how to incorporate them into the writing process. Students will learn about the types of information resources, the strategies for effectively using them and how to evaluate information for credibility. The course will also focus on the legal and ethical use of information, including guidelines for citing resources. *Prerequisites: RDG100 and basic computer skills.*

COMMUNITY PUBLIC HEALTH (CPH)

CPH160 Introduction to Community Health Worker

3 Credits (3 Lectures) R
Overview of the various roles, skills and functions of the Community Health Worker. *Prerequisites: RDG100, acceptance into the CHW program or CPH department approval.*

CPH178 Personal Health and Community Wellness

3 Credits (3 Lectures) R
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. *Recommended: Good communication skills, interest in community activities, and personal interest in a healthy living lifestyle. Prerequisites: RDG100, CPH department approval.*

CPH180 Chronic Disease Management

3 Credits (3 Lectures) R
Develop skills and resources necessary to understand chronic conditions and diseases in order to be able to effectively communicate self-management techniques. *Prerequisites: RDG100, acceptance into the CHW program or CPH department approval.*

CPH185 Health Communication

3 Credits (3 Lectures) R
Methods of communication in healthcare are covered. Topics include: health literacy, counseling and motivational interviewing. *Prerequisites: RDG100, acceptance into the CHW program or CPH department approval.*

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CPH196 Community Health Worker Internship
2 Credits (2 Internships, 90 hours) R
Opportunities to apply Community Health Worker competencies in community/public health settings. *Prerequisites: CPH160, CPH178, CPH180, CPH185, MET and CPH department approval. Before beginning the internship, students (at their own expense) must pass a background check, drug screen, and TB skin test. Proof of immunizations will also be required.*

CPH200 Community and Public Health
3 Credits (3 Lectures) R
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. *Prerequisite: RDG100.*

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.*

CUL118 Native American and Southwest Cuisine
1 Credit (1 Lecture)
Discover the unique flavors, ingredients and culinary traditions of Native American and Southwest cuisines and food traditions through this hands-on class. Learn to make some of your favorite appetizers, soups, entrees, salads, breads and desserts.

CUL122 Culinary Culture Seminar
.5 Credit (.5 Recitation)
Renowned Classic and Nouvelle 20th century cuisine creations prepared with historical, aesthetic, artistic and cultural emphasis. Hands-on setup opportunities for students to prepare food and/or practice service skills. *Satisfactory/Unsatisfactory grading option available. May be taken twelve 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, factory farms, artisan and native foods; environmental impact of farming; sustainability on a personal and industry level.

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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: MAT082 or higher. 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 and MAT082.*

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: MAT082 or higher. 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. *Prerequisites: RDG100 and MAT082.*

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 OR HRM250.*

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

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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.*

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.

CUL264 Confectionary Show Pieces

1 Credit (1 Lecture)
Create confectionary showpieces to demonstrate culinary artistry and advanced skills. Learn advanced techniques to prepare popular, edible confectionery decorations/showpieces, such as chocolate, marzipan, nougatine, and simple sugar work. *May be taken three times for credit. Prerequisites: (CUL160 and CUL263) or instructor consent. Recommended: CUL260.*

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.*

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.

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. *Prerequisite or corequisite: RDG100. Consult an academic advisor as to how this course meets CAC's Computer Competency degree requirement. Offered every spring.*

ICON LEGEND: **AGEC:** **Intensive Writing:** *IW* **Reading Required: RDG100:** R **SUN Course:**

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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. *Prerequisite: ART101. 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. 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.*

ICON LEGEND: **AGEC:** **Intensive Writing: IW** **Reading Required: RDG100: R** **SUN Course:**

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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.*

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 3-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.

DIE111 Introduction to Electricity and Electronics

3 Credits (2 Lectures, 3 Labs)

Theory, operation and components of electrical and electronic circuits.

DIE112 Introduction to Mobile Hydraulics

3 Credits (2 Lectures, 3 Labs)

Theory of operation of hydraulic and hydrostatic systems used in heavy equipment and truck applications, emphasizing the use of electrical and hydraulic schematics and service manuals.

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DIE113 Introduction to Power Trains
3 Credits (2 Lectures, 3 Labs)
An introduction to power train systems used in heavy equipment focusing on the theory of operation and application of manual, power shift and hydrostatic transmissions.

DIE114 Introduction to Power Train Repair and Diagnostics
4 Credits (3 Lectures, 3 Labs)
An introduction to diagnosis and repair of heavy equipment manual, power shift and hydrostatic transmission systems. *Prerequisite: DIE113.*

DIE115 Introduction to Diesel Engine Repair and Diagnostics
4 Credits (3 Lectures, 3 Labs)
An introduction to troubleshooting, diagnosing and performing repairs on Diesel engines and engine subsystems. *Prerequisite: DIE110.*

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.

DIE117 Workplace Success Principles, Practices and Strategies
3 Credits (3 Lectures)
An exploration of employer expectations, economic factors related to the success of a business and ethical workplace behavior for employees that leads to productivity, success of the business and long term employment.

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 DIE113 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.*

DIE210 Advanced Diesel Engines and Fuel Systems
5 Credits (4 Lectures, 3 Labs)
An in-depth study of modern diesel engines used in off and on-highway application, emphasizing computer controlled fuel systems and new emission standards. *Prerequisite: DIE115.*

DIE211 Advanced Electrical/Electronic Systems
3 Credits (1 Lecture, 6 Labs)
An application of electrical/electronic principles and theories emphasizing electrical system anomaly diagnostics and repair/replacement of components. *Prerequisite: DIE111.*

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DIE212 Advanced Mobile Hydraulics
3 Credits (1 Lectures, 6 Labs)
Application of the theoretical concepts, diagnostic procedures, service and repair techniques related to hydraulic and hydrostatic systems used in heavy equipment and truck applications, emphasizing the use of hydraulic schematics, test equipment, and service manuals to diagnose and repair. *Prerequisite: DIE112.*

DIE214 Advanced Power Train Repair and Diagnostics
5 Credits (4 Lectures, 3 Labs)
Modern power train systems used in on and off-highway equipment, emphasizing diagnostic and repair procedures applied to computer controlled power shift and hydrostatic transmission systems. *Prerequisite: DIE114.*

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.*

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.

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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.

ECE128A Environments for Infants and Toddlers

1 Credit (1 Lecture)
Practical theories and principles for the arrangement of a safe, healthy environment for infants and toddlers, emphasizing indoor/outdoor environments, material selection and usage based on observation and participation in an infant/toddler care setting. Observations required.

ECE129B Observation Skills in the Infant and Toddler Program

1 Credit (1 Lecture)
Techniques and skills to effectively observe and record characteristics and developmental stages of infants and toddlers, including record keeping procedures, an overview of a variety of caregiving settings and an observation in an infant/toddler program. Observations required.

ECE129C Recordkeeping Skills: Infant and Toddler Programs

1 Credit (1 Lecture)
Recordkeeping procedures for the daily operations of an infant/toddler program are explored, including an overview of caregiving settings and observations.

ECE183 Curriculum and Learning Materials for Infants

1 Credit (1 Lecture)
Practical theories and principles for designing infant curriculum with an emphasis on responsive relationships, developmental stages, applied observation and providing developmentally appropriate, safe learning materials for infant exploration.

ECE184 Curriculum and Learning Materials for Toddlers

1 Credit (1 Lecture)
This course explores practical theories and principles for designing toddler curriculum emphasizing responsive relationships, developmental stages, applied observation and providing developmentally appropriate, safe learning materials for toddler exploration.

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.

ECE226A Cognitive Development of Infants and Toddlers

1 Credit (1 Lecture)
Theories, trends and principles of cognitive growth and development of infants and toddlers, and examination of the developmental stages and norms through observation and participation in an infant/toddler care program.

ECE226C Language Development of Infants and Toddlers

1 Credit (1 Lecture)
Theories, trends and principles of cognitive growth and language development in infants and toddlers and the

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examination of developmental stages and norms through observation and participation in an infant/toddler program.

ECE227B Guidance of Infants and Toddlers

1 Credit (1 Lecture)
Overview of the social and emotional development of infants and toddlers, including positive relationship building and guidance techniques.

ECE227C Enhancing Social Competency of Infants and Toddlers

1 Credit (1 Lecture)
This course explores the social and emotional development of infants/toddlers, including appropriate experiences and environments to enhance development of social competency within a group through observation and participation in an infant/toddler program.

ECE228B Physical Development in Infancy/Toddlerhood

1 Credit (1 Lecture)
Study the physical development of infants/toddlers, including observing and participating in infant/toddler activities and customizing a program to meet specific children's needs. Observations required.

ECE229 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)
Methods to establish age-appropriate learning environments, incorporating indoor, outdoor and community aspects. Design and implement schedules, lesson plans and transitions to meet the needs of young children in a variety of early childhood settings.

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 Effective Curriculum Design for Teachers of Young Children

3 Credits (3 Lectures)
Methods of collecting and organizing resources to provide a play based early childhood curriculum. Planning and implementing a developmentally appropriate curriculum using observation and assessment tools.

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.

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ECE283 Building Family and Community Partnerships

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)

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

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

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)

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)

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)

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)

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.*

EDU230 Cultural Values in Education

3 Credits (3 Lectures)

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)

Full endorsement course in Introduction to Structured English Immersion for teachers and administrators who are working in the K-12 school setting, or for students in the AAEE program. This course meets the Arizona Department of Education SEI endorsement. *Prerequisite: EDU221.*

ENGINEERING (EGR)

EGR090 STEM Learning Success

1 Credit (1 Lecture)

Learning how to learn through effective time and stress management, the application of study skills to basic presentations from various STEM (Science-Technology-

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Engineering-Mathematics) career fields and Learning Theory. Students who are interested in any STEM field should consider this student success course that is designed especially for those goals.

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*.

EGR110 Introduction to Programming in MATLAB
Previously known as EGR110 Intermediate MATLAB Programming
2 Credits (2 Lectures)
Introduces basic topics and concepts of computer programming in MATLAB. *Prerequisite: MAT221*.

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*.

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.*

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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 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.*

ICON LEGEND: **AGEC:** **Intensive Writing: *IW*** **Reading Required: RDG100:** **SUN Course:**

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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.*

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.*

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

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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.*

EMS235 Emergency Cardiac Care

3 Credits (3 Lectures)
Designed to acquaint all levels of emergency care providers with basic electrocardiographic (ECG) rhythm analysis and interpretation and related care in a clinical and pre-hospital setting. *Prerequisite: EMS125 or Program Coordinator consent.*

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)

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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.*

ICON LEGEND: **AGEC:** **Intensive Writing: *IW*** **Reading Required: RDG100:** **SUN Course:**

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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 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)
An introduction to the writing process, emphasizing idea development, organization, and revision in sentences, paragraphs and short essays, as well as development of grammatical and mechanical skills. *Prerequisite or corequisite: Students must be enrolled in RDG091, or have passed RDG091 with a 70% or above, or have the appropriate reading placement score.*

ENG091 Reading and Writing Essentials

5 Credits (5 Lectures)
This reading and English course will teach the essentials for reading and writing in order to prepare students to be successful in their program of study. *Prerequisites: Students must either have passed RDG 090 or have tested into RDG 091 and ENG 090 on the COMPASS Placement Tests.*

ENG097 Reading and Writing Essentials

5 Credits (5 Lectures)
Essentials for reading and writing in order to prepare students to be successful in their program of study. This course satisfies RDG091 and ENG090. *Prerequisite: Appropriate placement scores.*

ENG100 Introduction to Composition II

Previously known as ENG100 English Composition II
3 Credits (3 Lectures)
An introduction to academic writing with an emphasis on generating ideas, expressing those ideas in essay form and using one's writings to organize content, identify punctuation, grammar and spelling errors and to create effective strategies for their correction. *Prerequisite: ENG090 or ENG097or appropriate placement score.*

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*.

ICON LEGEND: **AGEC:** **Intensive Writing:** *IW* **Reading Required: RDG100:** R **SUN Course:**

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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 and 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) IW
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. Prerequisites: RDG100, ENG101. Corequisite: ENG102.*

ENG210 Introduction to Fiction Writing
3 Credit (3 Lectures)
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) 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.*

ENGLISH AS A SECOND LANGUAGE (ESL)

ESL089 ESL Multi-level Studies
3 Credits (3 Lectures)
English language listening, speaking, reading and writing skill development, levels of Beginning Literacy - ELAA V. Learners are assessed upon entry to determine English skill levels and placed in the appropriate learning level. The course content varies according to skills that align to the six levels and standards of the Arizona Department of Education Adult Education Standards for English Language Acquisition for Adults (ELAA). Learners progress at their own pace and may repeat the course to continue in the next level as they progress toward completion of all six ELAA levels. *May be taken more than four times for credit. Satisfactory/Unsatisfactory grading option only. Prerequisite: Pretest to determine existing skill level.*

ESL089R ESL Multi-level Studies, Emphasis on Reading
4 Credits (4 Lectures)
English language listening, speaking, reading and writing skill development, levels of Beginning Literacy - ELAA V. This four credit course provides additional face to face hours (in comparison to the three credit ESL course) for additional emphasis on targeted reading instruction. Learners are assessed upon entry to determine English skill levels and placed in the appropriate learning level. The course content varies according to skills that align to the six levels and standards of the Arizona Department of Education Adult Education Standards for English Language Acquisition for Adults (ELAA). Learners progress at their own pace and may repeat the course to continue in the next level as they progress toward completion of all six ELAA levels. *May be taken more than four times for credit. Satisfactory/Unsatisfactory grading option only. Prerequisite: Pretest to determine existing skill level.*

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

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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.*

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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

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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.*

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

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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.*

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.*

GENERAL EDUCATION DEVELOPMENT (HSE)

HSE089 High School Equivalency Multi-level Studies

Previously known as GED089 GED Multi-level Studies

3 Credits (3 Lectures)

Development of English Language Arts, Mathematical Reasoning, Science, Social Studies, and other academic knowledge and skills, including college and career readiness. Students are assessed upon entry to determine readiness for passing the high school equivalency test. The course content varies according to the skills learners need for test and college and career preparation. Levels and standards align with Arizona Department of Education Adult Education College and Career Ready Standards. *May be taken more than four times*

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for credit. Satisfactory/Unsatisfactory grading option only. Prerequisite: Pretest to determine existing skill level.

