



The third paragraph on Page 22 of the **Student Services** Section should read as follows:

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

\*\*\*\*\*

Following is an updated list of Programs of Study:

**PROGRAMS OF STUDY PAGE 67**

**Accounting**

|                          |    |
|--------------------------|----|
| Accounting (A.A.S.)      | 69 |
| Accounting (Certificate) | 70 |

**Administration of Justice**

|  |    |
|--|----|
| Administration of Justice Studies (A.A.) | 70 |
| Administration of Justice (A.A.S.)       | 72 |
| Administration of Justice (Certificate)  | 73 |

**Agriculture**

|                                    |    |
|------------------------------------|----|
| <b>Agriculture (A.A.)</b>          | 74 |
| Agriculture (A.S.)                 | 75 |
| Agriculture Business (Certificate) | 76 |
| Agriculture General (A.A.S.)       | 77 |
| Agriculture General (Certificate)  | 78 |

**Animal Science**

|  |    |
|--|----|
| Equine Management and Training (A.A.S.)      | 79 |
| Equine Management and Training (Certificate) | 80 |

**Business**

|   |     |
|---|-----|
| Business (A.A.S.)                             | 81  |
| Business (Certificate)                        | 82  |
| Management (Certificate)                      | 82  |
| Hotel and Restaurant Management (A.A.S.)      | 83  |
| Hotel and Restaurant Management (Certificate) | 84  |
| Recreation and Tourism Management (A.A.)      | 140 |
| See Sports and Fitness                        |     |
| Recreation Management (Certificate)           | 141 |
| See Sports and Fitness                        |     |

**Chemistry**

|                         |    |
|-------------------------|----|
| <b>Chemistry (A.S.)</b> | 85 |
|-------------------------|----|

**Computer**

|  |     |
|--|-----|
| Application Development and Web Design (Certificate) | 86  |
| Computer Aided Design (Certificate)                  | 143 |
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|  |    |
|--|----|
| Computer Applications for Business Users (Certificate)       | 86 |
| Computer Programming (A.A.S.)                                | 87 |
| Computer Programming (Certificate)                           | 88 |
| Microcomputer Business Applications (A.A.S.)                 | 88 |
| Microcomputer Business Applications Specialist (Certificate) | 89 |
| Network Administration (Certificate)                         | 90 |

**Creative Arts**

|  |    |
|--|----|
| Entertainment Industry Technology (EIT) – Artist and Venue Management (A.A.S.) | 91 |
| EIT – Artist and Venue Management (Certificate)                                | 92 |
| EIT – Live Audio and Lighting (A.A.S.)   | 92 |
| EIT – Live Audio and Lighting (Certificate)                                    | 93 |
| EIT – Popular Music Performance (A.A.S.)                                       | 94 |
| EIT – Popular Music Performance (Certificate)                                  | 95 |
| EIT – Recording Engineering (A.A.S.)   | 95 |
| EIT- Recording Engineering (Certificate)                                       | 96 |
| Fine Arts (A.A.)   | 97 |
| Graphic Design (A.A.S.)  | 98 |

**Culinary Arts**

|                                |     |
|--------------------------------|-----|
| Culinary Arts (A.A.S.)         | 99  |
| Culinary Arts I (Certificate)  | 100 |
| Culinary Arts II (Certificate) | 101 |

**Diesel/Heavy Equipment**

|   |     |
|---|-----|
| Diesel and Heavy Equipment Technology (A.A.S.)      | 101 |
| Diesel and Heavy Equipment Technology (Certificate) | 102 |
| Heavy Equipment Operator (A.A.S.)                   | 103 |
| Heavy Equipment Operator (Certificate)              | 104 |

**Education**

|  |     |
|--|-----|
| Early Childhood Education – Family Childcare (A.A.S.)      | 105 |
| Early Childhood Education – Family Childcare (Certificate) | 106 |
| Early Childhood Education – Infant/Toddler (A.A.S.)        | 106 |
| Early Childhood Education – Infant/Toddler (Certificate)   | 107 |
| Early Childhood Education – Management (A.A.S.)            | 108 |
| Early Childhood Education – Management (Certificate)       | 109 |
| Early Childhood Education – Preschool (A.A.S.)             | 109 |
| Early Childhood Education – Preschool (Certificate)        | 110 |
| Early Childhood Education – School-Age (A.A.S.)            | 111 |
| Early Childhood Education – School-Age (Certificate)       | 112 |



Elementary Education (A.A.E.E.) 112

**Emergency Medical Services**

Basic EMT (Certificate) 114  
 Critical Care for Paramedics (Certificate) 115  
 Paramedicine (A.A.S.) 115

**Fire Services**

Basic Firefighter (Certificate) 116  
 Fire Science Technology (A.A.S.) 117  
 Wildland Firefighter I (Certificate) 118

