Award Requirements
## Educational Awards Offered

<table>
<thead>
<tr>
<th>AWARD TITLE</th>
<th>AWARD CODE</th>
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</thead>
<tbody>
<tr>
<td><strong>ANTHROPOLOGY</strong></td>
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</tr>
<tr>
<td><strong>ART</strong></td>
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<td></td>
</tr>
<tr>
<td>Studio Arts</td>
<td>AA-T</td>
<td>75</td>
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<tr>
<td>Fine Arts: Emphasis in Art</td>
<td>AA-T</td>
<td>75</td>
</tr>
<tr>
<td>Fine Arts: Emphasis in Photography</td>
<td>AA-T</td>
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<tr>
<td><strong>AUTOMOTIVE TECHNOLOGY</strong></td>
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<tr>
<td>Automotive Service Technician</td>
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<tr>
<td>Drive Train Technician</td>
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<td>77</td>
</tr>
<tr>
<td>Engine Performance</td>
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<tr>
<td>Under Vehicle Service</td>
<td>C</td>
<td>79</td>
</tr>
<tr>
<td>Autobody Repair</td>
<td>SA</td>
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</tr>
<tr>
<td>Automotive Technology for Entrepreneurs</td>
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</tr>
<tr>
<td>Electrical Repair</td>
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<td>Engine Repair</td>
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<tr>
<td><strong>BIOLOGY</strong></td>
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<td><strong>BUSINESS ADMINISTRATION</strong></td>
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<td>Business Administration</td>
<td>AS-T</td>
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<tr>
<td>Business Administration: Accounting</td>
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<tr>
<td>Business Administration: Professional</td>
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<tr>
<td>Business Management</td>
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<td>Account Clerk</td>
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<td>Management</td>
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<td>Organizational Behavior</td>
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<td>Small Business Management</td>
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<td>Tax Clerk</td>
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<td>Customer Service Academy</td>
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<tr>
<td><strong>CHEMISTRY</strong></td>
<td>AS-T</td>
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</table>

### AWARD REQUIREMENTS

**AWARD CODES** (see pages listed for more information)

- **AA-T**: Associate in Arts for Transfer degree (p. 55)
- **AS-T**: Associate in Science for Transfer degree (p. 54)
- **AA**: Associate in Arts degree (p. 54)
- **AS**: Associate in Science degree (p. 54)
- **C**: Certificate of Achievement (p. 53)
- **SA**: Skills Attainment Certificate (p. 53)
- **COC**: Noncredit Certificate of Competency (p. 53)
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<td>Entrepreneurship</td>
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<tr>
<td>E-Marketing Your Business</td>
<td>SA</td>
<td>106</td>
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<tr>
<td>Entrepreneur Business Startup</td>
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<td>Fire Science</td>
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<td>Fire Technology</td>
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<td><strong>FORESTRY AND NATURAL RESOURCES</strong></td>
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<td>Forestry</td>
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<tr>
<td>Natural Resources</td>
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<tr>
<td>Management &amp; Restoration of Fire-Adapted Ecosystems</td>
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<td><strong>GIS (GEOGRAPHIC INFORMATION SYSTEMS)</strong></td>
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<td>Geographic Information Systems</td>
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<td>GIS Geospatial Micro-Credential</td>
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<td>GIS UAV/Drone Mapping</td>
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<td>Science: Emphasis in Earth Science</td>
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<td><strong>HEALTH</strong></td>
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<td>Sport Science</td>
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<td>Culinary Arts</td>
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<td>Hotel and Restaurant Management</td>
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<td>Emphasis in Arts and Humanities</td>
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<tr>
<td>Emphasis in Behavioral and Social Sciences</td>
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<tr>
<td>Emphasis in Science</td>
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<td>AA-T AA</td>
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<td>Administrative Office Professional</td>
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<td>Virtual Office Professional</td>
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<td>Office Technician</td>
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<tr>
<td>Virtual Entrepreneur Technician</td>
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<td>Medical Office Specialist</td>
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<td><strong>SCIENCE: EMPHASIS IN PHYSICAL SCIENCE</strong></td>
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<td><strong>WATER RESOURCES MANAGEMENT</strong></td>
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<td>Water Resources Management</td>
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<td>Wastewater Treatment Plant Operation</td>
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<td>Welding Technology</td>
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<td>Welding Technology for Entrepreneurs</td>
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<tr>
<td>Metal Sculpture for Entrepreneurs</td>
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ACCOUNTING

see "Business Administration"