HSE089R High School Equivalency Multi-level Studies with Reading

4 Credits (4 Lectures)
Development of English Language Arts, Mathematical Reasoning, Science, Social Studies, and other academic knowledge and skills, including college and career readiness. This four credit course provides additional face to face hours (in comparison to the three credit HSE course) for additional emphasis on targeted reading instruction. Students are assessed the first class to determine readiness for passing the high school equivalency test. The course content varies according to the skills learners need for test and college and career preparation. Levels and standards align with Arizona Department of Education Adult Education College and Career Ready Standards. *May be taken more than four times for credit. Satisfactory/Unsatisfactory grading option only. Prerequisite: Pretest to determine existing skill level.*

HSE092 HSE Math

3 Credits (3 Lectures)
Instruction in algebra and geometry, to include algebraic expressions, equations, squares, cubes, exponents, factoring, graphing, slope, and other skills that will assist students in preparation for the GED Mathematical Reasoning test. This math review is a perfect refresher for students preparing for the GED Math test or for those who have failed the GED Mathematical Reasoning test. *Satisfactory/ Unsatisfactory grading option available. May be taken five or more times for credit. Prerequisite: Appropriate math placement test score AND a completed TABE survey in math with placement at ABE III or above; OR a documented failing score on the GED Mathematical Reasoning test.*

GEOGRAPHY (GEO)

GEO101 Introduction to Cultural and Historical Geography

3 Credits (3 Lectures) AGEC 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) AGEC 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) SUN *GLG 1101* AGEC 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) AGEC 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) AGEC 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.*

ICON LEGEND: **AGEC:** **Intensive Writing: IW** **Reading Required: RDG100: R** **SUN Course:**

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HCC111 Healthcare Law and Ethics

2 Credits (2 Lectures) R

Introduction to the foundations of law and ethics in healthcare, legal issues for healthcare practitioners, and professional, social and interpersonal healthcare issues. *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.*

HCC113 Math and Dosage Calculations for Health Occupations

1 Credit (1 Lecture) R

Mathematical concepts and medical dosage calculation skills required in a variety of health occupations. Basic math skills and comprehensive coverage of three methods of dosage calculations including proportion, formula, and dimensional analysis are examined, emphasizing accuracy and medication error prevention necessary for critical dosage calculations. *Prerequisites: MAT082 and 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.*

HCC162 Basic Pharmacology for Health Occupations

Previously known as HPM162 Basic Pharmacology for Health Occupations

3 Credits (3 Lectures) 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) 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) 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)

HEO10 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

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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. *Prerequisites: HEO121 and 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 Technology 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.*

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HIM117 Health Information Technology 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: HIM115. Offered every spring.*

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 and spring.*

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: RDG100. Prerequisite or corequisite: HCC116. Offered every fall.*

HIM158 CPT Coding

3 Credits (3 Lectures)

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 spring.*

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.*

HIM161 Introduction to Insurance and Insurance Billing II

3 Credits (3 Lectures) R

Real world scenarios for student application of knowledge and skills building in data content, insurance systems, billing processes, clinical vocabularies, ethical and legal issues, and computer applications. *Prerequisite: RDG100. Offered every spring.*

HIM175I Coding and Reimbursement Practicum

4 Credits (4 Practica – 180 hours)

Practical experience of 180 hours, under supervision of an instructor, applying medical coding principles and procedures to health records. In addition, students will apply reimbursement concepts to reinforce the revenue cycle process. *Prerequisite: Completion of all certificate required courses and program director's written consent. Offered every summer.*

HIM200 Healthcare Reimbursement

2 Credits (2 Lectures)

Principles of 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. *Prerequisite: 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 or BUS101, HIM160. Offered every fall.*

HIM208 Advanced Coding

3 Credits (3 Lectures)

Continued study in advanced coding concepts utilizing all coding methodologies. Emphasis is placed on following inpatient coding guidelines for diagnostic and procedural

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coding. *Prerequisites: HIM138 and HIM158. Offered every fall.*

HIM210 Supervision and Quality
2 Credits (2 Lectures)
Comprehensive introduction to the theory, practice, and management of performance and quality improvement processes in healthcare organizations. *Prerequisite: HIM205. Offered every spring.*

HIM215 Health Information Systems
3 Credits (3 Lectures)
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. *Prerequisites: CBA113A and HIM160. Corequisite: CBA114A. Offered every spring.*

HIM275Q Health Information Technology Practicum
4 Credits (4 Practica – 180 Hours)
Through professional practice, students will apply knowledge and skills obtained in the Health Information Technology program with a healthcare organization affiliate and through professional development experiences; requires a minimum of 180 hours. *Prerequisites: HIM215, (all program requirements completed prior to enrollment in HIM275Q) and HIM Director written consent. Offered every summer.*

HISTORY (HIS)

HIS101 United States History I
3 Credits (3 Lectures) HIS 1131
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)
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)
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)
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)
Survey of Arizona history from prehistoric and modern day Native American experience, Spanish Colonial exploration 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
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)
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)
An examination of the characteristics and development of civilizations, religions, and philosophies of the Middle East,

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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)

HMC201 International Travel Experience

3 Credits (3 Internships)

CAC students selected to receive a CAC International Studies Scholarship earn credit for international exchanges. During their stay at a foreign university, students tailor their foreign study to their particular major and design a course of study that focuses on a specific aspect of their major which supports firsthand observation. The independent study specific requirements will be negotiated between the student and the instructor. *Prerequisite: ENG100. Only students selected to receive a CAC International Studies scholarship to study at a foreign college or university for one semester may enroll.*

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 and ENG100. Recommended: 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. 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.*

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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, 3 Recitations) AGEC 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, 3 Recitations) AGEC 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*.

HNR255 Leadership Development

3 Credits (3 Lectures) AGEC R
A theoretical and applied study of leadership within the context of service. Approaches the study of the humanities as they relate to leadership theory, ethics and management. *Prerequisite: RDG100. Offered every spring.*

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.*

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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.*

HIGH SCHOOL EQUIVALENCY (HSE)

HSE089 High School Equivalency Multi-level Studies

Previously known as GED089 GED Multi-level Studies

3 Credits (3 Lectures)

Development of English Language Arts, Mathematical Reasoning, Science, Social Studies, and other academic knowledge and skills, including college and career readiness. Students are assessed upon entry to determine readiness for passing the high school equivalency test. The course content varies according to the skills learners need for test and college and career preparation. Levels and standards align with Arizona Department of Education Adult Education College and Career Ready Standards. *May be taken more than four times for credit. Satisfactory/Unsatisfactory grading option only. Prerequisite: Pretest to determine existing skill level.*

HSE089R High School Equivalency Multi-level Studies with Reading

4 Credits (4 Lectures)

Development of English Language Arts, Mathematical Reasoning, Science, Social Studies, and other academic knowledge and skills, including college and career readiness. This four credit course provides additional face to face hours (in comparison to the three credit HSE course) for additional emphasis on targeted reading instruction. Students are assessed the first class to determine readiness for passing the high school equivalency test. The course content varies according to the skills learners need for test and college and career preparation. Levels and standards align with Arizona Department of Education Adult Education College and Career Ready Standards. *May be taken more than four times for credit. Satisfactory/Unsatisfactory grading option only. Prerequisite: Pretest to determine existing skill level.*

HSE092 HSE Math

3 Credits (3 Lectures)

Instruction in algebra and geometry, to include algebraic expressions, equations, squares, cubes, exponents, factoring, graphing, slope, and other skills that will assist students in preparation for the GED Mathematical Reasoning test. This math review is a perfect refresher for students preparing for the GED Math test or for those who have failed the GED Mathematical Reasoning test. *Satisfactory/ Unsatisfactory grading option available. May be taken five or more times for credit. Prerequisite: Appropriate math placement test score AND a completed TABE survey in math with placement at ABE III or above; OR a documented failing score on the GED Mathematical Reasoning test.*

INTERDISCIPLINARY STUDIES (IDS)

IDS100 Service Learning I

3 Credits (2 Lectures, 1 Internship)

Participation in service to the community that incorporates academic skills and knowledge to produce meaningful, real-world results. *May be taken two times for credit. Prerequisite: ENG101*.

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) R

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) *IW*

Survey of a diverse range of American literary works from the American Colonial Period through the Civil War, emphasizing

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literary history, criticism, and socio-cultural and historical contexts. *Prerequisite or corequisite: ENG102*.

LIT202 American Literature II
3 Credits (3 Lectures) *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) *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) *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) *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) *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) *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 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.*

LIT254 Literature and Film
3 Credits (3 Lectures) *IW*
Examine the mediums of literature and film through the study of select literary works and films associated with a selected genre (may include adaptations of literature into film). Focus is on understanding motifs, symbols, metaphors, allusions, plot, theme, and other literary elements as they relate to both literature and film. *Prerequisite or corequisite: ENG102.*

LIT256 Science Fiction Literature and Film
3 Credits (3 Lectures) *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.*

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

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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.*

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.*

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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)

MAT082 Basic Arithmetic
3 Credits (3 Lectures)
Development of arithmetic skills, including operations with whole numbers, fractions, decimals, ratio and percent, estimation, and solving applied problems; introduction to the metric system. Calculators will be required for selected topics. *This is a developmental education course which may impact financial aid eligibility. Students are advised to contact Financial Aid for more information.*

MAT086 Pre-Algebra
3 Credits (3 Lectures)
A review of the fundamental concepts of algebra. This course provides a strong base for success in future algebra courses. *Prerequisite: MAT082. Recommended: RDG091.*

MAT087 Foundations I
6 Credits (6 Lectures)
Review of fundamental mathematical skills as a foundation for other mathematics courses. *Credit is allowed for only MAT086 or MAT087. Recommended: RDG091.*

MAT092 Introductory Algebra
3 Credits (3 Lectures)
A review of the basic skills of arithmetic and algebra, with the emphasis on developing sound algebraic and problem solving skills. *Prerequisite: MAT086 or MAT087. Recommended: RDG091.*

MAT097 Foundations II
6 Credits (6 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. *Prerequisite: MAT086 or higher or appropriate placement score. Recommended: RDG091.*

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MAT106 Technical Math I

3 Credits (2 Lectures, 3 Labs)

Review of basic operations of whole numbers, fractions, decimals, percentage, and their application to the construction trade. Incorporates the use of tools to measure length and weight. Various mathematical conversions are studied along with practical applications. A study of basic geometry including perimeter, area, volume, and geometric constructions. Closed entry. *Prerequisite: Instructor consent.*

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. *Prerequisites: (MAT086 or 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. *Prerequisite: MAT092. Recommended: RDG091.*

MAT122 Intermediate Algebra, Accelerated

3 Credits (3 Lectures)

Operations/properties of real numbers, exponents and complex numbers; factoring, solution/application of linear and quadratic equations; operations on rational and radical expressions. *Prerequisite: MAT092. Recommended: RDG091.*

MAT141 College Mathematics, Standard

4 Credits (4 Lectures) MAT 1142 R

General mathematics including personal finance, set theory, exponential growth and decay, probability and statistics. *Prerequisite: MAT087 or MAT118 or higher. 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. *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. *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. *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. *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. *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

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prospective elementary education teachers. *Prerequisite: MAT141 or MAT151.*

MAT211 Brief Calculus, Standard
4 Credits (4 Lectures)
Foundations of differential and integral calculus, including applications to business and economics. *Not open to students with credit in MAT221 or MAT231. Prerequisite: MAT151.*

MAT212 Brief Calculus, Accelerated
3 Credits (3 Lectures) MAT 2212
Foundations of differential and integral calculus including applications to business and economics. *Not open to students with credit in MAT221 or MAT231. Prerequisite: MAT151.*

MAT215 Math for Business Analysis
4 Credits (4 Lectures)
A study of mathematics focused on solving business-related problems by applying the concepts of linear programming, optimization, statistics, probability and multivariable calculus. *Prerequisite: MAT211 or MAT212.*

MAT221 Analytical Geometry and Calculus I
4 Credits (4 Lectures) MAT 2220
An introduction to analytic geometry, limits, continuity, differential and integral calculus of single variable functions and related applications. *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. *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. *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. *Prerequisite: MAT231.*

MAT262 Ordinary Differential Equations
3 Credits (3 Lectures) MAT 2262
An introduction to first and higher order ordinary differential equations with applications. *Prerequisite: MAT231. Offered every spring.*

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. *Students may not receive credit for both MAT262 and MAT275. 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,

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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.

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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 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.*

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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.

MEDICAL LAB 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.*

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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 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 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.*

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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.*

MHL209 Visual Art, Music and Learning
3 Credits (3 Lectures) R
An introduction to the effects of the arts on learning, student learning styles, visual culture and visual arts, and music theory and culture. *Prerequisite: RDG100. Cross Listed: ART209.*

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.*

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

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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 and/or MUP112.*

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 credit. Prerequisite: Instructor consent. Recommended: MUP107 and/or MUP112.*

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.*

MUP112 Jazz Ensemble

1 Credit (3 Labs)
A performing organization open to Central Arizona College students. The jazz styles of swing, rock and Latin are studied and performed. An emphasis is placed on learning and developing improvisational skills. Experience is gained by performing for the college, schools and community. *May be taken four times for credit. Prerequisite: Instructor consent.*

MUP113 The ChromAtiCs (Jazz Choir)

1 Credit (3 Labs)
A beginning to intermediate vocal jazz ensemble, the ChromAtiCs is a major performance ensemble that performs vocal jazz literature for CAC and community organizations. No audition is required. The concerts are varied and represent a broad perspective of the American vocal jazz genre. Singers may represent the college as performers in public functions throughout Arizona and at vocal jazz festivals throughout the United States. *May be taken five or more times for credit.*

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Recommendation: Previous singing experience helpful, but not required.