**Geology and Planetary Science**

Geology and Planetary Science (A.S.) 118

**Health Careers Center**

Clinical Laboratory Assistant (Certificate) 119  
 Coding and Reimbursement (Certificate) 120  
 Health Information Technology (A.A.S.) 121  
 Massage Therapy (A.A.S.) 122  
 Massage Therapy (Certificate) 123  
 Medical Assistant (A.A.S.) 123  
 Medical Assistant (Certificate) 124  
 Pharmacy Technician (Certificate) 125

**Manufacturing**

Field Programmable Gate Array (FPGA) Certificate  
 Page 6 in Addendum  
 LabVIEW Programming Certificate  
 Page 6 in Addendum  
 Manufacturing Electronics (Certificate) 126  
 Manufacturing Engineering (A.A.S.) 127  
 Nanofabrication Technology (A.A.S.) 128

**Nutrition and Dietetics**

Community Nutrition Worker (Certificate) 129  
 Diabetes Care and Education (Certificate) 130  
 Dietary Manager Training Program (Certificate) 130  
 Dietetic Technician (A.A.S.) 131  
 Nutrition and Health Promotion (Certificate) 131

**Renewable Energy Technology**

Biofuels Technician (Certificate) 132  
 Renewable Energy Technology (A.A.S.) 132  
 Solar Photo Voltaic Technician (Certificate) 133

**Sports and Fitness**

Athletic Studies (A.A.) 134  
 Athletic Training Education Program (A.A.) 135  
 Group Fitness Instructor (Transfer Pathway) 137  
 Group Fitness Instructor (Certificate) 138  
 Personal Trainer (Transfer Pathway) 138  
 Personal Trainer (Certificate) 139  
 Recreation and Tourism Management (A.A.) 140

Recreation Management (Certificate) 141  
 Sports Information (Certificate) 142  
 Sports Management (A.A.S.) 142

**Technology**

Computer Aided Design (Certificate) 143  
 Welding (Certificate) 144

**PROGRAMS WITH SPECIAL REQUIREMENTS**

The following degrees and certificates also are offered at Central Arizona College; however, they have special requirements which must be fulfilled before enrollment. Please see the individual listing for specific information.

**Agriculture**

Farm Business Management (Certificate) 145

**Corrections**

Advanced Corrections (Certificate) 145  
 Corrections (A.A.S.) 146

**Diesel/Heavy Equipment**

Heavy Equipment Mechanic's Apprenticeship Program 147  
 John Deere Construction and Forestry Equipment Technology (A.A.S.) 147  
 John Deere TECH (A.A.S.) 148  
 Operator's Apprenticeship Program – Associated General Contractors (Certificate) 149

**Health Careers**

Diagnostic Medical Sonography (A.A.S.) 150  
 Diagnostic Medical Sonography (Certificate) 151  
 Nursing (A.A.S.) 152  
 Practical Nursing (Certificate) 153  
 Radiologic Technology (A.A.S.) 153

**Law Enforcement**

Central Arizona Regional Law Officer's Training Academy - CARLOTA (Certificate)  
 See AJS Certificate under Administration of Justice 73

Also see Advanced Corrections Certificate and Corrections A.A.S. Degree under Corrections 145



## HUMANITIES

### Page 207

The following course has **no prerequisites**.

#### HMS200 Comparative Cultures and Society

3 Credits (3 Lectures)

A focused study of a given country and its people, involving a survey of culturally significant aspects of that country. The selected country will vary.

## MATHEMATICS

### Page 211

**Credit value, credit breakdown and course description updated.**

#### MAT090 Math Help 911

1 Credits (1 Lecture)

Instructional assistance to strengthen student's math concepts and study skills in their 082, 086 or 092 math course(s). May be repeated for a total of six (6) credits with Instructor Consent.

## NURSING

### Page 215

**Clarification of prerequisites and corequisites.**

#### NUR222 Nursing in Organizational Transitions

8 Credits (4 Lectures, 12 Labs )

Focus on the patient with complex health problems and their family/caregiver(s) and perform higher-level nursing skills. Application of evidence-based clinical practice and Meleis transitions theory within organizational settings.

*Prerequisites:* NUR221, SOC100, NTR200, BIO205.

*Corequisites:* MAT121 **or MAT141** or higher MAT course; Humanities course; PAC or DAN course (1).

## AGRICULTURE

### AGRICULTURE A.A.

#### Page 74

**Clarification of AGEC-A requirements.**

#### Total Credits: 64

Students pursuing this Agriculture A.A. Degree may transfer to a university to pursue a Bachelor of Arts Degree in Agriculture.