ALLIED HEALTH

see "Health"

ANTHROPOLOGY PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

AA-T Degree: Anthropology

The Anthropology program provides students with a core curriculum covering introductory anthropology content, theory, and methodology. The curriculum is designed to help students understand the broad scope of anthropology as a comparative science. In addition, it covers the key theoretical approaches and insights that inform anthropology, as well as the role of anthropological theory and research methods in understanding the bio-cultural nature of our species. Further, the program seeks to foster critical thinking, develop an awareness of diverse perspectives and their implications, and encourage effective approaches to problem solving.

The goal of the Associate in Arts in Anthropology for Transfer (AA-T) program is to prepare students for transfer to a California State University to pursue a B.A. in Anthropology. The program is intended and designed to make the transfer of Columbia College students to CSU as seamless as possible. The major requirements of this degree align with the Transfer Model Curriculum. It is the most efficient pathway for students wishing to transfer to CSU in a similar major in a timely manner. Students should consult with a counselor to determine if this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Describe the legal, operational, and ethical dimensions of applied anthropological work.
- Compare and contrast the main sub-disciplines of anthropology their origins, histories, associated theories, principles, and methodologies.
- Contextualize contemporary social and cultural differences.

DEGREE REQUIREMENTS

■ To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:
  1. Either the California State University General Education Breadth Requirements (CSU-GE) OR the Intersegmental General Education Transfer Curriculum (IGETC); AND
  2. Semester units as specified below, with a grade of C or better in all courses; AND
  3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.

Required courses:

- ANTHR 1 Biological Anthropology 3
- ANTHR 2 Cultural Anthropology 3
- ANTHR 10 Archaeology 3
- MATH 2 Statistics 4

Complete one course: 3-4

- BIOL 10 Human Anatomy (4)
- ESC 5 Physical Geology (4)
- HIST 5/ Introduction to the History and Philosophy of Science (3)
- PHILO 5 Research Methods in Psychology (3)

Complete one of the following courses or any course not already taken from the above list: 3

- ANTHR 15 Native People of North America (3)
- HUMAN 4 World Religions and Spirituality (3)
- SOCIO 5 Ethnicity and Ethnic Relations in America (3)
- SPCOM 5 Intercultural Communication (3)

UNITS REQUIRED IN MAJOR: 19–21

TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60
Art
PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

AA-T Degree: Studio Arts

The Studio Arts program provides students with a core curriculum covering introductory art content, theory, history, and practice. The program is designed to provide students with a solid foundation in visual design elements and principles, common materials and techniques, and a historical and cultural context. The program also seeks to promote critical visual thinking and evaluation, nurture creative independence, and encourage productive experimental problem solving.

The goal of the Studio Arts Associate in Arts for Transfer (AA-T) program is to prepare students for transfer to a California State University to pursue a B.A. or B.S. in Studio Arts, Art History, or something similar. The program is intended and designed to make the transfer of Columbia College students to the CSU as seamless as possible. It is the most efficient pathway for students desiring to transfer to CSU in a similar major in a timely manner. The major requirements align with the Transfer Model Curriculum (TMC) for Studio Arts. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

• Demonstrate a foundation of art skills and a high level of craftsmanship by utilizing a variety of tools and technologies.
• Demonstrate an understanding of the art materials, methods and techniques, historical and contemporary, and the contexts in which they are employed.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. Either the California State University General Education Breadth Requirements (CSU-GE) OR the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