MUP117 Desert Dissonance (Jazz Choir)
Previously known as MUP117 Jazz Choir
2 Credits (6 Labs)
Jazz Choir, a major performance ensemble, is an auditioned group of musicians who perform vocal jazz literature for CAC and community organizations. The concerts are varied and represent a broad perspective of the American vocal jazz genre. Singers represent the college as performers in public functions throughout Arizona and at vocal jazz festivals throughout the United States, in addition to an annual spring recruitment tour. *May be taken four times for credit.*

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)

NTR100 Contemporary Issues
1 Credit (1 Lecture)
The identification and application of current nutrition information, trends and its impact on food, health and wellness. Topics will vary and may include technology, accreditation, and informatics among others. *May be taken four times for credit.*

NTR104 Nutrition
3 Credits (3 Lectures) R
An introductory study of the optimal diet for health and fitness, principles of basic nutrition, and nutritional needs. *Prerequisite or corequisite: RDG100.*

NTR104L Personal Wellness Lab
1 Credit (3 Labs)
A scientific investigation into one's own personal health and wellness status.

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.

NTR129 Introduction to Healthcare for Nutrition Professionals
1 Credit (1 Lecture) R
Fundamentals common to all healthcare occupations with an emphasis on nutrition. *Prerequisite or corequisite: RDG100. Corequisite: NTR163.*

NTR130 Type 2 Diabetes: A Quick Start Guide
Previously known as NTR130 Diabetes Overview
1 Credit (1 Lecture)
An introduction to diabetes, risk factors for developing diabetes, detection methods and management techniques.

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.

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NTR135 Healthy Weight for Adults
1 Credit (1 Lecture)
An overview of the behavior management and treatment strategies that can help adults achieve and maintain a healthy weight as a means to reduce the incidence of chronic health conditions, including diabetes, heart disease, and others.

NTR136 Management of Gestational Diabetes
1 Credit (1 Lecture)
An overview of gestational diabetes, management techniques, potential complications, and nutritional management, and strategies for monitoring.

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) 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) R
Applied scientific principles of food preparation and production. Students must purchase ingredients for assignments. *Prerequisite or corequisite: RDG100.*

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.

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. *Satisfactory/Unsatisfactory grading option only. A grade of S is required to proceed to NTR296, Dietetic Technician Internship. Prerequisites: Complete all Dietetic Technician AAS Degree general education requirements and Program Director or instructor consent.*

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. Corequisite: NTR129.*

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.*

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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. *Prerequisites: NTR200 or NTR104.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.*

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.*

NTR257 Food Allergies and Intolerances
1 Credit (1 Lecture)
An intense study of food allergies and intolerance, etiology, mechanisms, symptoms and management. *Recommended: Prior knowledge of metabolic nutrition and chemistry.*

NTR258 Gastrointestinal Nutrition
1 Credit (1 Lecture)
An intense study of gastrointestinal nutrition, etiology, mechanisms, symptoms and management. *Recommended: Prior knowledge of metabolic nutrition and chemistry.*

NTR259 Popular Dietary Supplements
1 Credit (1 Lecture)
A survey of dietary supplements, safety, efficacy and research. *Recommended: Prior knowledge of metabolic nutrition and chemistry.*

NTR272 Breastfeeding Counselor
Previously known as NTR272 Certified Breastfeeding Counselor
3 Credits (3 Lectures)
Provides the necessary skills to educate and support the breastfeeding mother with greater details about breastfeeding issues and special challenges/situations.

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.*

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.*

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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.*

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.*

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.*

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.*

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.*

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.*

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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.*

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.*

PAC127 Theory and Practice of Volleyball I
2 Credits (6 Labs)
Fundamentals of volleyball including techniques of team play, rules, theory, conditioning and mechanics of volleyball. May be taken four times for credit. *May be taken two times for credit.*

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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.*

PAC227 Theory and Practice of Volleyball II
1 Credit (3 Labs)
Advanced techniques of volleyball, including techniques of team play, rules, conditioning and mechanics of volleyball. May be taken two times for credit. *Prerequisite: PAC127 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.

PED101 History of Intercollegiate Athletics
3 Credits (3 Lectures) R
Examination of the origins and development of intercollegiate athletics and the relationship with the academic institutions that house these programs. Emphasis on amateurism, academics, finance and commercialism from the 1920's to the present. *Prerequisite or corequisite: RDG100.*

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.

PED104 Anatomical Kinesiology
3 Credits (3 Lectures) R
Muscles, bones, joints and nerves and how they produce movement. Applying kinesiology to improve and maintain the muscular strength, endurance, flexibility and overall health of individuals. *Prerequisite: RDG100.*

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.*

ICON LEGEND: **AGEC:** **Intensive Writing: IW** **Reading Required: RDG100: R** **SUN Course:**

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PED112 Introduction to Strength Training
3 Credits (3 Lectures)
A comprehensive guide to the design and implementation of strength and conditioning programs.

PED114 Introduction to Coaching
3 Credits (3 Lectures)
An introduction to philosophies of coaching youth, high school and collegiate athletics, emphasizing both competitive and recreational settings.

PED115 Coaching Methods I
3 Credits (2 Lectures, 3 Labs)
An overview of coaching methods, emphasizing both competitive and recreational settings and practical applications of concepts. *Prerequisite: PED114.*

PED215 Coaching Methods II
3 Credits (1 Lecture, 6 Labs)
In-depth examination of coaching, emphasizing methods and concepts in both competitive and recreational settings. *Satisfactory/Unsatisfactory grading option is available. Prerequisite: PED115.*

PHYSICAL EDUCATION 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,

PEH200 Sports Safety Training
3 Credits (3 Lectures) R
Sports Safety Training, CPR and AED for the Professional Rescuer including soft tissue and skeletal injury prevention, first aid, and emergency steps for breathing and cardiac care. *May be taken four times for credit. Corequisite: RDG100.*

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.*

ICON LEGEND: **AGEC:** **Intensive Writing: IW** **Reading Required: RDG100:** R **SUN Course:**

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PEV207 Varsity Volleyball I
1 Credit (3 Labs)
Hone volleyball skills, knowledge and strategies. *May be taken two times for credit. Prerequisite: Intercollegiate Varsity Volleyball team member.*

PEV211 Varsity Basketball II
1 Credit (3 Labs)
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.*

PEV217 Varsity Volleyball II
1 Credit (3 Labs)
Intercollegiate Varsity Volleyball with application of theory in NJCAA events. *May be taken two times for credit. Prerequisite: PEV207 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 AGEC 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) AGEC 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)

PHT105 Pharmacy Techniques
Previously known as HPM105 Pharmacy Techniques
3 Credits (3 Lectures) R
An overview of pharmacy: history of pharmacy, pharmacy terminology, role and responsibilities of a pharmacy technician in comparison to that of the pharmacists, and ethical and legal information. Theory of procuring, manipulating, calculating and preparing drugs for dispensing. *Prerequisites: Program Director consent, RDG100, PHT150. Corequisite: PHT105LL.*

PHT105LL Pharmacy Techniques Lab
2 Credits (6 Labs) R
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 by instructor before practicum. *Prerequisites: Program Director consent, RDG100, PHT150. Corequisite: PHT105.*

PHT150 Pharmacy Calculations
1 Credit (1 Lecture)
Mathematical calculations essential to the duties of pharmacy technicians in a variety of contemporary settings are covered.

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Includes complete coverage of ASHP curriculum standard 12 and business-related calculations for insurance processing, inventory management, and depreciation.

PHT164 Pharmacy Certification Review

Previously known as HPM164 Pharmacy Certification Review

2 Credits (2 Lectures) R

Preparation for taking the national pharmacy certification exam necessary for placement in the field and verification of competency. *Prerequisites: Program Director consent, RDG100, HCC113. Corequisites: PHT105, PHT105LL.*

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 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)

PHY100 Physical Universe

4 Credits (3 Lectures, 3 Labs) R

The basic principles of physics and chemistry and their application in science, technology and everyday life. Emphasis is on the fundamental behavior of matter and energy in physical systems with concepts presented and applied at the mathematical level of elementary algebra. *Prerequisites: RDG100; MAT092 or higher.*

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.*

PHY223 University Physics III: Thermodynamics, Optics and Waves

Previously known as PHY223 University Physics III: Vibrations and Waves

4 Credits (3 Lectures, 3 Labs)

Final course in the three-semester, calculus-based University Physics sequence, covering thermodynamics, kinetic theory, physical and wave optics, matter waves, relativity, photons and atomic physics. *Prerequisites: MAT231 and PHY122.*

POLITICAL SCIENCE (POS)

POS101 American Politics

3 Credits (3 Lectures) POS 1110 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

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Education U.S. Constitution requirement for teacher certification. *Prerequisite or corequisite: RDG100.*

POS103 Arizona Constitutional Government

1 Credit (1 Lecture) R

Constitution and government of the state of Arizona. Meets the Arizona 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.*

POS105 U.S. Constitution

2 Credits (2 Lectures) R

An examination of the U.S. Constitution, Bill of Rights and other significant amendments including the historic background, theory, organization and functions of the federal system of government in the United States. Meets the Arizona State Department of Education U.S. Constitution requirement for teacher certification. *Prerequisite 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. *Students selecting POS220 (3) should not enroll in either POS103 (1) or POS105 (2). 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

Descriptive statistics, probability and application, probability distributions of random variables, inferential statistics and statistical decision-making. *Prerequisites: MAT121; 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,

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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.*

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.*

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.*

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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.*

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)
Increase reading comprehension, reading fluency, and college level vocabulary by exploring the relationship between words and ideas, word parts, context clues, and how they all contribute to determining the topic, main idea, and details in a reading selection. To pass the course, a grade of C or better must be achieved. *Prerequisite: 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

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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) 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.*

RENEWABLE ENERGY TECHNOLOGY (RET)

RET275 Biodiesel Production and Design

3 Credits (3 Lectures) R

Biodiesel production and design in transformation of biomass and other resources into biofuels and bio products. Includes biodiesel history, chemistry, legal factors, and political factors. Technical applications focus on technologies for bioconversion of renewable resources. Consideration of technologies for future energy needs. *Prerequisite: RDG100.*

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) 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.*

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SOCIOLOGY (SOC)

SOC101 Introduction to Sociology

Previously known as SOC100 Introduction to Sociology

3 Credits (3 Lectures) *SOC 1101* *R*

The systematic study of society; the role and impact of society on individual and group social interaction. *Prerequisite or corequisite: RDG100.*

SOC200 Racial and Ethnic Minorities

3 Credits (3 Lectures) *SOC 2215* *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* *R*

A systematic study of contemporary American and global social problems from a sociological viewpoint. *Prerequisite: RDG100.*

SOC203 Marriage and the Family

3 Credits (3 Lectures) *R*

A comprehensive examination of marriage and the family as a cultural unit and a social institution. *Prerequisite: RDG100.*

SOC212 Gender in Society

3 Credits (3 Lectures) *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.*

SOC250 Family Violence

3 Credits (3 Lectures) *R*

The introduction to concepts related to family/intimate violence with an emphasis on legal, social and psychological aspects of abuse. *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.

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.*

SPA115 Conversational Spanish I

3 Credits (1 Lecture, 2 Recitations)

Introduction to conversational Spanish. Fundamentals of authentic speaking and listening skills in Spanish, with minimal grammar instruction. Introduction to cultures of the Spanish-speaking world.

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.*

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SOCIAL WORK UNDERGRADUATE (SWU)

SWU171 Introduction to Social Work
3 Credits (3 Lectures) AGEC R
A descriptive and analytical historical perspective of the profession of social work, social problems and the social welfare system. *Prerequisite or corequisite: RDG100.*

SWU242 Introduction to Child Welfare Service in a Diverse World
3 Credits (3 Lectures) AGEC
Examine contemporary child welfare policies and practices in the United States, including the rights of children, the rights and responsibilities of parents and society and their point of conflict. The nature and impact of child maltreatment, the ways in which society prevents or responds to the social problem of child maltreatment, and the system of response to child maltreatment are addressed. *Prerequisite: ENG101* SUN.

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.*

SWU291 Social Service Delivery
3 Credits (3 Lectures) AGEC
Purpose, structures, and delivery systems of human services agencies, including 40 hours of volunteer experience in local human services agencies. *Prerequisites: SWU171 and division chair consent.*

SWU295 Foundations of Social Work Practice: Effective Helping in a Diverse World
3 Credits (3 Lectures) AGEC
Theoretical foundations and skills base for effective culturally competent communication and interviewing with individuals, families, small groups and larger systems. *Prerequisite: ENG101* SUN.

THEATER (THE)

THE100 Theater Appreciation
3 Credits (3 Lectures) SUN *THE1100* AGEC 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) AGEC 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) AGEC 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) AGEC 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.*

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.*

ICON LEGEND: **AGEC:** AGEC **Intensive Writing:** *IW* **Reading Required: RDG100:** R **SUN Course:** SUN

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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.