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

##### Written Communications (6)

ENG101 English Composition III (3)

ENG102 English Composition IV (3)

*For the following five categories, select AGEC courses.*

##### Oral Communications (3)

*Select a COM Course.*

##### Arts and Humanities (6-9)

###### Arts (3)

*(Fulfilled in the core requirements)*

###### Humanities (3)

*Select a Humanities course.*

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

*Select courses from two different disciplines.*

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

*Select courses with a laboratory component.*

##### Mathematics (3-4)

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

##### AGEC Special Requirements (0-9)

*Select AGEC courses to fulfill these requirements.*

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

Note: Courses used in other areas, such as Oral Communications, Arts and Humanities, Social and



Behavioral Sciences, or Transfer Electives, may also be used to satisfy requirements in these three categories. A course may not be used to satisfy more than one special requirements category.

### Core Requirements (10)

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

### Electives (19)

Select 19 credits from college-level courses numbered 100 or higher to meet the Degree requirement. All electives must transfer to the chosen university or the student will be required to take additional credits at the university. Consult the CEG to determine course equivalency at the university.

### Other Requirements

Reading Competency: RDG094 College Reading

### Computer Competency (3):

AGB124 Microcomputers in Agriculture  
(Fulfilled in Core Requirements)

Grade of "C" or better in each A.A. Degree required course.

Minimum of 20 credits completed at CAC including 12 credits in the AGEC-A.

### Other A.A. Degree Requirements

Some A.A. Degrees require up to 16 credits of a Second Language to demonstrate proficiency. Many four-year degrees require either a second semester or fourth semester level of a second language and strongly encourage students to complete this requirement at the community college prior to transfer.

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

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

### Subject Options

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

This A.A. Degree requires 64 semester credits.

## CHEMISTRY CHEMISTRY A.S.

Page 85

Clarification of AGEC-S requirements.

Total Credits: 60-64

The Associate of Science in Chemistry (A.S.) Degree is appropriate for students who plan to transfer to the university to earn a baccalaureate degree in physical science areas such as Chemistry and related pre-professional programs. It is also appropriate for students interested in becoming lab technicians.

### General Education Requirements AGEC-S (35-37)

#### Written Communications (6)

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

For the following two categories, select courses from the equivalent category on the AGEC course list.

#### Arts and Humanities (6)

Select one Arts (3) and one Humanities (3) course.

#### Social and Behavioral Sciences (6)

Select courses from two different disciplines.

#### Physical and Biological Sciences (8)

CHM151 General Chemistry I (4)  
CHM152 General Chemistry II (4)

#### Mathematics (3)

MAT221 Analytical Geometry and Calculus I (4) or higher MAT course

#### Subject Options (6-8)

MAT231 Calculus with Analytical Geometry II (4)  
MAT241 Analytical Geometry and Calculus III (4)  
MAT262 Ordinary Differential Equations (3)  
BIO181 General Biology I (4)  
BIO182 General Biology II (4)  
BIO205 Microbiology (4)

#### Special Requirements (0-9 Credits)

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 emphasizing Global/International Awareness or Historical Awareness.

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

### Core Requirements (16)

CHM235 Organic Chemistry I (4)

CHM236 Organic Chemistry II (4)

PHY121 University Physics I: Mechanics (4)

PHY122 University Physics II: Electricity and Magnetism (4)

### Transferable Electives (0-12)

Based on your major, consult the Transfer Guide at <http://www.aztransfer.com/TransferGuides> and select mathematics courses above the second course in the calculus sequence and/or Science courses from: Astronomy, Biology, Chemistry, Engineering, Environmental Science, Geology, or Physics.

Select elective credits that transfer to the chosen university to meet 60-64 credit Degree requirement.

### Other Requirements (3)

Reading Competency: RDG094 College Reading

### Computer Competency (3):

CIS110 or higher CIS Computer Competency course

EGR102, AGB124 or Computer Competency course

(Consult CEG for transferability)

Grade of "C" or better in each A.S. Degree-required course  
Minimum of 20 credits completed at CAC including 12 AGEC-S credits.

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

The Associate of Arts in Elementary Education (A.A.E.E.) Degree is appropriate for students who require practical and professional skills and knowledge that can lead to upper division programs in elementary and special education, and prepares para-educators.

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

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

### Recommended Proficiencies

Reading and math scores or courses that are needed for college level coursework in math and English.

### AGEC-A (35)

The AGEC-Associate of Arts satisfies requirements in many liberal arts programs and other programs that articulate with the A.A. Degree. AGEC-A requires a minimum of College Mathematics plus 32 credits from specific AGEC categories.

For the eight categories directly below, choose the recommended courses or courses from the equivalent category on the AGEC course list in CAC's catalog.

### Written Communications (6)

ENG101 English Composition III (3) (SUN ENG 1101)

ENG102 English Composition IV (3) (SUN ENG 1102)

### Oral Communications (3)

COM100 Fundamentals of Human Communication (3) (SUN COM 1100) or higher

### Arts (6)

Select courses from two different AGEC-approved Arts disciplines.