*Note: Students earning this degree are exempt from the Activities Requirement.*

<table>
<thead>
<tr>
<th>Required courses:</th>
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<tbody>
<tr>
<td>ART 1 Basic Freehand Drawing</td>
<td>3</td>
</tr>
<tr>
<td>ART 2 Basic Color and Design</td>
<td>3</td>
</tr>
<tr>
<td>ART 3 3-D Design: Mixed Media</td>
<td>3</td>
</tr>
<tr>
<td>ART 12 History of Art:</td>
<td></td>
</tr>
<tr>
<td>Renaissance, Baroque, and Modern</td>
<td></td>
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</tbody>
</table>

Complete one course: 3

| ART 11 History of Art: Ancient and Medieval (3) |
| ART 13 Art of Africa, Asia, Australia and the Americas (3) |

Complete three courses: (minimum of 9 units): 9

| ART 9A Figure Drawing: Beginning (3)               |
| ART 9B Figure Drawing: Intermediate (3)           |
| ART 21A Painting: Beginning (3)                   |
| ART 21B Painting: Intermediate (3)                |
| ART 23A Watercolor: Beginning (3)                 |
| ART 23B Watercolor: Intermediate (3)              |
| ART 25 Mixed Media Painting (3)                   |
| ART 31 Ceramics: Introductory (3)                 |
| ART 32 Ceramics: Intermediate (3)                 |
| ART 53/ Computer Graphics 1 (3)                   |
| CCTDM 53                                          |
| ART 40 Film Photography: Beginning (4)            |
| ART 71 Ceramic Sculpture: Introduction (3)        |

| UNITS REQUIRED IN MAJOR: | 24 |
| TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: | 60 |
AA Degree: Fine Arts: Emphasis in Art

An Associate in Arts Degree is earned in areas such as Fine Arts, Humanities, Social and Behavioral Science, and is often awarded to students who plan to transfer to a four-year institution.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Compose works of art that utilize a combination of techniques, materials, visual ideas, and experiences.
- Critique and analyze subject matter in the arts based on theory and techniques.
- Differentiate major historical movements and developments in visual arts.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Complete 3 units from this section: 3

ART 11 History of Art: Ancient and Medieval (3)
ART 12 History of Art: Renaissance, Baroque, and Modern (3)
ART 13 Art of Africa, Asia, Australia, and the Americas (3)

Complete 9 units from this section in courses not already taken above: 9

ART 1 Basic Freehand Drawing (3)
ART 2 Basic Color and Design (3)
ART 3 3-D Design: Mixed Media (3)
ART 9A Life Drawing: Beginning (3)
ART 11 History of Art: Ancient and Medieval (3)
ART 12 History of Art: Renaissance, Baroque, and Modern (3)
ART 13 Art of Africa, Asia, Australia, and the Americas (3)
ART 21A Painting: Beginning (3)
ART 23A Watercolor: Beginning (3)
ART 25 Mixed Media Painting (3)
ART 31 Ceramics: Introductory (3)
ART 71 Ceramic Sculpture: Introductory (3)

Complete 3 units from this section: 3

ART 40 Film Photography: Beginning (4)
ART 51/ Publication Design I (3)
CCTDM 50/ Computer Graphics I (3)
CCTDM 53

Complete 3 units from this section: 3

ENGL 10 Creative Writing (3)
ENGL 11 Film Appreciation (3)
MUSIC 2 Introduction to Music (3)
MUSIC 10 Survey of Music History and Literature: Ancient to 1750 (3)
MUSIC 20A Elementary Music Theory (3)
Any MUSIC course numbered 31-78 (.5-1)

UNITS REQUIRED IN MAJOR: 18
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

AA Degree: Fine Arts: Emphasis in Photography

An Associate in Arts Degree is earned in areas such as Fine Arts, Humanities, Social and Behavioral Science, and is often awarded to students who plan to transfer to a four-year institution.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Create photographs that visually communicate ideas and concepts while engaging the practices, theories, and materials of the medium
- Critically analyze and assess diverse historical and contemporary visual art works.
- Demonstrate advanced skills in dry (digital) and wet (analog) darkroom methods as well as commercial studio techniques.
- Present commercially viable visual art works for peer, professional, or academic review.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

ART 40 Film Photography: Beginning 4
ART 45 Field Photography 3
ART 49 Intermediate Field Photography 3