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

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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

ICON LEGEND: **AGEC:** **Intensive Writing: *IW*** **Reading Required: RDG100:** **SUN Course:**

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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; WLD 121, 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 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.*

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Staff Catalog



Aaron, Kendra
Assistant Coach – Women's Basketball, SPC
B.A., Adams State University
M.A., Concordia University, Irvine

Aaron, Tramaine
Sports & Fitness Specialist/Head Men's Basketball Coach,SPC
B.S., Berry College

Abad Lopez, Luis
Facilities Assistant III, SPC

Ackland, Terri
Academic Dean, District/SPC
B.A., University of California, Davis
M.A., Arizona State University
Ph.D., Walden University

Aguilar, Susan
Director I– ABE/GED Program, District/CGC
B.A., University of Arizona,
M.A., University of Arizona

Aiazzi, Brooke
Events Coordinator, District/SPC
B.A., Lakeland University
M.S., Missouri Baptist University

Almquist, Maggie
Program Assistant – Student Success Initatives, STC
B.A., The University of Arizona

Alvarado, Carina
Facilities Assistant I, SPC

Anderson, Gregory
Facilities Foreman, SPC

Andrews, Blake
Police Officer II, District
Arizona POST Certified Officer

Angle, Brenin
Student Services Generalist, SMC
B.A., Arizona State University
M.Ed., American College of Education

Apodaca, Santos
Admission & Registration Assistant, District/SPC
A.A., Central Arizona College

Archunde, Celina
Student Services Assistant, AVC
ECE Certificate, Central Arizona College

Arescurenaga, Amelia
Science Lab Specialist, District/STC
A.A., Mesa Community College
A.S., Mesa Community College
B.S., Arizona State University

Armendariz, Michael
Director I - Pence Center, SPC
B.M., New Mexico State University
M.M., New Mexico State University

Arnold, Lara
Campus Police Administrative Technician, SPC
Law Enforcement Certificate, Pima Community College

Askey, Angela
Executive Director I- Public Relations & Marketing, District/SPC
B.S., Colorado State University,
MAgr, Colorado State University

Attebery, Jani
Academic Dean, Workforce Development, District/SPC/CCC/FC/CGC
B.A., California State University Sacramento,
M.S., Portland State University,
Ph.D., Prescott College

Babb, George
Facilities Foreman, SMC

Bacon, Margie
Academic Division Assistant, SPC
A.A.S., Central Arizona College

Bailey, Nancy
Pay System Specialist, District/SPC
A.A., Central Arizona College

Bain, Brandi
Vice President, Talent Development/Legal Affairs, District/SPC
B.A., Ottawa University
M.B.A. University of Phoenix

Baldwin, Elizabeth
Student Services Generalist, District/SPC
A.A., Riverside Community College District
B.A., California State University, San Bernardino

Bandin, Roxanna
Fiscal Agent, MC

Baroi, Elizabeth (Liz)
Professor of Psychology, SPC
B.A., San Diego State University
M.Ed., University of Hawai'i at Manoa
Ph.D., University of Hawai'i at Manoa

Barquera, David
Fleet Technician, SPC

Barragan, Domingo
Associate Director- Facilities , District/SPC

Barrancas, Faviola
Student Services Assistant - Recruitment, SPC
A.B., Central Arizona College
B.B.A., Northern Arizona University

Barrett, Elizabeth
Veterans Services Specialist, District/SPC
B.A., Western International University
M.A., Western International Univerity

Barron, Salavdor
Facilities Assistant II, SPC

Bass, Robin
Professor of Nursing, SPC
A.A.S., Elgin Community College
B.A., Northeastern Illinois University
M.S.N., University of Phoenix

Beck, Joel
Director I - Lifelong Learning, District/SMC
B.A., University of North Texas

Bell, Thomas
Professor of Mathematics, AVC
B.S., University of Florida
M.S., Physics, University of Illinois at Urbana-Champaign
M.S., Mathematics, University of Illinois at Urbana-Champaign
M.S., Georgia Institute of Technology
M.S, University of Arizona

Benitez, Maria
Facilities Assistant I, SPC

Bergman, Robert
Professor of Multi-Cultural Studies/History, District/SPC
B.A., Arizona State University
M.A., Arizona State University

Berry, Tina
Academic Dean, Career Programs, Dis
B.S.N., Ohio State University
M.S.N., University of Phoenix
M.B.A. University of Phoenix
Ph.D. Capella University

Binkley, Miesha
Professor of Chemistry, District/STC
B.S., The University of Arizona
M.S., Brigham Young University

Boddy, Katherine
Director, SBDC, CCC
B.S.B.A., The University of Arizona

Boron, Cheryl
Professor of Sports & Fitness, District/SPC
B.S., University of Massachusetts
M.S., M.S, The University of West Florida

Bradley, Daniel
Professor of Building Maintenance & Repair, ASP/FC

Brightwell, Sandra
Director II, Health Information Technology, SMC
B.S., Illinois State University
M.Ed., Northern Arizona University
Certification: RHIA
Certification: FAHIMA

Britt, Wendy
Professor of Nursing, District/SPC
A.D.N., Central Arizona College
B.S.N., Grand Canyon University
M.S.N., Grand Canyon University

Broking, Deanna
IT Manager – Instructional Software
District/SPC
A.A., Central Arizona College

Brooks, Amy
Director II– Emergency Services Program, District/SMC
B.S., University of Phoenix

Brooks, Kathy
Professor of Psychology, District/STC
B.A., Temple University
M.Ed., Temple University

Brumand, Darius
ERP Functional Analyst, District/SPC
M.S., Texas A&M University
M.S., Tarleton State University

Bryant, Cara
Director I, WIOA Program, District/SMC
B.A., Prescott College

Buenafe, Mark
Professor of Economics, District/SPC
B.S., University of Miami
M.B.A., Wake Forest University

Bueras, Gabriel
Network Analyst, District/SPC

Bunkelmann, Jeffrey
Academic Dean, Science, Mathematics & Business,
District/SPC
B.S., Michigan State University
B.S., Northern Arizona University
Ph.D., Arizona State University

Busby, Melissa
Director II- Early Childhood Education, District/SPC
B.S., Western New Mexico University
M.A., Western New Mexico University

Busch, James
Director of Skilled Trades & Workforce Development,
District/SPC
A.A.S., Central Arizona College
B.S.Ed., Northern Arizona University

Bush, Daniel
Professor of Recording Engineering, District/SPC
B.F.A., Indiana University

Butler, Ruth
Professor of Speech Communications, District/MC
B.A., Arizona State University
M.A, Arizona State University
Ph.D., Arizona State University

Caballero- Gray, Stephanie
Administrative Assistant II for the Vice President of
Business Affairs, District/SPC
B.S., University of Phoenix

Campa, Hector
Facilities Technician I, SPC

Campbell, Barrington
Director II-Learning Support, District/SPC
A.A., Central Arizona College
B.A., George Mason University
M.Ed., Northern Arizona University

Cardenas, Denise
Sports & Fitness Specialist, Head Women's Basketball
Coach, SPC
A.A., Central Arizona College
A.AS., Central Arizona College
B.A., California State University, Northridge
M.Ed., Northern Arizona University

Cardenas, Jennifer
Vice President, Student Services, District/SPC
B.S., Northern Arizona University
M.Ed., Northern Arizona University
Ed.D., Northern Arizona University

Chuang, Kai
Professor of Mathematics, District/SPC
A.S., Citrus College
B.A., California State University
M.A., California State University

Clapp, Michelle
Director II – Student Account Services, District/SPC
A.A. Central Arizona College
A.B., Central Arizona College
B.A., Arizona State University

Clegg, Andrew
Director - Arizona Center for Community College Success, District/SPC
B.S., San Jose State University
M.B.A., University of Phoenix

Colton, Samuel
Professor of Welding, District/AVC
A.A.S., Arizona Western College
B.A., Northern Arizona University

Conley, Dawn
Professor of Sociology, District/SPC
B.A., University of Cincinnati
M.A., Northwestern University
Ph.D. Northwestern University

Connor, Donald
Facilities Assistant I, SPC

Cook, Christine
Professor of Mathematics, Lead Faculty, District/MC
B.S., Fayetteville State University
M.A., University of Phoenix

Coronel, Sean
Director I- Student Affairs, District/STC
A.A., Central Arizona College
B.A., Northern Arizona University
M.Ed., Northern Arizona University

Correa, Yvonne
Student Services Assistant - Admissions, MC

Cortez Lopez, Lizeth
Facilities Assistant I, STC

Cortez Lopez, Scarleth
Facilities Assistant I, SPC

Costales, Nicole
Director I – Title V, District/SPC
B.S., Northern Arizona University
M.A., University of Phoenix
M.Ed., Northern Arizona University

Cowan, Debra
Student Services Generalist, District/SMC
B.A., University of Central Florida

Craig, Elissa
Secretary Administrative Support, AVC
A.A.S., Central Arizona College

Dagnino, Celina
Student Services Assistant – Admissions, SMC

Dagnino, Jose
Assistant Director of Financial Aid, District/SMC
B.I.S., Arizona State University

David, Kimberly
Director I – Student Engagement & Activties, District/SPC
B.A., Georgia College & State University
M.P.A., Georgia College & State University
M.L.I.S., Wayne State University

David, Richard
Science Lab Specialist, District/SPC
B.S., De La Salle University
M.S., Georgia College & State University

Davis, Dianna
Student Services Generalist, SPC
B.A., University of New Mexico
B.A., University of New Mexico

Davis, Shelby
Sports & Fitness Specialist/ Head SoftBall Coach, SPC
B.A., Arizona State University

Day, Kimberly
Secretary III, Facilities, SPC

Day, Vaun
Professor of Accounting, District/ SPC
B.B.A., University of Oklahoma
M.Ed., University of Central Oklahoma
Ph.D., University of Wyoming
C.P.A., States of Arizona & Oklahoma

Decker, Shelley
Professor of English, District/MC/SPC
B.A., University of West Georgia
M.A., University of West Georgia

Demaline, Beverly
Professor of Mathematics, Mathematics Division Chair District/STC
B.S., Ohio University
M.Ed., Northern Arizona University
M.A.S, Penn State University
Graduate Certificate, Statistics, Penn State University

Demaline, Christopher
Professor of Business, Business and CIS Division Chair, District/ SMC
B.A., Ottawa University
M.B.A., Grand Canyon University
Graduate Certificate, Business Valuation, Indiana University
C.P.A., State of Arizona;
Graduate Certificate, Accounting, University of Maryland; Graduate Certificate, Forensic Accounting, Northeastern University; C.M.A., Institute of Management Accountants;C.F.E., Association of Certified Fraud Examiners
D.B.A., Grand Canyon University

DeSantiago, Benny
Coordinator III, Community Outreach, AVC
B.S., Northern Arizona University
M.Ed., Northern Arizona University

Deshler, Sarah
Professor of Nursing, SPC
A.A., Northeastern Wisconsin Tech College
B.S., University of Wisconsin-Green Bay
M.S.N., Bellin College
R.N., Arizona State Board of Nursing

Devere, Francis
ERP Functional Analyst, District/SPC
A.A.S., Mohave Community College
B.S., Northern Arizona University

Dichoso, Tracy
Program Assistant, Florence Center

Dillahunty, Maurine
Testing Assistant, SPC

Dion, Denise
Director II, Nursing, SPC
B.S.N., University of Massachusetts at Boston
M.S.N., University of Phoenix
R.N., Arizona State Board of Nursing

Diwan, DeAnna
Professor of Agriculture Business, District/SPC
B.S., Arizona State University
M.S., Arizona State University

Dooley, Margaret
Executive Director II -CAC Institutional Development, District/SPC
B.A., Rhode Island College

Draegan, Kolette
Professor of English, District/ SPC
B.A., University of Hawai'I, West O'ahu
M.A., California State University, San Marcos

Duran, Veronica
Registrar, District/SPC
A.G.S., Central Arizona College
B.S., Northern Arizona University
M.Ed., Northern Arizona University
Ed.D., Northern Arizona University

Eastín, Maria
Professor of English, District/SPC
B.A., Arizona State University
M.A., Northern Arizona University

Ebert, Mark
Student Services Generalist, District/SPC
B.S.B.A., University of Arizona
J.D., University of Tulsa
M.P.A., Arizona State University
M.A., George Washington University

Elliott, Jackie
President, District/SPC
B.A., Concordia University
M.A., Fort Hays State University
Ed.D., University of Nebraska - Lincoln

Emlet, Christina
Instructional Specialist II - Early Childhood Education, SMC
B.S.E., Indiana University

Erickson, Brenda
Police Officer II, District/SPC
Arizona POST Certified Officer

Escudero, Valiente
Facilities Assistant II, SPC

Falenski, Heinz
Learning Support Specialist, SPC
B.S., Humboldt State University (Two)
M.S., Humboldt State University

Faulkner, Brandi
Librarian, STC
B.S., Texas Woman's University
M.L.S., University of North Texas

Fawcett, Christina
Secretary II – WIOA Grant, MC

Faykosh, Joseph
Professor of History, District/SMC
B.A., The Ohio State University
M.A., Bowling Green State University
Ph.D., Bowling Green State University

Fernandez, Raylene
Student Services Assistant – Financial Aid, SPC

Finken, Jodie
Student Services Assistant – Admissions, MC
A.G.S., Central Arizona College

Flewelling, Donald
Professor of Diesel Technology, District/SPC
A.A.S., Ferris State University

Flores, Paul
Facilities Foreman, STC
Certificate: Backflow Prevention Assembly General Tester

Fortier, Amanda
Secretary II, Title V, SPC
A.A., Central Arizona College
B.A., Northern Arizona University

Foust, John
Professor of Administration of Justice. Disctrict/SPC
B.A., University of New Mexico
M.S., University of Wisconsin, Platteville

Fraley, Devin
Professor of Biology, Science Divison Chair
District/STC
B.S., Arizona State University
M.A., the University of Texas at Austin

Friedel, Linda
Instructional Specialist II, Business Club Advisor, SPC
B.S., Black Hills State University

Friend, Robert
Facilities Assistant III, AVC

Fuentes, Lupe
Facilities Assistant I, SPC

Fuller, Temenoujka
Associate Director of Learning Support, District/SMC
M.S., Sofia University
M.Ed., Northern Arizona University
Ph.D., Sofia University

Gamble, Thomas
Professor of Mathematics, District/STC
B.S., SUNY Buffalo
M.Ed., SUNY Buffalo

Garcia, Andrew
Facilities Assistant III, SPC

Garcia, George
Facilities Technician I, MC
Certificate: The Refrigeration School, Inc.