### Humanities (3)

### Social and Behavioral Sciences (6)

HIS101 United States History I (3)

ECE276 Child Development (3)

### Biological/Life Lab Sciences (4)

Select one of the following courses:

AGS101 World of Plants (4)

AGS104 Agricultural Environmental Science (4)

AGS106 Entomology (4)

## EDUCATION

### ELEMENTARY EDUCATION

#### A.A.E.E.

#### Page 112

Clarification of SUN Courses as per State requirement and additional computer competency course option of EGR102.

**Total Credits: 60-64**





AGS130 Plant Science (4)  
 AGS221 Soil Science (4)  
 BIO100 Biology Concepts (4)  
 BIO156 Human Biology for Allied Health (4)  
 BIO160 Introduction to Human Anatomy/Physiology (4)  
 BIO181 General Biology I (4) (SUN BIO 1181)  
 BIO182 General Biology II (4) (SUN BIO 1182)  
 BIO201 Human Anatomy and Physiology I (4) (SUN BIO 2201)  
 BIO202 Human Anatomy and Physiology II (4) (SUN BIO 2202)  
 BIO205 Microbiology (4) (SUN BIO 2205)  
 NTR141 Nutrition and Wellness (4)

### Physical Lab Sciences (4)

Select one of the following courses:

AST101 Survey of Astronomy (4)  
 CHM130 Fundamental Chemistry (4) (SUN CHM 1130)  
 CHM151 General Chemistry I (4) (SUN CHM 1151)  
 CHM152 General Chemistry II (4) (SUN CHM 1152)  
 CHM230 Fundamental Organic Chemistry (4) (SUN CHM 2230)  
 CHM235 General Organic Chemistry I (4) (SUN CHM 2235)  
 CHM236 General Organic Chemistry II (4) (SUN CHM 2236)  
 ENV101 Environmental Science (4)  
 GLG101 Physical Geology (4) (SUN GLG 1101)  
 GLG102 Historical Geology (4)  
 GLG110 Environmental Geology (4)  
 PHY100 Physical Universe (4)  
 PHY111 College Physics I (4) (SUN PHY 1111)  
 PHY112 College Physics II (4) (SUN PHY 1112)  
 PHY121 University Physics I: Mechanics (4) (SUN PHY 1121)  
 PHY122 University Physics II: Electricity and Magnetism (4) (SUN PHY 1131)

### Mathematics (3)

MAT141 College Mathematics (4) or higher

### Special Requirements (0-9)

Select AGECE 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).  
 Recommend: EDU230 Cultural Values in Education (3)
3. At least three semester credits of coursework emphasizing Global/International Awareness or Historical Awareness.  
 Recommend: HIS101 United States History I (3) (Can be fulfilled under Social and Behavioral Sciences)

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 these three categories. A

course may not be used to satisfy more than one special requirements category.

### Subject Options (0-6 credits)

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

### Core Requirements (18)

EDU221 Introduction to Education (3)  
 EDU222 Introduction to Special Education (3)  
 EDU230 Cultural Values in Education (3)  
 EDU240 Provisional Structured English Immersion (SEI) (3)  
 MAT201 Math for Elementary Teachers I (3)  
 MAT202 Math for Elementary Teachers II (3)

### Specialty Requirements (6 credits)

Select two of the following courses for Upper Elementary majors:

EDU/ENG205 Introduction to the Study of Language (3)  
 EDU225 Relationships in the Classroom (3)  
 EDU228 Behavior Management (3)  
 EDU/LIT291 Children's Literature for Educators (3)

OR

Select two of the following courses for Early Childhood K-3 Teaching majors:

ECE176 Early Childhood Development and Theories (3)  
 ECE271 Creating Early Childhood Environments (3)  
 EDU/ENG291 Children's Literature for Educators (3)

OR

Select two of the following courses for Special Education majors:

EDU225 Relationships in the Classroom (3)  
 EDU228 Behavior Management (3)\*  
 EDU/LIT291 Children's Literature for Educators (3)  
 \*Highly Recommended

### Other A.A.E.E. Degree Requirements

Reading Competency (3): RDG094 College Reading (3)

### Computer Competency (3):

AGB124 Microcomputers in Agriculture (3)  
 CIS120 Survey of Computer Information Systems (3) (SUN CIS 1120)  
 OR EGR102 Introduction to Engineering (3) (SUN EGR 1102)  
 OR Computer Competency course



## Other Degree Requirements

For students who plan to transfer to a four-year baccalaureate degree program, some programs require demonstrated proficiency in a Second Language, i.e. up to 16 credits of a Second Language to demonstrate proficiency. Many four-year degrees require either a second semester or fourth semester level of a second language and strongly encourage students to complete this requirement at the community college prior to transfer.

Check your university catalog, Transfer Guides at <http://www.aztransfer.com/TransferGuides>, or meet with an academic advisor regarding your major's second language requirement. Students may demonstrate proficiency by completion of coursework and/or a proficiency test.