Complete 6 units from this section: 6

ART 1 Basic Freehand Drawing (3)
ART 2 Basic Color and Design (3)
CCTDM 50/ Photo Editing for Digital and Print Publication (3)

Complete 3 units from this section: 3

ART 11 History of Art: Ancient and Medieval (3)
ART 12 History of Art: Renaissance, Baroque and Modern (3)
ART 13 Art of Africa, Asia, Australia, and the Americas (3)

UNITS REQUIRED IN MAJOR: 19
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Metal Sculpture for Entrepreneurs

see "Welding"
Automotive Technology

Program

Career and Technical Education Division
Manzanita, Upper Level, Room 267
(209) 588-5142
www.gocolumbia.edu/career_technical

Nationally accredited through February 2020 by the National Automotive Technicians Education Foundation (NATEF) www.natef.org

Associate Degrees

AS Degree:

Automotive Service Technician

- Previously offered as an ASOE degree

The Associate in Science (Automotive Service Technician) Degree is designed to provide students with skills and training for immediate entry into the automotive workforce as automotive technicians.

Program Student Learning Outcomes

Upon satisfactory completion of this award, the student should be prepared to:

- Apply maintenance, diagnostic, and repairs skills for all automotive systems, to industry standards, as an entry-level service technician.
- Take and pass the entire series of industry exams for certifications needed in obtaining employment as a service technician.
- Apply written and mathematical skills necessary for industry-based work order writing as a service writer.

Degree Requirements

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required Courses:

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<th>Course</th>
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<td>AT 97</td>
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<td>AT 100</td>
<td>Introduction to Automotive Technology</td>
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<td>AT 102</td>
<td>Engine Repair</td>
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<td>AT 103</td>
<td>Practical Laboratory</td>
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<td>AT 105</td>
<td>Automotive Braking Systems</td>
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<td>AT 106</td>
<td>Engine Performance</td>
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<td>AT 112</td>
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<td>AT 120</td>
<td>Suspension and Steering</td>
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<td>AT 122</td>
<td>Manual Power Trains and Axles</td>
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<td>AT 132</td>
<td>Automatic Transmissions and Transaxles</td>
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UNITS REQUIRED IN MAJOR: 43.5
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Recommended Optional Courses

<table>
<thead>
<tr>
<th>Course</th>
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<td>AT 185</td>
<td>Auto Body Collision Repair I (3)</td>
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<tr>
<td>WT 121</td>
<td>ARC/Gas Welding (5)</td>
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AS Degree:

Drive Train Technician

A Drive Train Technician degree recipient will have demonstrated competencies necessary to diagnose, service, and maintain suspension systems, braking systems, manual transmissions, automatic transmissions, transaxles, and differentials.

Program Student Learning Outcomes

Upon satisfactory completion of this award, the student should be prepared to:

- Become successfully employed as a drive train technician.

Degree Requirements

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 97</td>
<td>Work Experience in Automotive Technology</td>
<td>1</td>
</tr>
<tr>
<td>AT 105</td>
<td>Automotive Braking Systems</td>
<td>4</td>
</tr>
<tr>
<td>AT 113</td>
<td>Automotive Electrics</td>
<td>7</td>
</tr>
<tr>
<td>AT 120</td>
<td>Suspension and Steering</td>
<td>4</td>
</tr>
<tr>
<td>AT 122</td>
<td>Manual Power Trains and Axles</td>
<td>4</td>
</tr>
<tr>
<td>AT 132</td>
<td>Automatic Transmissions and Transaxles</td>
<td>3</td>
</tr>
</tbody>
</table>

UNITS REQUIRED IN MAJOR: 23
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Certificates of Achievement

Certificate of Achievement:

Automotive Service Technician

This certificate covers the entire eight areas that encompass Automotive Service Excellence certifications. Students completing this certificate program have completed the complete set of training prescribed for entry-level automotive technicians.

Program Student Learning Outcomes

Upon satisfactory completion of this award, the student should be prepared to:

- Apply maintenance, diagnostic, and repairs skills for all automotive systems, to industry standards, as an entry-level service technician.
- Take and pass the entire series of industry exams for certifications needed in obtaining employment as a service technician.