Garrison, Judy
Academic Division Assistant, SPC
A.A.S., Central Arizona College

Garza, Alejandrina
Professor of Mathematics, District/STC
B.S.B.A., California State University
M.B.A., University of LaVerne
M.S., Prairie View A&M University

Gasca, Adela
Registrar Assistant,
District/SPC
B.A., Arizona State University

Gelfand, Lynn
Professor of English, District/MC
B.A., University of Illinois at Champagne-Urbana
M.A., University of Illinois at Chicago
Ph.D., Indiana University

Ghaninia Tabarestani, Majid
Professor of Biological Sciences, District/SPC
B.Sc., Gorgan University of Argricultural Sciences and Natural Resources
M.Sc., Isfahan University of Technology
Ph.D., Swedish Univeristy of Agricultural Sciences

Gibson, Barbara
Classroom Technology Support Specialist, SPC
B.A., Middle Tennessee State University

Gibson, Bridgette
Financial Aid Assistant, District/SPC

Gibson, Sylvia
Director III, Curriculum & Quality Projects, District/SPC
A.A., Central Arizona College
B.A., Ottawa University
M.A., Northern Arizona University

Giesen, Justin
Facilities Assistant II, SPC

Gilich, Anthony
Sports & Fitness Specialist/ Head Baseball Coach, SPC
B.A., Central Washington University

Gillespie, Jacquelyn
Professor of Medical Laboratory Technology
District/SP
B.S., Northern Arizona University

Gilliland, Mary Kay
Vice President- Academic Affairs, District
B.A., Bryn Mawr College
Ph.D., University of California, San Diego

Glahn, Cheryl
Student Services Assistant – Admissions, STC

Godwin, Ronald
Accountant, District/SPC
B.A., Simpson College
M.B.A., Drake University
Certification: Six Sigma

Gomez, Deseri
Administrative Assistant, SPC
A.A.S., Central Arizona College
A.A., Central Arizona College
B.S., Northern Arizona University

Gomez, Michelle
Academic Division Assistant, SPC
A.A.S., Central Arizona College
A.G.S., Central Arizona College

Gonzalez, Andres
Professor of Computer Technology, ASP/FC
B.S., St. Mary's University
M.S.S., Arizona State University

Gonzalez, Brandy
Program Assistrant – WIOA Grant, District/SMC
A.A.S., Central Arizona College

González (Del Cid), Cristina
Administrative Assistant,SPC
A.G.S., Central Arizona College

Graham, AnnDee
Payroll Manager, District/SPC
B.S., Arizona State University

Graham, Chelsea
Program Assistant – ABE/GED, CGC
A.A.S., Central Arizona College
B.A., Northern Arizona University

Grant, Alan
ERP Functional Analyst, District/SPC
A.A., Madison Area Technical College
B.S., Edgewood College

Greathouse, Heidi
Libarian, District/SMC
B.S., Brigham Young University - Idaho
M.A., The Univerisity of Arizona

Gregory, Alyssa
Admissions & Registration Assistant/ SPC

Grijalva, Connie
Accounting Clerk II, District/SPC

Gutierrez, Joey
Athletic Equipment Assistant, SPC
Certificate – Albuquerque Technical Vocational Institute

Haley, Douglas
Facilities Assistant II, SPC

Halfhill, Denette
Facilities Assistant III, STC

Halloran, Jean
Program Assistant – DEP, SPC
Certificate, Central Arizona College (Two)
A.G.S., Central Arizona College

Han, Di
Research Specialist, District/SPC
B.A., Jilin University/China
M.S. Univeristy of California, Riverside

Hanson, Alyson
Professor of Reading & Humanities, District SMC
B.A., Arizona State University
M.Ed., Arizona State University

Hanson, Connie
Office Assistant II – ECE, SPC

Hanson, Tressie C. (Christine)
IT Manager – Classroom Technologies, District/SPC
B.A., Northern Arizona University

Haro, Gayle
Professor of Business, District/SPC
A.A., Central Arizona College
B.A., Arizona State University
M.Ed., Northern Arizona University
ADM., University of Phoenix
CCE, American Culinary Federation;
CHE, American Hotel & Lodging Association

Harper Makaafi, Jana
Instructional Specialist II – ESL, CGC/SMC
B.A., Brigham Young University
M.A., California State University, Long Beach

Hatch, Kathy
Secretary II- Engineering Technology & Fire Science, SPC

Hatfield, Daniel
Facilities Foreman, AVC
A.A.S., Central Arizona College

Henderson, Sara
Cashier, District/SPC
A.B., Pima Community College
Certificate: AGEC-B, Pima Community College

Henley, Ryan
Assistant Coach – Softball, SPC
B.A., Azusa Pacific University

Hernandez, Cheryl
Director I - Student Accessibility Services, District/SPC
B.A., Arizona State University
M.A., University of Arizona

Hernandez, Hector
Technology Support Generalist, District/SPC

Hernandez, Mary Lou
Executive Assistant to the President & Governing Board
District/SPC
A.A., Central Arizona College
B.S., Northern Arizona University

Hernandez-Flores, Carmen
Facilities Assistant I, SPC

Heward, Dara
Web Content Assistant, District/SPC
B.G.S., The University of Arizona
B.A., The University of Arizona

Higgs, Victoria
Student Services Generalist, District/SPC
A.A., Central Arizona College
B.A., Northern Arizona University
M.Ed., Northern Arizona University

Hill, Deborah
Instructional Specialst II – Certified Nursing Program,
District/SPC
B.S.N., Grand Canyon Universty
M.S.N., Grand Canyon University
R.N., Arizona State Board of Nursing

Hindhede, Karen
Professor of English, Literary Arts & Languages Division
Chair, District/SPC
B.A., Augustana College
M.A., University of Nebraska-Lincoln

Hohmann, Timothy
Professor of English, District/SMC
B.A., Arizona State University
M.F.A., Arizona State University

Honea, Martin
Assistant Coach – Track & Field, SPC
B.A., Point Loma Nazarene University

Hope, Lindsay
Associate Director, Public Relations & Marketing,
District/SPC
B.S., Tarleton State University
M.S., Texas Christian University

Horn, Susan
Professor of Health Careers, District/SMC
A.A.S., Ivy Tech State College
B.S., Indiana State University

Howley, Adrienne
ERP Functional Analyst, District/SPC

Hughes, Dale
Facilities Technician I, STC

Hurt, Garrett
Professor of Diesel Technology, District/SPC
A.A.S., Central Arizona College

Ingram, Lisa
Professor of Health Careers/Allied Health, District/SMC
A.S., Indiana Wesleyan University
B.S., Indiana Wesleyan University
M.B.A., Grand Canyon University

Iselin, Marcia
Secretary- Administrative Support, SPC
A.G.S., Central Arizona College
B.A., Northern Arizona University

Jaco Riggs, April
Secretary – Administrative Support, CCC
B.B.A., University of Houston Clear Lake

Jagadish, Bhumasamudram
Professor of Chemistry, District/STC
B.S., Osmania University, India
M.S., Indian Institute of Technology, Bombay
Ph.D., Indian Institute of Technology, Bombay

Jewell-Cannon, Deborah
Accounting Clerk II, Accounts Receivable, SPC

Joaquin, Veronica
Student Services Generalist, District/STC
A.A., Central Arizona College
B.S., Arizona State University
M.Ed., Northern Arizona University

Johnson, Carol
Professor of Honors/Director of Honors, District/SPC
B.A., New Mexico State University
M.S., Capella University
Ed.D. Northern Arizona University

Johnson, Joel
Professor of Auto Body Collesion Repair/Refinish ASP/FC
A.A.S., Southeast Technical Institute

Jones, Christopher
Facilities Technician II, SPC

Juarez, Eleanor
Secretary II – Advising, SPC
A.G.S., Central Arizona College
A.A., Central Arizona College
Certificate, Central Arizona College

Juarez, Elisa,
Director III of Financial Aid, District/SPC
A.A.S., Central Arizona College
B.A., Northern Arizona University

Juarez, Nancy
Instructional Specialist I- Clinical Laboratory Assistant/Phlebotomy Program, SPC
ASPT Certified Technician/Clinical Laboratory Assistant/Phlebotomy

Kannegaard, Michelle
Director III – IT Support & Online Services, District/SPC
B.S., Heidelberg College
Certification: Project Management Professional(PMP)

Keeling, Tatiana
Professor of English, Lead Faculty, District/SPC
B.A., Moscow State Linguistic University
M.A., Arizona State University
Ph.D., Arizona State University
A.A., Central Arizona College

Kelley II, Robert
Technology Support Generalist, District/SPC
A.G.S., Central Arizona College

Kelly, Janie
Sports & Fitness Specialist- Athletic Trainer, SPC
B.S., Indiana State University
M.S., A.T. Still University

Kieser, Mary
Professor of Reading, District/SPC
B.S., Northern Arizona University
M.Ed., Northern Arizona University

Knudsen, Tyson
Professor of Adult Basic Education, District/STC
B.A., Weber State University
M.A., University of Nevada, Reno
M.B.A., Western Governors University

Kohl, David
Web Designer/Developer, District/SPC
B.S., Arizona State University

Kohut, Melinda
Professor of CIS, District/SPC
A.A.S., Pima Community College
B.S., Excelsior College, Albany New York
M.B.A., University of Phoenix
M.I.S.M., Keller Graduate School of Management

Kotrodimos, Peter
Professor of Business Economics, District/SPC
B.A., The University of Iowa
M.Ed., Northern Arizona University
M.B.A., West Texas A&M University

Krantzman, Monica
Program Assistant, Early Childhood Education/SPC
A.A.S., Central Arizona College

Krieher, Herman
Warehouse Operations Technician, SPC
B.B., The University of Iowa
M.B.A., DePaul University

Krieher, Nancy
Production & Mailroom Technician, SPC
A.A., Moraine Valley Community College

Kyhn, Stacie
Professor of Mathematics, District/SMC
B.S., Arizona State University
M.Ed., Northern Arizona University

LaFalce, Shawn
Academic Division Assistant, SPC
A.A.S., Central Arizona College (Three)
Certificates, Central Arizona College (Three)

Lambrecht, Tracy
Secretary Administrative Support, SMC
A.A.S., Dakota County Technical College

Lange, Kenneth
Sports & Fitness Specialist – Athletic Trainer, SPC
B.S., Grand Canyon University

Lascher-Zires, Sandra
Director I – iRAMM Program, District/SPC
B.A., SUNY Empire State College
M.A., Purdue University

Lashinsky, Michael
Facilities Technician I, SMC

Laursen, Andrew
Program Specialist- Residence Life, SPC
A.A., Chandler-Gilbert Community College
B.A., Arizona State University

Lautzenheiser, Sarah
Fiscal Agent, STC
A.A., Central Arizona College

Leamons, Eliana
Instructional Specialist II, Mathematics, MC
B.S., University of Arizona

Leeder, Nancy
Coordinator III – Science Labs, District, SMC
B.S. The University of Arizona
N.M.D., Southwest College of Naturopathic Medicine & Health Sciences

Lespron, Samuel
Director III – IT Infrastructure, District/SPC
B.A.S., Northern Arizona University

Li, Ming
Professor of Mathematics, District/SPC
B.A., California State University
M.A., California State University

Licón, Sherrie
Executive Director II, Enrollment Services, District/SPC
B.A., State University of New York College at Cortland
M.Ed., Northern Arizona University
Ed.D., Northern Arizona University

Lomeli, Peter
Professor of Manufacturing Electronics, District/SPC
Diploma – Electronic Technology, DeVry Institute of Technology
A.G.S., Chandler-Gilbert Community College
A.A., Chandler-Gilbert Community College

Lopez, Yesenia
Facilities Assistant I, STC

Lowe, Daniel
Performing Arts Technical Specialist, SPC
A.A., Central Arizona College

Lujan-Rodriguez, Amanda
Public Relations Assistant, District/SPC
B.A., Arizona State University

Luna, Beverley
Facilities Asisstant I, MC

Maestas, Teasha
Case Management Specialist,
CGC
A.A.S., Central Arizona College

Mahoney, Kayse
Assistant Rodeo Coach, SPC
A.G.S., Central Arizona College
B.B.A., Northern Arizona Univeristy

Maneely, Rhonda
Secretary Administrative Support, SPC
A.A.S., Central Arizona College

Maroney, Dustin
Executive Director II, Institutional Effectiveness, District/SPC
B.M., Arizona State University
M.S., University of Phoenix

Maurer, Deborah
Accounting Clerk II, Accounts Payable, SPC

McClain, Kelly
Police Officer II, District/SPC
Arizona POST Certified Officer

McGruder, Brandon
Assistant Coach – Men's Basketball, SPC
B.A., Peru State College

McIntyre, Carrie
Transfer Resource Specialist, District/SPC
B.A., University of Alaska, Anchorage

McKenna, Crystal
Professor of Biology, District/MC
B.A., Arizona State University
M.A., University of Phoenix
Ph.D., Prescott College

McKinney, Kinsey
Professor of English, District/AVC
B.A., University of Arizona
M.F.A., Wichita State University
M.A., University of Arizona

McLaughlin, Sarah
Professor of Art-Studio, District/SPC
B.A., University of Arizona
B.F.A., University of Arizona
M.F.A., State University of New York, New Paltz

McQueen, James
Enterprise System Support Specialist, District/SPC
A.A.S., Air University-Community College of the Air Force
B.S., University of Massachusetts Lowell
CompTIA Network+ Certification

Miele Veronica
Student Services Generalist, SPC
A.A., Central Arizona College
B.S., Northern Arizona University

Mollica, Frank
Director II-Diagnostic Medical Imaging, SMC
Raiologic Technology Certificate
B.S., University of St. Francis
M.S., University of St. Francis

Moncada, Irma,
Employee Relations Specialist, District/SPC

Montano, Ysidro
Facilities Technician I, AVC

Montijo, Frankie
Facilities Assistant II,SPC

Montijo, Jennifer
Coordinator II – High Schools Programs & Recruitment, STC
B.A., University of Arizona
M.Ed., Northern Arizona University

Moody, Joe
Sports & Fitness Specialist/Head Rodeo Coach, District/SPC
B.S., West Texas A & M University

Moore, Richard
Director III, Enterprise Application Services, District/SPC
B.S., Northern Arizona University

Mosley, Veronika
Program Assistant – Health Careers, SMC
A.A.S., Central Arizona College
B.A., Northern Arizona College

Moulton, Heather
Professor of English, District/SPC
A.A., Chaffey College
B.A., University of California
M.A., California State University

Muñoz, Maria
Director I – Site Management, AVC
A.A.S., Central Arizona College
A.B., Central Arizona College
B.S., Grand Canyon University

Murillo, Armando
Talent Development Assistant I, District/SPC

Nazario, Dawn
Profssor of Nursing, SPC
B.S.N., Western Governer's University
M.S.N., Western Governer's University
R.N., Arizona State Board of Nursing

Nelson, Henry
Facilities Technician III, SPC

Nettles, Gail
Coordinator II-TRIO, District/SPC
B.A., Grambling State University
M.S., State University of New York, Albany