Grade of C or better in each A.A.E.E. degree required course  
Minimum of 20 credits completed at CAC including one-third of AGEC-A credits.

The Associate of Arts in Elementary Education Degree requires 60-64 credits.

# GEOLOGY AND PLANETARY SCIENCE

## GEOLOGY AND PLANETARY SCIENCE

A.S.

Page 118

*Clarification of AGEC-S Requirements.*

### Total Credits: 60-64

The Associate of Science in Geology (A.S.) Degree prepares students to transfer to a university to earn a baccalaureate degree in Geology or related fields.

### General Education Requirements AGEC-S (35-37)

#### Written Communications (6)

ENG101 English Composition III (3)

ENG102 English Composition IV (3)

*For the following two categories, select courses from the equivalent category on the AGEC course list.*

#### Arts and Humanities (6)

*Select one Arts (3) and one Humanities (3) course.*

#### Social and Behavioral Sciences (6)

*Select courses from two different disciplines.*

#### Physical and Biological Sciences (8)

AST101 Astronomy (4)

GLG101 Physical Geology (4)

#### Mathematics (3)

MAT221 Analytical Geometry and Calculus I (4) or higher MAT course

#### Subject Options (6-8)

ENV101 Environmental Science (4)

GLG102 Historical Geology (4)

GLG110 Environmental Geology (4)

#### Special Requirements (0-9 Credits)

*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 emphasizing Global/International Awareness or Historical Awareness.

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

#### Core Requirements (20)

CHM151 General Chemistry I (4)

CHM152 General Chemistry II (4)

MAT231 Calculus with Analytical Geometry II (4)

PHY121 University Physics I: Mechanics (4)

PHY122 University Physics II: Electricity and Magnetism (4)

#### Transferable Electives (0-8)

Based on your major, consult the Transfer Guide at <http://www.aztransfer.com/TransferGuides> and select mathematics courses above the second course in the calculus sequence and/or Science courses from: Astronomy, Biology, Chemistry, Engineering, Environmental Science, Geology, or Physics.

Select elective credits that transfer to the chosen university to meet 60-64 credit Degree requirement. (Consult the CEG.)

#### Other Requirements (3)

Reading Competency: RDG094 College Reading

**Computer Competency (3):**

CIS110 or higher CIS Computer Competency course  
EGR102, AGB124 or Computer Competency course

Grade of "C" or better in each A.S. Degree-required course  
Minimum of 20 credits completed at CAC including 12 AGEC-S credits.

The Geology and Planetary Associate of Science Degree requires 60-64 credits.

## MANUFACTURING

### FIELD PROGRAMMABLE GATE ARRAY (FPGA) CERTIFICATE

*New to 2012-2013 Catalog*

*Signal Peak Campus*

#### Total Credits: 18

The Field Programmable Gate Array (FPGA) Certificate provides the basis for an entry-level career or the professional training required of a working engineer. FPGA, embedded fundamentals and MicroBlaze processor applications are emphasized.

#### Recommended Proficiencies

Computer programming and basic electronics coursework prepare students for success in this Certificate program.

#### Core Requirements (18)

|        |                                  |
|--------|----------------------------------|
| ELT128 | FPGA Fundamentals (3)            |
| ELT223 | Microcontroller Fundamentals (3) |
| ELT260 | Advanced FPGA Concepts (3)       |
| ELT265 | MicroBlaze1 (3)                  |
| ELT270 | MicroBlaze2 (3)                  |
| ELT275 | Embedded Fundamentals (3)        |

#### Other Requirements

Grade of "C" or higher earned in each required course  
Cumulative grade point average of at least a 2.0 on a 4.0 scale  
Minimum of one-third of required Certificate credits completed at CAC

### LABVIEW PROGRAMMING CERTIFICATE

*New to 2012-2013 Catalog*

*Signal Peak Campus*

#### Total Credits: 16

The LabVIEW Certificate provides the basis for an entry-level career in the LabVIEW programming environment using National Instruments hardware.

#### Recommended Proficiencies

Computer programming and basic electronics coursework prepare students for success in this Certificate program.

#### Core Requirements (16)

|        |                               |
|--------|-------------------------------|
| MET261 | LabVIEW 1 Programming (3)     |
| MET262 | LabVIEW 2 Programming (3)     |
| MET263 | LabVIEW 3 Programming (3)     |
| MET264 | LabVIEW FPGA Applications (3) |
| MET265 | LabVIEW Overview (4)          |

#### Other Requirements

Reading Competency: RDG094 College Reading  
Grade of "C" or higher earned in each required course  
Cumulative grade point average of at least a 2.0 on a 4.0 scale  
Minimum of one-third of required Certificate credits completed at CAC

## SPORTS AND FITNESS

### ATHLETIC STUDIES A.A.

#### Page 133

*Clarification of AGEC-A requirements.*

#### Total Credits: 64

The A.A. Degree prepares students to transfer to a four-year college/university by completing the AGEC and gathering a broad background in sports, intercollegiate athletics, sports management, and exercise.