Certificate Requirements

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.
Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 97</td>
<td>Work Experience in Automotive Technology</td>
<td>1</td>
</tr>
<tr>
<td>AT 100</td>
<td>Introduction to Automotive Technology</td>
<td>4</td>
</tr>
<tr>
<td>AT 102</td>
<td>Engine Repair</td>
<td>5</td>
</tr>
<tr>
<td>AT 103</td>
<td>Practical Laboratory</td>
<td>.5</td>
</tr>
<tr>
<td>AT 105</td>
<td>Automotive Braking Systems</td>
<td>4</td>
</tr>
<tr>
<td>AT 106</td>
<td>Engine Performance</td>
<td>8</td>
</tr>
<tr>
<td>AT 112</td>
<td>Heating and Air Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>AT 113</td>
<td>Automotive Electrics</td>
<td>7</td>
</tr>
<tr>
<td>AT 120</td>
<td>Suspension and Steering</td>
<td>4</td>
</tr>
<tr>
<td>AT 122</td>
<td>Manual Power Trains and Axles</td>
<td>4</td>
</tr>
<tr>
<td>AT 132</td>
<td>Automatic Transmissions and Transaxles (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 43.5

Recommended Optional Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 185</td>
<td>Auto Body Collision Repair I (2)</td>
</tr>
<tr>
<td>WT 121</td>
<td>ARC/Gas Welding (3)</td>
</tr>
</tbody>
</table>

Certificate of Achievement: Engine Performance

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Apply maintenance, diagnostic, and repairs skills for heating and air conditioning, and engine performance to industry standards as an entry-level technician.
- Take and pass the industry exams for air conditioning and heating, and engine performance certifications needed in obtaining employment as a technician.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 97</td>
<td>Work Experience in Automotive Technology</td>
<td>1</td>
</tr>
<tr>
<td>AT 103</td>
<td>Practical Laboratory</td>
<td>.5</td>
</tr>
<tr>
<td>AT 106</td>
<td>Engine Performance</td>
<td>8</td>
</tr>
<tr>
<td>AT 112</td>
<td>Heating and Air Conditioning</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 12.5

Automotive Technology students use the EIS emissions analyzer to set up a dynamometer test.
Certificate of Achievement:
Under Vehicle Service

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Apply maintenance, diagnostic, and repairs skills for areas in automatic and manual, transmissions, and steering and suspension to industry standards as an entry-level technician.
- Take and pass the industry exams for automatic and manual, transmissions, and steering and suspension certifications needed in obtaining employment as a technician.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:
- AT 97 Work Experience in Automotive Technology 3
- AT 103 Practical Laboratory .5
- AT 105 Automotive Braking Systems 4
- AT 120 Suspension and Steering 4
- AT 122 Manual Power Trains and Axles 4

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 13.5

Skills Attainment Certificates

Skills Attainment Certificate:*
Autobody Repair

Students earning this certificate have demonstrated prescribed competencies in basic auto body repair and painting.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Apply maintenance, diagnostic, and repairs skills for areas in painting and refinishing, and non-structural and structural analysis and repair to industry standards as an entry-level technician.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:
- AT 97 Work Experience in Automotive Technology 3
- AT 104 Practical Lab (Auto Body) 1
- AT 155 Automotive Spray Refinishing I 2
- AT 156 Automotive Spray Refinishing II 2
- AT 185 Auto Body Collision Repair I 2
- AT 186 Auto Body Collision Repair II 2

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 12

Skills Attainment Certificate:*
Automotive Technology for Entrepreneurs

The coursework in this certificate is designed to better prepare students who plan to own their own business in the automotive industry.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Apply basic business ownership skills to successfully operate an automotive repair facility.
- Apply soft skills necessary to become gainfully employed as an entry-level automotive technician to industry standards.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:
- ENTRE 102 Entrepreneurial Marketing (2)
- OR ENTRE 103 Financial Management for Entrepreneurs (2)
- ENTRE 104 Preparing Effective Business Plans (2)