Newman, Annette
Facilities Assistant III, STC

Nichols, Debra
Academic Division Assistant – Science, SPC

Noravian, Armineh
Professor of Engineering, District/SPC
B.S.E.E., Unversity of Sydney
M.S.E., San Jose State University
M.A., San Jose State University
Ed.D., San Francisco State University

Oldfather, Sherri
Facilities Assistant III, AVC

Orozco, John
Student Services Generalist,MC
B.A., Arizona State University

Ortega, April
Coordinator II – TRIO Upward Bound, District/SPC
B.A., Arizona State University
M.Ed., Arizona State University

Osmer, Jonathan
Librarian, District/SPC
M.L.I.S., University of WI-Milwaukee

Ott, Luisa
Executive Director II for Accounting Services/Comptroller, District/SPC
B.S., Arizona State University
CPA, State of Arizona
CFE, State of Arizona

Owens, Michael,
Professor of Language, District/SPC
M.A., Washington State University

Park, Sunjung
Professor of Biological Sciences, District/SMC
M.S., Louisiana State University
Ph.D., Louisiana State University

Parks, Tamara
Nursing Lab/Simulation Specialist, SPC
A.A.S., Central Arizona College
B.S.N., Regis University
M.S.N., University of Northern Colorado

Patefield, Karissa,
Director I- Student Affairs, SMC
B.A., University of Wisconsin, Platteville
M.S., Eastern Illinois University

Patrick, Geoffrey
Facilities Assistant I, SPC

Peake, Douglas
Professor of Adult Basic Education, District/CGC
B.S., Willamette University
M.Div., Nyack College

Peden, Clay
Professor of Culinary Arts, District/STC
A.O.S., Le Corden Bleu College of Culinary Arts, Scottsdale

Perea, Sherry,
Fiscal Agent,
AVC
A.A.S., Central Arizona College

Perez, Joseph
Assistant Coach – Baseball, SPC
B.A., University of Jamestown

Petersen, Paul
Facilities Asssitant I, SPC

Peterson, Erik
Instructional Specialist II– Developmental Math District/SPC
B.S., Arizona State University
M.Ed., Arizona State University

Peterson, Roy
Professor of Construction Technology, ASP/FC
ASP Diploma, Chaparral College
A.S., Chaparral College
B.S., Chaparral College
B.S., Brown Mackie

Petrey, Jennifer
Professor of English, District/SPC
B.A.,Wright State University
M.A., Wright State University

Phillips, Susan
Learning Support Specialist – Reading & Writing, District/SPC
B.A., Southern Oregon University
M.A., Southern Oregon University
Ed.D., George Fox University

Pierce, Isaiah
Student Services Generalist, District/SPC
B.A., Adams State University

Porterfield, Jordan
Professor of Welding, District/SPC
A.A.S., Centralia College

Potts, Amanda
Professor of Culinary Arts/Professional Programs
Division Chair, District/SPC
B.S., Northern Arizona University
M.Ed., Northern Arizona University

Prevost, John
Professor of Language, District/SPC
B.A., University of St. Thomas
M.A.T. University of Southern Mississippi

Primm, Deborah
Professor of Mathematics, District/SMC
B.S., Jacksonville State University
M.S., Jacksonville State University

Prock, Paula
Benefits Manager, District/SPC
A.A.S., Central Arizona College
Certificate: Human Resources Management, University of Phoenix

Pryor, Wayne
Professor of Astronomy/Geology, District/SPC
B.A., University of California
M.S., University of Colorado
Ph.D., University of Colorado

Puglia, Mary
Professor of Biological Sciences, District/SMC
B.S., University of Arizona
M.S., Arizona State University
Ph.D., Arizona State University

Purvis, Megan
Director I-Student Affairs,
MC
B.A., Keene State College
M.M., University of Phoenix

Quiroz, Cecilia
Director I – Title IX Compliance, District/SMC
B.S., Arizona State University
M.Ed., Northern Arizona University

Ramirez, Alejandro
Facilities Technician II, SPC

Ramirez, Angel
Facilities Assitant I, STC

Ramirez, Henry,
Facilities Foreman, MC

Ramirez, Idelberto,
Facilities Technician II,SPC

Ramirez, Nayla
Payroll Assistant, District/SPC

Ramirez, Rosemary,
Director I- Residence Life, SPC
B.A., Arizona State University
M.Ed., Northern Arizona University

Rath, Sandra,
Professor of Speech Communications, District/STC
B.S., Syracuse University
M.A., Syracuse University
Ph.D., Arizona State University

Rauhalammi, Samuli
Professor of Biological Sciences/District/AVC
B.A., Helsinki Metropolia University of Applied Science
M.Sci, University of Glasgow
M.S., University of Glasgow, Glasgow School of Art

Rausaw, Walter Tramaine
Dean – Student Life, District/SPC
B.A., Trinity Unversity
M.Ed. Northcentral University
Ed.D., Northcentral University

Rector, Ross
Professor of Industrial Carpentry, District/SPC
Certificate, NCCER
Certificate, The Refrigeration School
Certificate, OSHA

Regan, Barry
Professor of Speech Communication, District/SPC
B.A., University of Nevada, Las Vegas
M.A., University of Arkansas

Reyna, David
Accounting Clerk III – Accounts Receivable, District/SPC

Reynolds, Willie
Police Officer II, District/SPC
Arizona POST Certified Officer

Rifkin, Samuel
Learning Support Technology Assistant, District/SPC
A.A.S., Central Arizona College

Roberts, Gregory
Chief of Police, District/SPC
Arizona POST Certified Officer
Certificate, FBI National Academy Graduate Session 265
B.A.S., Northern Arizona University

Robinette, Beverly
Campus Police Assistant, District/SPC
A.A.S., Central Arizona College
Certificate, Central Arizona College

Robinette, Stephen
Professor of Refrigeration Technologies, ASP/FC

Robinson, Edith
Coordinator III, Science Labs, District/SPC
B.A., Univeristy of North Carolina, Wilmington

Robledo, Josue
Systems Analyst, District/SPC

Rodriquez, Adam
Police Officer II, District/SPC
Arizona POST Certified Officer

Rodriquez, Reinaldo
Facilities Assistant III, SMC

Rogers, Theresa
Registrar Assistant, District/SPC
A.A., West Valley College
A.S., West Valley College

Romero, Shawna
Instructional Specialist II, Clinical Radiology, SMC
A.A.S., Central Arizona College
B.S., Northern Arizona University

Rosenbam, Charlie
Online Learning System Specialist, District/SPC

Ross-Atanasio, Deborah
Classroom Technologies Support Specialist, SMC

Rossi, Hazel
Coordinator II – High School Programs & Recruitment, District/SMC
A.A., Central Arizona College
B.S., Northern Arizona University

Rowland, Bobbi
Technology Support Generalist, District/SPC

Ruelas, Victoria
Instructional Specialist II, CGC
B.F.A., The University of Arizona
M.Ed., Northern Arizona Univeristy

Ruiz, Antonia
Facilities Assistant I, SPC

Ruiz, Clarice
Facilities Assistant I, SPC

Ruiz Yanez, Carlos
Police Officer II, SPC
Arizona POST Certified Officer

Saavedra, Adriana
Director II– Library Services, District/SPC
B.A., University of Arizona
M.L.S., University of Arizona

Salaz, Mark
Director III- Purchasing, District/SPC
B.S., University of Arizona

Sanchez, Luis
Director II-Recruitment, District/SPC
B.S., University of Phoenix
M.B.A., University of Phoenix
Ed.D., Arizona State University

Sanders, Cameron
Chief Information Officer, District/SPC
B.S.B.A., Northern Arizona University
Certification:Database Systems, Northern Arizona University
Certification: Project Management Professional (PMP)

Sauceda, Veronica
Program Assistant – Athletics, SPC
A.A., Central Arizona College

Sawade, Tammi
Coordinator II – Scheduling Solutions, District/SPC
A.G.S., Central Arizona College
Certificate, Central Arizona College

Saxberg, Kimberly
Development Assistant, SPC

Schaefer, John
Assistant Director - Residence Life, SPC
B.S., Northern Arizona University
M.A., University of Akron

Scharf, David
Facilities Technician III, SPC

Scherer, Julie
Senior Accountant, District/SPC
B.S., University of Phoenix

Schlee, Glen
Professor of Mathematics, District/SPC
B.A., University of North Texas
M.A., University of North Texas
Ph.D., University of North Texas

Schneeflock, Melanie
Librarian, District/SPC/SMC
B.A., Northern Arizona University
M.S.L.S., Clarion University

Schnoor, Chuck
Athletic Director, District/SPC
B.A., University of Nebraska
M.Ed., Northern Arizona University

Seaman, Stacey
Professor of Music, District/SPC
A.A.S., Mohave Community College
B.M., The University of Arizona
M.M., Southern Oregon University
M.A., University of Northern Colorado

Searle, Michael
IT Analyst - Hardware, District/SPC
Cerificate: CompTIA A+, Security +
Certificate: Dell EMC, System Adminstration
A.S., Indiana University
B.S., Indiana University

Secrist, William
Police Officer II, District/SPC
Arizona POST Certified Officer

Selby, Sonya
Student Services Assistant, SMC
Certificate, Central Arizona College

Shank, Derek
Director II- Advising, District/SPC
B.S., University of Arizona
B.S.E., University of Arizona
M.A., University of Arizona
M.C., Arizona State University
J.D., University of Arizona

Shepherd Jones, Christina
Student Services Generalist, District/STC
B.A., Arizona State University
M.Ed., Northern Arizona University

Silvia, Mark
Professor of English, District/STC
B.S., Utah Valley State College
M.A., Kansas State University

Sioris, Fotini
Professor of Biological Sciences, District/SPC
B.A., Agnes Scott College
M.S., Georgia State University

Smith, Kenneth
Professor of Welding, District/SPC
A.A.S., Central Arizona College
Certificate: Welding Inspector, American Welding Society
Certificate: Cathodic Protection Tester, NACE

Smith, Laurette
Program Assistant – Nursing, SPC
A.A., Elgin Community College

Snellman, Scott
Librarian, District/MC
B.A., University of Montana - Missoula
M.A., University of Arizona

Span, Derrick
Professor of Sociology,Social Sciences Division Chair
District/STC
B.S., University of Louisville
M.Div., Interdenominational Theological Center
M.A., Binghamton University
Ed.D., Northern Arizona University

Stark, Terry
Director I, FC
B.A., Davenport University
E.M.B.A., Strayer University

Steincamp, Hugo
Director II - Resource Development & Quality Assurance, District/SPC
Certificate, American Society for Quality
B.A., University of Canterbury, New Zealand
M.A., Northeastern University

Steincamp, Sheri
Director II – Dietetic Education Program, District/SPC
B.S., University of Nevada, Las Vegas
M.S., Case Western Reserve University
Registered Dietitian Nutritionist
Certified Diabetes Educator

Steiner, Cara
Professor of Education/District Lead Faculty, District/SPC
B.A., Arizona State University
M.Ed., Northern Arizona University (Two)
Graduate Certificate, Northern Arizona University

Stephens, Robert
Director II, Employee Development, District/SPC
B.S., University of Phoenix
M.B.A., University of Phoenix

Stevenson, Christine
Professor of Biological Sciences, District/SPC
B.S. Arizona State University (Two)
M.S. Arizona State University

Studer, James
Technology Support Generalist, District/SPC

Sutton, Reece
Network Analyst, District/SPC

Swift, Rebecca
Librarian, District/AVC
B.S., Northern Arizona University
M.L.S., The University of Arizona

Talamantez, Yolanda
Financial Aid Specialist, District/SPC
A.A., Central Arizona College
B.A., Northern Arizona University

Tatterson, Susan
Professor of Digital Media, Creative Arts Division Chair Disrict/SPC
A.A.S., Community College of Baltimore County
B.S., University of Baltimore
M.F.A., University of Baltimore

Tavares, Paul
Professor of Biology, District/SPC
B.S., University of Wisconsin, Parkside
D.C., National College of Chiropractic

Teel, Louis
Professor of Heavy Equipment Operations, District/SPC
A.A.S., Central Arizona College
B.S.Ed., Northern Arizona University

Teel, Skyla
Professor of Reading/Head Rodeo Coach, District/SPC
A.A., Pima Community College
B.S., Northern Arizona University
M.Ed., Northern Arizona University

Teply, Jennifer
Purchasing Assistant II, District/SPC
A.A.S., Front Range Community College
A.A.S., Front Range Community College
B.S., University of Phoenix

Terry, Gabriel
Police Officer II, District/SPC
Arizona POST Certified Officer

Thomas, Evelyn
Instructional Specialist I, Health Information Program, SMC
B.S., Stephens College
M.Ed., Western Governors University

Thomas, Muriel
Coordinator III- Lifelong Learning, District/CCC
A.G.S., Central Arizona College
A.A., Central Arizona College
B.A., Northern Arizona University

Thompson, Bernita Joyce
Fiscal Agent, SMC
A.A.S., Central Arizona College

Tinnin, Sarah
Financial Aid Assistant II, District/SPC
A.A., Central Arizona College

Todd, Sandra
Registrar Assistant, District/SPC
A.G.S., Central Arizona College
Clerk Typist, Stenographer & General Office Clerk Certificates

Torres, Monica
Facilities Assistant I, SPC

Torres, Ricky
Office Assistant II – Veterans' Services/ Student Accessibility Services, SPC

Torres Lopez, Alma
Facilities Assistant I, SPC

Travis, Joanna "Jody"
Director IV – Budget/Accounting Services District/SPC
B.S.B.A., University of Arizona
B.S., University of Arizona
M.B.A., University of Phoenix

Ulich, Monica
Coordinator I – Learning Support, MC
B.S., Northern Arizona University
M.Ed., Northern Arizona University

Uriarte, Francisco
Financial Aid Assistant I, SPC
Certification, Central Arizona College
A.A.S, Central Arizona College
B.A., Northern Arizona University

Van Blaricom, Jimi
ABE Career Navigator, CCC
B.A., The Evergreen State College
M.B.A., University of Phoenix