#### General Education Requirements (35)

##### AGEC-A

#### Written Communications (6)

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

#### Oral Communications (3)

*Select as AGEC Course*

#### Arts and Humanities (6-9)

*Select one Arts and one Humanities course from the AGEC list.*

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





Select AGEC courses from at least two different disciplines.

PEH101 Personal Health (3)

PSY101 Introduction to Psychology (3)

### Physical and Biological Sciences (8)

Select AGEC courses with a laboratory component.

### Mathematics (3)

Select one of the following:

MAT162 Applied Statistics (3)

MAT141 College Mathematics, Standard (4)

MAT151 College Algebra, Standard (4)

### Special Requirements (0-9 Credits)

1. At least three semester credits of coursework in Intensive Writing and Critical Inquiry; select courses from the AGEC list to fulfill this requirement.

2. At least three semester credits of coursework in Cultural Awareness (Ethnic/Race/Gender); select courses from the AGEC list to fulfill this requirement.

3. At least three semester credits of coursework emphasizing Global/International Awareness or Historical Awareness; select courses from the AGEC list to fulfill this 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 these three categories. A course may not be used to satisfy more than one special requirements category.

### Core Requirements (26)

PAC201J Advanced Weight Training (2)

PED100 History and Philosophical Foundations of Sport and Physical Education (3)

PED101 History of Intercollegiate Athletics (3)

PED102 The Management of Sports (3)

PED103 Foundations of Exercise (3)

PED105 Women and Sport in the U.S. (3)

PED112 Introduction to Strength Training (3)

PEH200 Sport Safety Training/CPD/AED for the Professional Rescuer (3)

### Select three of the following:

PED202A Team Sports Officiating Baseball (1)

PED202B Team Sports Officiating Basketball (1)

PED202C Team Sports Officiating Football(1)

PED202D Team Sports Officiating Soccer (1)

PED202E Team Sports Officiating Softball (1)

PED202F Team Sports Officiating Volleyball (1)

### Other Requirements (3)

Reading Competency: RDG094 College Reading

### Computer Competency (3):

CIS 120 Survey of Computer Information Systems (3)

OR

AGB124 Microcomputers in Agriculture (3)

Grade of "C" or better in each A.A. degree required course

Minimum of 20 credits completed at CAC including 12 AGEC-A credits

### Other A.A. Degree Requirements

Some A.A. Degrees require up to 16 credits of a Second Language to demonstrate proficiency. Many four-year degrees require either a second semester or fourth semester level of a second language and strongly encourage students to complete this requirement at the community college prior to transfer.

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

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

### Subject Options

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

This A.A. Degree requires 64 semester credits.

## RECREATION AND TOURISM MANAGEMENT A.A.

### Page 139

**Clarification of AGEC-A credit total requirements and other requirements.**

### Total Credits: 69

This A.A. Degree 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, destination management companies and other components of the tourism/commercial recreation industry. Since this Degree includes the AGEC-A, general education requirements, students may choose to



transfer the Degree to a university to earn additional credentials.

## General Education Requirements (35) AGEC-A

### Written Communications (6)

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

### Oral Communications (3)

COM263 Intercultural Communication (3)

### Arts and Humanities (6-9)

Select one Arts and one Humanities course from the AGEC list.

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

ECN202 Principles of Microeconomics (3)  
Select 3-6 additional credits from a different discipline.

### Physical and Biological Sciences (8)

ENV101 Environmental Science (4)  
NTR141 Nutrition and Wellness (4)

### Mathematics (3)

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

### Special Requirements (0-9)

Select AGEC courses to fulfill these requirements.

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

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

### Core Requirements (30)

BUS100 Introduction to Business (3)  
HRM100 Introduction to Hospitality (3)  
REC101 Leisure and the Quality of Life (3)  
REC108 Recreation Practicum (3)  
REC203 Leisure Delivery Systems (3)  
REC220 Intro to Nonprofit Youth and Human Service Agencies (3)  
REC230 Program Planning (3)  
REC250 Leadership in Recreation (3)

Select two of the following courses:

ACC201 Financial Accounting (3)  
BUS190 Principles of Management and Leadership (3)  
HRM102 Management of Guest Services (3)  
HRM208 Hospitality Law (3)

### Other Requirements (4)

Physical Education Activity (1) excluding varsity sports  
Reading Competency: RDG094 College Reading

### Computer Competency (3):

AGB124 Microcomputers in Agriculture (3)  
CIS110 Fundamentals of Computer Literacy or higher CIS course  
OR  
Computer Competency course

Other A.A. Degree Requirements

Some A.A. Degrees require up to 16 credits of a Second Language to demonstrate proficiency. Many four-year degrees require either a second semester or fourth semester level of a second language and strongly encourage students to complete this requirement at the community college prior to transfer.