Complete 8 units: 8
- AT 1 – AT 199 (Maximum 1 unit from AT 97)

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 12

*Skills Attainment Certificates do not appear on student transcripts.
AWARD REQUIREMENTS

Skills Attainment Certificate:*
Electrical Repair

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Apply maintenance, diagnostic, and repair skills for electrical and electronics, and heating and air conditioning to industry standards as an entry-level technician.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

**Required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 97</td>
<td>1</td>
</tr>
<tr>
<td>AT 103</td>
<td>.5</td>
</tr>
<tr>
<td>AT 112</td>
<td>3</td>
</tr>
<tr>
<td>AT 113</td>
<td>7</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 11.5

*Skills Attainment Certificates do not appear on student transcripts.

Skills Attainment Certificate:*
Engine Repair

The Engine Repair Skills Attainment Certificate encompasses the skills necessary to become successfully employed to perform engine-related diagnostics and repairs.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Apply maintenance, diagnostic, and repairs skills for engine repair to industry standards as an entry-level technician.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

**Required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT 97</td>
<td>1</td>
</tr>
<tr>
<td>AT 100</td>
<td>4</td>
</tr>
<tr>
<td>AT 102</td>
<td>5</td>
</tr>
<tr>
<td>AT 103</td>
<td>.5-1.5</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 10.5–11.5

*Skills Attainment Certificates do not appear on student transcripts.

Biology

PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

AS-T Degree: Biology

The Associate in Science for Transfer (AS-T) degree in Biology provides students with the core curriculum required in the first two years of a college experience leading to a Bachelor of Science (BS) or Bachelor of Arts (BA) degree in Biology. The basis for any biological sciences degree requires courses in a general biology series (organismal, ecology, evolution, molecular and cellular biology), chemistry, calculus and physics.

The goal of the Associate in Science in Biology for Transfer program is to prepare students for transfer to a California State University to pursue a B.A. or B.S. in Biology. The program is intended and designed to make the transfer of Columbia College students to CSU seamless. The requirements of this degree align with the Transfer Model Curriculum. It is the most efficient pathway for students desiring to transfer to CSU in a similar major in a timely manner. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

• Explain the scientific theories that are the foundation of the biological sciences.
• Verbalize the effects of humans on local and global environments.
• Demonstrate social and professional skills needed to be successful in the modern work place, e.g., communications, working in groups, working with technology.
• Plan a program of data gathering and analysis that employ modern scientific procedures and the use of modern technology.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. Either the California State University General Education Breadth Requirements (CSU-GE) OR the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses;
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.
RECOMMENDED OPTION
IGETC for STEM: Courses in Areas 1 (UC-bound students do not need 1C), 2, and 5 of the traditional IGETC; and One course in Area 3A; one course in Area 3B; and two courses in Area 4 from two different disciplines.*
**Two lower division general education courses are deferred and must be taken after transfer.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 2</td>
<td>Cell and Molecular Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 4</td>
<td>Principles of Evolution and Zoology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 6</td>
<td>Plant Biology and Ecology</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2A</td>
<td>General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2AL</td>
<td>General Chemistry I Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 2B</td>
<td>General Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2BL</td>
<td>General Chemistry II Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>MATH 18A</td>
<td>Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 4A</td>
<td>Introductory Physics I: Trigonometry Level (4) AND</td>
<td></td>
</tr>
<tr>
<td>PHYS 4B</td>
<td>Introductory Physics II: Trigonometry Level (4) OR</td>
<td></td>
</tr>
<tr>
<td>PHYS 5A</td>
<td>Introductory Physics I: Calculus Level (4) AND</td>
<td></td>
</tr>
<tr>
<td>PHYS 5B</td>
<td>Introductory Physics II: Calculus Level (4) OR</td>
<td></td>
</tr>
</tbody>
</table>

Complete 4 units from the following: 4

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2</td>
<td>Statistics (4)</td>
<td></td>
</tr>
<tr>
<td>CHEM 4A</td>
<td>Organic Chemistry I (3) AND</td>
<td></td>
</tr>
<tr>
<td>CHEM 4AL</td>
<td>Organic Chemistry I Laboratory (1)</td>
<td></td>
</tr>
</tbody>
</table>