Vangilder, Clark
Professor of Physics, District/SPC
B.S., Grand Canyon University
M.N.S., Arizona State University
Ph.D., Grand Canyon Universty

Varela-Avila, Osman
Case Management Specialist, MC
B.S., The University of New Mexico

Vargas Coll, Sonia
Facilities Assistant I, SPC

Vega, Sylvia
Coordinator I, Learning Support, STC
B.A., Northwestern University
M.A., Arizona State University

Verdugo, Kimberlee
Director I- Classification & Compensation, District/SPC
B.A., California State University, Long Beach
M.Ed., Northern Arizona University

Verduzco, Jeanette
Student Services Generalist, District/SPC
A.A., Central Arizona College
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Villa, Ricardo “Omar”
Professor of Mathematics, SPC
B.S., Arizona State University
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Coordinator II- Outreach & Promise Activities,
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Professor of Refrigeration Technologies, ASP/FC
A.A.S., Pikes Peak Community College

Weir, Estella
IT Analyst – Asset Management, District/SPC
A.A., Central Arizona College

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Assistant Director – Adult Basic Education, SMC
B.A., Texas A&M University
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Wilson, Maren
Professor of Social Sciences & Anthropology, Phi Theta Kappa Advisor, District/AVC
B.A., New Mexico State University
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Winner, Stephanie
Student Services Generalist, MC
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Vice President Business Affairs/CFO, District, SPC
B.A., Saint Xavier University
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Track Events Head Coach, SPC
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Police Sergeant, District/SPC
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Wooten, Loida
Program Assistant, SPC
A.A.S., Central Arizona College
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Systems Engineer, District/SPC

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Professor of Speech Communications, District/SPC
B.A., Pittsburg State University
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Yubeta, Dawn,
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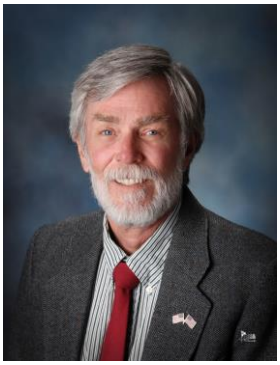
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INDEX

A

Absence Policy....43
Academic & Proctored Testing....53
Academic Advising....26
Academic Calendar 2020-21.... ii, 31
Academic Concern....45
Academic Honors Recognition....31
Academic Load....27
Academic Offerings by Areas of Interest....77
Academic Progress....11, 45
Academic Renewal Guidelines....45
Academic Standards....42
Academic Warning....45
Accessibility Services, Student....53
Accommodation (non-employee related), Concern or Complaint regarding any Disability....46
Accounting Certificate....84
Accounting (ACC) Courses....148
Accounting (AAS) Degree....84
Accreditation....55
Adding Classes (or Dropping)....30
Additional Degrees....58
Administration, College....249
Administration of Justice Certificate....135
Administration of Justice (AJS) Courses....151
Administration of Justice (AA) Degree....135
Administrative Withdrawal....30
Admission, Catalog Year of....9
Admissions....6
Admissions: How Do I Become A Student....4
Admission Requirements....6
Admission of F-1 Nonimmigrant Students-- International Students....6
Admission of Students Under the Age of 18 (See Special Admit)....6
Advanced Placement from High School....28
Advanced Industrial Technology Certificate....145
Advanced Industrial Technology (AAS) Degree....147
Advanced Production Maintenance Technician Certificate....146
Advanced Production Technician Certificate....147
Advanced Structural Welding and Fabrication Certificate....113
AGEC (Arizona General Education Curriculum)....35, 64, 146
AGEC Course Designations....69
AGEC Grandfather Clause....146
Agreement Options, Transfer....35
Agriculture (AA) Degree....80
Agriculture Business Certificate....81
Agriculture Business (AGB) Courses....148
Agriculture Business (AAS) Degree....82
Agriculture General Certificate....80
Agriculture Science (AGS) Courses....148
Albright College (AC)....36
Animal Science (ANS) Courses....152
Anthropology (ASB) Courses....155
Appeal, Grade Change....44
Appealing a Decision....12
Application for Graduation....34
Archaeology (ARH) Courses....153
Arizona Christian University....36
Arizona General Education Curriculum (AGEC)....35, 64, 146
Arizona General Education Curriculum for the Arts (AGEC-A Certificate)....74
Arizona General Education Curriculum for Business (AGEC-B Certificate)....75
Arizona General Education Curriculum for Science (AGEC-S Certificate)....76
Arizona Shared Unique Numbering (SUN) System....35, 146
Arizona State University....36, 37
Arizona State University (Nursing Options)....38
Arizona State University (Online)....38
Arizona Transfer Information....34
Arizona@Work Pinal County Youth Program (WIOA)....53
Art (ART) Courses....154
Articulation and Transfer Options for Degree Completers....36
Associate of Applied Science (AAS) Degree....63
Associate of Arts (AA) Degree....59
Associate of Arts in Elementary Education (AAEE)....104
Associate of Business (ABUS) Degree....61, 86
Associate of General Studies (AGS) Degree....64
Associate of Science (AS) Degree....62
Astronomy (AST) Courses....156
ASU@Pinal....38
Automated Industrial Technology I Certificate....105
Automated Industrial Technology II Certificate....106
Automated Industrial Technology (AIT) Courses....150
Automated Industrial Technology (AAS) Degree....106
Athletic Records....48
Athletics, Intercollegiate....48
Attendance....43
Attendance Requirements....43
Audit (AU) Grade....44
Auditing....30

B

Baking and Pastry Certificate....87
Basic EMT Certificate....130
Benedictine University (BU)....36
Biology (BIO) Courses....157
Biological Lab Science Courses, Physical and....59
Bookstore....52
Bookstore Refund Policy....52
Building Construction Technology (BCT) Courses....156
Business Certificate....85
Business (BUS) Courses....157
Business (AAS) Degree....157

C

CAC Offerings: What Can I Study At CAC....1
CAC Scholarships Opportunities....12
Calculation of Grade Point Averages....44
Calendar, Academic....ii, 31
Campus Leadership Opportunities....50

Campus Location Descriptions
(see Serving Pinal County)..... iii, iv
Career Exploration 48
Career & Student Employment Services.....14, 48
Carpentry (CRP) Courses.....170
Catalog Under Which a Student Graduates.....34
Catalog Year of Admission.....9
Catering (see Meal Plan Options) 32
Center for Cultural & Civic Engagement.....49
Central Arizona College Foundation Scholarships 13
Central Arizona College Scholarship Opportunities 12
Central Help Desk Services 52
Certificates.....74
Certificates by Area of Interest 2
Certified Dietary Manager, Certified Food
Professional Certificate 127
Certified Nursing Assistant (CNA) Courses 167
Chamberlain College of Nursing 36
Chemistry (CHM) Courses 162
Civil Technology (CET) Courses.....162
Classification of Students.....8
CLEP, College Level Examination Program 28
Clinical Laboratory Assistant Certificate.....116
Clinical Laboratory Assistant (CLA) Courses 166
Coding and Reimbursement Certificate 120
College Administration.....249
College Academic Calendar..... ii, 31
College Faculty & Staff Catalog.....229
College Federal Work Study Program 14
College Funded Student Employee.....14
College Leadership 249
College Level Examination Program (CLEP).....28
College of St. Scholastics.....36
College Mission 55
Commercial Electrician Installer Certificate.....107
Common Student Learning Outcomes (CSLOs).....56
Communication Studies (COM) Courses.....168
Communication Skills for the Professional Certificate.....95
Communication Studies Certificate 96
Community Health Worker Certificate.....55, 116
Community Nutrition Worker Certificate 127
Community Public Health (CPH) Courses.....169
Community Public Health (AA) Degree.....117
Complaint Regarding any Disability Accommodation
(Non-employee Related), Concern or 46
Complaint with a Specific Office,
Student Concern or.....46
Computer Aided Drafting (CAD) Certificate.....107
Computer Business Applications (AAS) Degree 97
Computer Business Applications (CBA) Courses.....160
Computer Business Applications Specialist
Certificate.....96
Computer Information Systems (CIS) Courses.....163
Computer Programming Certificate 99
Computer Technology, Engineering & Math.....96
Computing Your G.P.A. Worksheet 44
Concern or Complaint Regarding any Disability
Accommodation (Non-employee Related).....46
Concern or Complaint with a Specific Office, Student.....46
Concurrent Enrollment: Non-Resident Tuition.....8
Concurrent Enrollment Program(s).....38, 126
Conferring a Second Degree 34
Counseling/Personal Development (CPD) Courses.....169
Course Delivery 145
Course Descriptions.....144
Course Numbering System 27
Courses for Programs with Special Requirements.....145
Credit/No Credit 44
Credit by Evaluation 27
Credit by Examination 28
Critical Care for Paramedics Certificate 131
Cross Listed Courses 146
Culinary Arts Certificate I 88
Culinary Arts Certificate II 88
Culinary Arts (CUL) Courses 170
Culinary Arts (AAS) Degree 89
Customer Service, Central Help Desk 52

D

Dean's and Honors List 31
Declaration of Civility for a Learning College 46
Degrees by Area of Interest 2
Degrees & Certificates.....57
Degree and Certificate Information 58
Diabetes Care and Education Certificate 128
Diesel/Heavy Equipment (DIE) Courses 174
Diesel Technology 56
Diesel Technology Certificate I 107
Diesel Technology Certificate II.....108
Diesel Technology (AAS) Degree 108
Dietary Managers Training Program Certificate.....55
Dietetic Technician Degree.....55
Dietetic Technician (AAS) Degree, Nutrition and.....129
Digital Media Arts (DMA) Courses.....172
Digital Media Arts (AAS) Degree 139
Directions, Our.....55
Disability Accommodation, Concern or Complaint.....46
Disability Accommodation, Obtaining 53
Drafting (DFT) Courses.....174
Driver Operator Certificate 118
Dropping or Adding Classes.....30
Dual Credit (Special Admit) 7
Dual Enrollment (Special Admit) 6

E

Early Childhood Education Certificate 101
Early Childhood Education (ECE) Courses.....179
Early Childhood Education (AA) Degree.....100
Early Childhood Education (AAS) Degree.....55, 101
Early Childhood Education Infant Toddler Certificate 102
Early Childhood Education
Infant Toddler (AAS) Degree 103
Early Childhood Education Professional
Development Certificate 103
Economics (ECN) Courses 179
Education 55
Education (EDU) Courses.....179
Electricity (ELC) Courses.....182
Electronics (ELT) Courses.....182

Elementary Education (AAEE) Degree 104
Emergency Medical Services....55
Emergency Medical Services (EMS) Courses 182
Employment Services, Career and Student....14, 48
EMT Certificate, Basic 130
Engineering (EGR) Courses....179
English (ENG) Courses....185
English as a Second Language (ESL) Courses 186
English as a Second Language (ESL) Program....3, 28, 186
Enrollment Checklist....5
Entertainment Industry Technology (EIT) Courses 180
Entry Level Welder GMAW/FCAW Certificate....114
Entry Level Welder SMAW Certificate....114
Environmental Science (ENV) Courses....186
Equine Management and Training Certificate 83
Equine Management and Training (AAS) Degree 83
ESL, English as a Second Language Classes....3, 28, 186
Exception to Policy 43
Excused Absences....43

F

Faculty and Staff Catalog....229
Family Education Rights and Privacy Act (FERPA) 42
Fashion Institute of Design & Merchandising 36
Federal Financial Aid Programs....11
Federal Work Study Program....14
FERPA, Family Education Rights and Privacy Act....42
Financial Aid....11
Financial Aid Contact Information 13
Fine Arts (AA) Degree....137
Fire Officer 1 Certificate 118
Fire Science Technology (FSC) Courses 186
Fire Science Technology (AAS) Degree....120
Firefighter Operations Certificate 119
Fondazione Marco Polo SRL - Italy 36
Food Services....32
Foundation Scholarships....13
Frontier Nursing University....36
Fundamentals of Pipe Welding Certificate 111
Fundamentals of Structural Welding Certificate....112

G

G.P.A. Worksheet, Computing Your 44
GED Courses (see HSE) 190
GED (HSE) Tests....28
GED/HSE- High School Equivalency Program....3, 28
General Education Development
(GED, HSE) Courses 190, 198
General Eligibility....11
Geography (GEO)/ Physical Geography Courses....191
Geology (GLG) Courses 191
Grade Change/Appeal....44
Grade Point Averages, Calculation of....44
Grading Information 43
Grade Change/ Appeal....44
Graduation with Honors....31
Graduation, Application for 34
Grand Canyon University 36
Graphic Design Certificate....138

H

Health Careers....55, 116
Health Careers Center (HCC) Courses 191
Health Information Management (HIM) Courses....193
Health Information Technology (AAS) Degree....55, 121
Heavy Equipment Operators....56
Heavy Equipment Operations (HEO) Courses....192
Heavy Equipment Operator (AAS) Degree 110
Heavy Equipment Operator Level I Certificate 109
Heavy Equipment Operator Level II Certificate....109
Help Desk Services, Central 52
High School Equivalency (HSE) Courses....190, 198
High School Equivalency Classes....3, 28
History (HIS) Courses....195
Honors (HNR) Courses....196
Honors Program....31
Honors Scholarship....31
Hospitality Management (HRM) Courses 197
Hotel and Restaurant Management Certificate 90
Hotel and Restaurant Management (AAS) Degree....91
Housing, On-Campus....28, 48
Housing & Residence Life....28, 48
How to Apply....11
Humanities (HMC, HMS) Courses....196

I

I'm Almost Done With My Degree/Certificate....33
I Have My Schedule: Now What Do I Need to Know....29
Incomplete (I) Grade....43
Index 250
Industrial Carpentry Certificate 110
Infant Toddler Certificate, Early Childhood Education 102
Infant Toddler (AAS) Degree, Early
Childhood Education 103
Information Services- Service & Support Desk 52
Institutional Scholarship 12
Instructor Consent....27
Intercollegiate Athletics 48
Intercultural Travel Programs....49
Interdisciplinary Studies (IDS) Courses....198
International Students, Admission of
F-1 Nonimigrant Students....6
Internships 48, 146
Iron Working (IRW) Courses 198