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

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

### Subject Options

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

This A.A. Degree requires 69 semester credits.

## CORRECTIONS ADVANCED CORRECTIONS CERTIFICATE Page 145

Clarification of applied COTA Credits



Signal Peak Campus

### Total Credits: 39

This Advanced Corrections Certificate is designed to upgrade the skills and knowledge of Correctional Officers currently working in the corrections field.

#### Prerequisites:

RDG094, Successful completion of Arizona COTA Certificate (21 credits)

#### Core Courses (36)

##### COTA Certification (21)

BUS190 Principles of Management and Leadership (3)  
(\* May be fulfilled by successful completion of COTA Certificate)

COM101 Interpersonal Communication (3)

OR

COM263 Intercultural Communication (3)

POS220 U.S. and Arizona Constitutions (3)

PSY101 Introduction to Psychology (3)

SOC100 Introduction to Sociology (3)

#### Electives (3)

Choose One:

AJS101, AJS275; PHI112; CIS120; any SPA;

SOC200 or above; PSY200 or above

\*Corrections Officers who have the rank of Sergeant or higher are required to request that the Department of Corrections submit to CAC Admissions an official copy of their Sergeant Leadership Academy Certificate of completion to receive credit for BUS190.

#### Other Requirements:

Cumulative grade point average of at least a 2.0 on a 4.0 scale

Minimum of one-third of the required Certificate credits completed at CAC.

## CORRECTIONS A.A.S.

### Page 146

Clarification of applied COTA Credits; also ENG121 option.

Signal Peak Campus

### Total Credits: 64

This Degree is designed to upgrade the skills and knowledge of Correctional Officers currently working in the field. Completion of the Arizona Correctional Officers Training Academy (COTA) Certificate program is required for admission into the degree. Upon successful completion of COTA, students are eligible to apply up to 21 credits towards the Corrections A.A.S. Degree, per CAO Memo: COTA Certified Completers dated 09/07/2012..

#### Prerequisites:

RDG094, Successful Completion of Arizona COTA Certificate (21 credits)

#### General Education Requirements (19)

##### Written Communications (3)

ENG101 English Composition III (3) or

ENG121 Applied Technical Writing (3)

##### Oral Communications (3)

COM101 Interpersonal Communication (3) or

COM263 Intercultural Communication (3)

##### Arts and Humanities (3)

Select an AGECE course from the Humanities.

##### Social and Behavioral Sciences (3)

Select one:

PSY101 Introduction to Psychology (3)

SOC100 Introduction to Sociology (3)

##### Physical and Biological Sciences (4)

Select an AGECE course with a laboratory component.

##### Mathematics (3)

Math 121 Intermediate Algebra, Standard (4) or higher MAT course.

##### Core Requirements (42)

###### COTA Certification (21)

AJS101 Introduction to Administration of Justice (3)

AJS123 Ethics and the Administration of Justice (3)

AJS209 Substantive Criminal Law (3)

AJS240 The Corrections Function (3)

BUS190 Principles of Management and Leadership (3) (\* May be fulfilled by Sergeant Leadership Academy Certification)

CIS120 Survey of Computer Information Systems (3)

POS220 U.S. and Arizona Constitutions (3)

##### Electives (3)

Select 3 credits from the following courses: AJS225, AJS275;



PHI112; any SPA; SOC 200 or above; PSY 200 or above.

\*Corrections Officers who have the rank of Sergeant or higher are required to request that the Department of Corrections submit to CAC Admissions an official copy of their Sergeant Leadership Academy Certificate of completion to receive credit for BUS190.

### Other Requirements (0-4)

Physical Education Activity (1), excluding varsity sports (Fulfilled by COTA physical training)  
Reading Competency: RDG094 College Reading

### Computer Competency (3)

CIS120 Survey of Computer Information Systems (3) (Fulfilled under Core Requirements)

Cumulative grade point average of at least a 2.0 on a 4.0 scale  
Minimum of 20 credits completed at CAC

Total of 64 credits required to earn this degree.

## JOHN DEERE CONSTRUCTION AND FORESTRY EQUIPMENT TECHNOLOGY

### A.A.S.

### Page 147

*Course DIE197 has been replaced by Course DIE196.*

*Signal Peak Campus*

### Total Credits: 78

The John Deere Construction and Forestry Equipment Technology A.A.S. Degree prepares students for employment as diesel and heavy equipment technicians at John Deere Dealerships. Students must be sponsored by a John Deere Dealership; dealerships are located in Arizona, Nevada and California.