J

Justice Certificate, Administration of 135
Justice (AA) Degree, Administration of 135
Justice Studies (AAS) Degree....136

K

L

Law Enforcement/Administration of Justice
(See Administration of Justice) 135
Learning Support Department....53
Library 53
Licensed Massage Therapy (LMT) Courses 199

Lifelong Learning 3
Literature (LIT) Courses 198
Live Audio and Lighting Certificate 140
Live Audio and Lighting (AAS) Degree 140
Living On Campus (see Meal Plan Options) 32

M

Make-up Assignments and Exams 43
Management Certificate 92
Manufacturing Engineering Technology (MET) Courses 204
Massage Therapy (AAS) Degree 123
Massage Therapy Certificate 122
Mathematics (MAT) Courses 201
Meal Plan Options, Living On Campus 32
Medical Assistant Certificate 124
Medical Assistant (MDA) Courses 203
Medical Assistant (AAS) Degree 55, 124
Medical Lab Technician (MLT) Courses 206
Medical Laboratory Technician (AAS) Degree 125
Military Experience (see Veteran Educational Benefits) 13, 27
Mission, Our 55
Music History and Literature ((MHL) Courses 207
Music Performance (MUP) Courses 208
Music Theory and Composition (MTC) Courses 208

N

Network Systems Administration (Certificate) 97
Networking Technologies (AAS) Degree 98
New Mexico Resident Tuition Waiver Program 8
New Student Orientation 27
No Show During Drop/Add Period 30
No Show Reporting During Drop/Add Period 43
Non-Credit Classes 43
Northcentral University 36
Northern Arizona University 37, 39
Numbering System (SUN), Shared Unique 9, 35, 146
Nursing Certificate and Degree 56
Nursing (NUR) Courses 213
Nursing (AAS) Degree 126
Nutrition/Dietetics (NTR) Courses 210
Nutrition and Dietetic Technician (AAS) Degree 129
Nutrition and Foodservice Professional Training Program Certificate 128
Nutrition and Health Promotion Certificate 129

O

Off-Campus Employment 14
Office Automation Systems (OAS) Courses 214
Official Residency Guidelines 7
Online Registration 26
Operator's Apprenticeship Program Certificate, Sundt 115
Opportunities Beyond The Classroom 47
Ottawa University 37
Our Directions 55
Our Mission 55
Our Values 55
Our Vision 55
Out-of-County Residence Affidavit 8

P

Paying for College: What Are My Options? 10
Payment of Financial Aid 12
Payment Options 14
Palmer College of Chiropractic 37
Paramedicine Certificate 131
Paramedicine (AAS) Degree 131
Paramedicine Program Degree/Certificate 55
Pharmacy Technician Certificate 56, 133
Pharmacy Technician (PHT) Courses 217
Phi Theta Kappa 31
Philosophy (PHI) Courses 217
Physical and Biological Lab Science Courses 59
Physical Education Activity (PAC) Courses 214
Physical Education (PED) Courses 215
Physical Education Health (PEH) Courses 216
Physical Education Varsity Sports (PEV) Courses 216
Physical Geography (See Geography) 191
Physical Lab Science Courses 59
Physics (PHY) Courses 218
Pipefitting/Pipe Welding Certificate 111
Pipefitting/Pipe Welding Technology (AAS) Degree 112
Placement Testing 26
Plagiarism 42
Political Science (POS) Courses 218
Popular Music Performance Certificate 141
Popular Music Performance (AAS) Degree 141
Prerequisites and Corequisites 27, 145
Prescott College 37
President Welcome Letter (see Welcome from the President) i
Program Requirements 9
Programs with Special Requirements, Courses for 145
Proof of Residency 8
Psychology (PSY) Courses 219
Punctuality 43

R

Radiography Degree 56
Radiologic Technology (AAS) Degree 133
Radiology (RAD) Courses 220
Reading (RDG) Courses 221
Reading Proficiency Requirement 26
Recording Engineering Certificate 142
Recording Engineering (AAS) Degree 142
Recreation and Tourism Management (AA) Degree 93
Recreation Management Certificate 92
Recreation (REC) Courses 222
Refunds, Tuition 30
Registration: I'm a CAC Student, Now What? 25
Registration Information 26
Registration, Online 26
Renewable Energy Technology (RET) Courses 222
Repayment Guidelines for Federal Financial Aid Recipients 12
Repetition of Courses 30

Residence Life, Housing & 28, 48
Residency Guidelines/Official Residency Guidelines 7

S

Satisfactory Academic Progress for Federal Financial Aid Recipients 11
Satisfactory/Unsatisfactory 44
Scholarship(s) 12, 13, 31, 38
Scholarship Opportunities 12
Science (SCI) Courses 222
Serving Pinal County (Campus Location Descriptions) ... iii, iv
Sexual Misconduct (see Title IX) 45
Shared Unique Numbering (SUN) System 35, 146
Sign Language (SLG) Courses 222
Social Work Undergraduate (SWU) Courses 224
Sociology (SOC) Courses 223
Software Development (AAS) Degree 99
Southern New Hampshire University 37
Spanish (SPA) Courses 223
Special Admit (Admission of Students Under the Age of 18) 6
Special Courses 146
Sports Management (AA) Degree 94
Standards of Satisfactory Academic Progress 11
Staff and Faculty Catalog 229
Structural Welding Technology (AAS) Degree 113
Student Accessibility Services 53
Student Clubs & Organizations 50
Student Code of Conduct & Student Handbook 42, 46
Student Concern or Complaint with a Specific Office 46
Student Employee, College Funded 14
Student Employment 14, 48
Student Engagement and Activities 49
Student Government Association (SGA) 49
Student Handbook, Student Code of Conduct 42
Student Records 42
Student Resources: Where Do I Go For Help 51
Student Rights & Responsibilities 41
Student Services 46
Student Support Services, TRIO 49
Student Right to Know 42
Summer Bridge, TRIO 49
SUN System, Arizona Shared Unique Numbering 35
Sundt Construction Operator's Apprenticeship Certificate 115

T

Table of Contents v
Technology 56
Test of English as a Foreign Language (TOEFL) 6
Theater (THE) Courses 224
Time Limit for Course Work, University Department 31
Title IX 45
Transfer Admission Guarantee (TAG) 37
Transfer Agreement Options 35
Transfer Information, Arizona 34
Transfer of Credits 9
Transfer Students 8
Transferable Degrees 58
Transferring Credits from CAC 9
Transferring Credits to CAC 9
Travel Programs, Intercultural 49
TRIO Student Support Services 13, 49, 52
TRIO Summer Bridge 49
TRIO Upward Board 49
Tuition & Fees Schedule 15
Tuition Refunds 30

U

Unexcused Absences 43
University of Arizona 37, 40
University of Maryland University College 37
University of Phoenix 37
University of the Potomac 37
University Department Time Limit for Coursework 31
Unsatisfactory (U) Grade 30
Upper Division Course Transfer 9
Upper Iowa University 37
Upward Bound, TRIO 49

V

Values, Our 55
Veteran Education Information 9, 13, 26, 52
Veterans Educational Benefits 13
Vision, Our 55

W

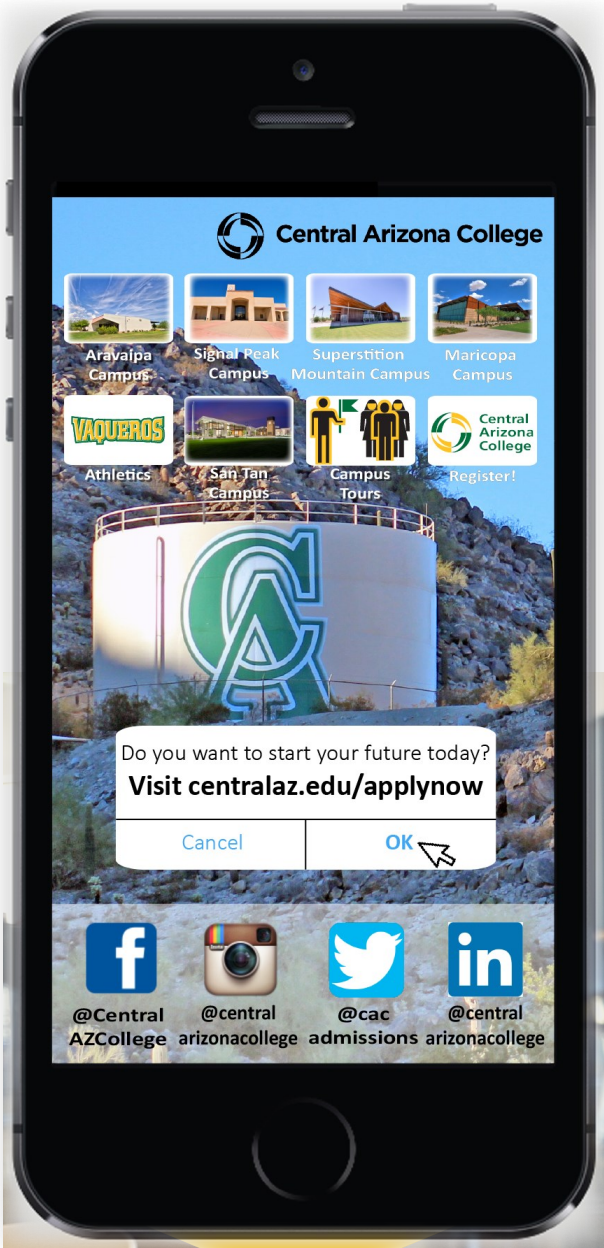
Web Design Certificate 100
Weekend College 3
Welcome From the President i
Welding 56
Welding Certificate, Fundamentals of Pipe 111
Welding Certificate, Fundamentals of Structural 112
Welding Certificate, Pipefitting/Pipe 111
Welding (WLD) Courses 224
Welding Technology (AAS) Degree 114
Welding Technology (AAS) Degree, Pipefitting/Pipe 112
Welding Technology (AAS) Degree, Structural 113
Western International University 37
Western Undergraduate Exchange Program (W.U.E.) 8
Wildland Firefighter I Certificate 119
Withdrawal/Repayment Guidelines for Federal Financial Aid 12
Withdrawal Timeline 30
Withdrawal While Failing (WF) Grade 43
Withdrawing from Classes/College 30
Women and Gender Studies (WGS) Courses 224
Work Study Program, College Federal 14

X

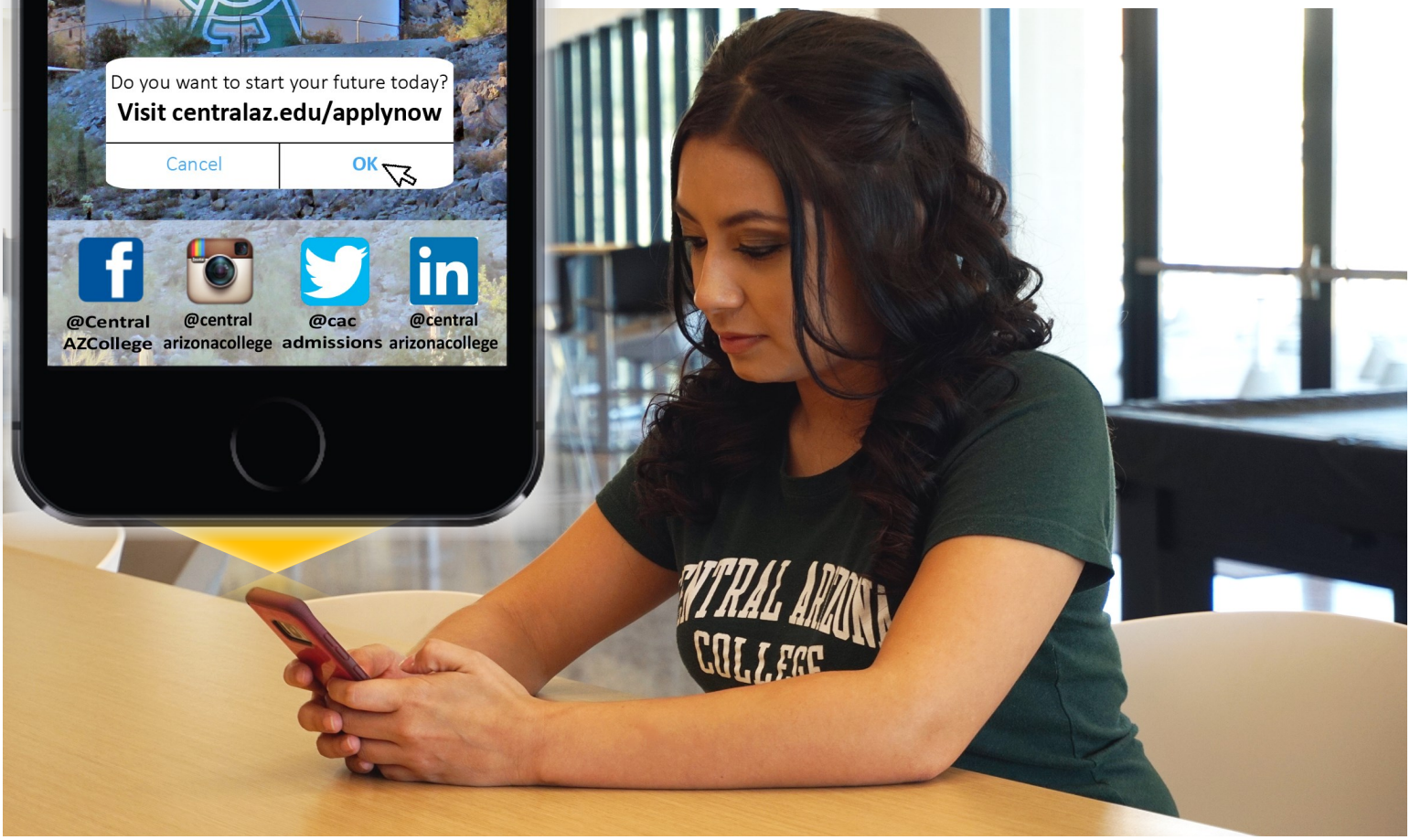
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