### General Education Requirements (19)

*For the five categories below, select AGEC courses.*

### Written Communications (3)

### Oral Communications (3)

### Arts and Humanities (3)

### Social and Behavioral Sciences (3)

### Physical and Biological Sciences (4)

### Mathematics (3)

MAT101 Essential Mathematics (4) or higher  
**OR**

BUS101 Business Mathematics (3)

### Required Courses (58)

CFE101 John Deere Diesel Engines and Fuel Systems (12)

CFE102 John Deere Hydraulic and Electrical/Electronics Systems (12)

CFE201 John Deere Chassis and Drives (10)

CFE202 John Deere Heavy Equipment Reconditioning and Operations (10)

**DIE196 Diesel Equipment Tech & HEO Internship I (3)**

DIE222 Mobile Refrigeration (3)

DIE225 Preventive Maintenance (2)

WLD Any Welding course (3)

TEC129 Computers for Technicians (3)

**OR**

CIS CIS Computer Competency Course

### Other Requirements (1-4)

PAC or DAN course (1)

Reading Competency: RDG094 College Reading

### Computer Competency (3):

TEC129 Computers for Technicians (3)

**OR**

CIS 110 or higher Computer Competency Course  
(Fulfilled in Required Courses)

Cumulative grade point average of at least a 2.0 on a 4.0 scale  
Minimum of 20 credits completed at CAC

Total of 78 credits required to earn this degree

## RADIOLOGIC TECHNOLOGY A.A.S.

### Page 153

*Total Credits = 79 with 24 General Education and 55 Major Core credits*

*Superstition Mountain Campus*

### Total Credits: 79



Radiologic Technology is a health care profession involving the use of ionizing radiation to generate diagnostic images in the diagnosis and treatment of disease. The Associate of Applied Science Degree in Radiologic Technology is a two-year program (six sequential semesters including summers) that prepares students for entry-level positions as radiographers

The program starts once per year in the Spring Semester. Students must complete 24 credits of general education requirements and 55 credits of major core courses.

The curriculum is designed in accordance with the Radiography Curriculum established by the American Society of Radiologic Technologists. Students are required by Arizona State Statute to complete 1,800 practicum hours within the two years. The Radiologic Technology course of study is a demanding experience and involves a full-time commitment of at least 40 hours per week plus homework. Students must earn a grade of "C" or better in all required courses.

Graduates of the program are eligible to:

1. Receive a Radiologic Technology Associate of Applied Science Degree;
2. Sit for the American Registry of Radiologic Technologists examination (ARRT);
3. Apply for an Arizona license to practice radiography - CRT (Certified Radiologic Technologist).

### Recommended Proficiencies

Enrollment is limited and the selective admission process is highly competitive. Students must meet the minimum admission requirements of the program and those required for admission to Central Arizona College. Admission to the program is based on a point value system. Points are calculated by a formula related mainly to grade point average, residency, work experience, committee interview and other criteria. It is highly recommended that a student complete the general education requirements before admission to the program, including 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  
 BIO201 Human Anatomy - Physiology I (4)  
 BIO202 Human Anatomy - Physiology II (4)

### General Education Requirements (23)

*For the four categories below, select AGEC courses.*

#### Written Communications (3)

#### Oral Communications (3)

#### Arts and Humanities (3)

#### Social and Behavioral Sciences (3)

#### Physical and Biological Sciences (8)

BIO201 Human Anatomy - Physiology I (4)  
 BIO202 Human Anatomy - Physiology II (4)  
*(Fulfilled by prerequisites)*

#### Mathematics (3)

MAT121 Intermediate Algebra, Standard (4) or higher MAT course

### Required Courses (55)

RAD100 Fundamentals of Radiologic Science and Health Care (1)  
 RAD110 Radiographic Positioning I (4)  
 RAD120 Principles of Radiographic Exposure I (3)  
 RAD130 Patient Care in Radiologic Science (2)  
 RAD140 Practicum I (240-280 hours) (3)  
 RAD150 Radiation Physics I (3)  
 RAD160 Radiographic Positioning II (4)  
 RAD170 Principles of Radiographic Exposure II (3)  
 RAD180 Practicum II (240-280 hours) (3)  
 RAD200 Practicum III (600-650 hours) (7)  
 RAD210 Radiation Physics II (3)  
 RAD230 Radiobiology and Radiation Protection (3)  
 RAD240 Practicum IV (360-390 hours) (4)  
 RAD250 Basic Pharmacology and Drug Administration (1)  
 RAD260 Radiographic Pathology (2)  
 RAD270 Advanced Imaging (2)  
 RAD280 Registry Review (3)  
 RAD290 Practicum V (360-390 hours) (4)

### Other Requirements (1)

PAC or DAN course (1)  
 Reading Competency: RDG094 College Reading

Cumulative grade point average of at least a 2.0 on a 4.0 scale



Changes indicated in yellow

## ADDENDUM

CAC 2012-2013 COLLEGE CATALOG



Students must earn a grade of "C" or better in all courses  
Minimum of 20 credits completed at CAC  
Total of 79 credits required to earn this degree