UNITS REQUIRED IN MAJOR: 39
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60
AWARD REQUIREMENTS

Required courses:
- BUSAD 2A Financial Accounting 4
- BUSAD 2B Managerial Accounting 4
- BUSAD 18 Business Law 3
- ECON 10 Principles of Economics – Macro 3
- ECON 11 Principles of Economics – Micro 3

Complete 1 of the following courses:
- MATH 2 Statistics (4)
- MATH 12 Finite Math (3)

Complete 2 of the following courses:
- BUSAD 20 Principles of Business (3)
- CCTIS 10 Computer Concepts and Information Systems (4)
- Any MATH course not already chosen from the list above (3-4)

UNITS REQUIRED IN MAJOR: 26–29
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

AS Degree:
Business Administration:
Accounting

- Previously offered as an ASOE degree

This degree prepares students for an entry-level position in accounting or full-charge bookkeeper. Learn the accounting cycle, how to prepare financial statements, federal payroll laws, how to account for payroll, how the income tax system works, and business laws.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:
- Demonstrate the ability to recognize and analyze ethical issues as they apply to the business environment.
- Analyze business problems, breaking them into their essential components.
- Apply accounting concepts, principles, and standards of practice in bookkeeping processes regarding evaluation, recording, and reporting.
- Use information technology skills appropriate to the business environment in maintaining, communicating and reporting of accounting records.

DEGREE REQUIREMENTS
- To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.
AS Degree: Business Management

This Degree is specifically designed for students who intend to go straight into a management position and is not intended as a transfer degree.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate the ability to work in teams and interact collaboratively within a business organization.
- Demonstrate effective communication practices utilized within a business environment.
- Demonstrate the knowledge and skills to prepare accurate business statements and payrolls.
- Demonstrate the knowledge and skill to manage a business in a legal manner.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

- BUSAD 24 Human Relations in Organizations 3
- BUSAD 30 Principles of Marketing 3
- BUSAD 40 Principles of Management 3
- BUSAD 41 Small Business Management 3
- BUSAD 158 Payroll Accounting 3

Complete 8 units from B1 or B2:

B1: 8 units required
- BUSAD 2A Financial Accounting (4) AND
- BUSAD 2B Managerial Accounting (4)

B2: 8 units required
- BUSAD 161A Small Business Accounting I (4) AND
- BUSAD 161B Small Business Accounting II (4)

Complete 6 units:

- BUSAD 18 Business Law (3)
- BUSAD 163 Business Mathematics (3)
- OFTEC 132 Business Communications (3)

UNITS REQUIRED IN MAJOR: 29
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Certificates of Achievement

Certificate of Achievement: Account Clerk

This Certificate of Achievement prepares students for employment as an entry level full charge bookkeeper.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate the knowledge and skills required for a full-charge bookkeeper.
- Demonstrate management and decision making skills necessary for the work environment.
- Demonstrate the proper use of software programs related to bookkeeping.
- Demonstrate ethical behavior required as a bookkeeper.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- BUSAD 135 Computerized Accounting (QuickBooks) 2
- BUSAD 161A Small Business Accounting (4) AND
- BUSAD 161B Small Business Accounting II (4)
- BUSAD 163 Business Math 3
- CCTIS 30 Financial Worksheets on Computers 3
- MGMT 114 Values and Ethics in the Workplace .5
- MGMT 116 Stress Management in the Workplace .5
- MGMT 118 Decision-Making in the Workplace .5
- MGMT 120 Generational Diversity: Managing Cross-Generational Teams .5

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 18
Certificate of Achievement: Business Administration: Accounting

This Certificate of Achievement prepares students for an entry level position as a full charge bookkeeper. Students learn the accounting cycle, how to analyze and post to the journal and prepare financial statements.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Apply accounting concepts, principles, and standards of practice in transaction recording processes.
- Use information technology skills appropriate to the business environment in maintaining accounting records.
- Demonstrate the ability to recognize and analyze ethical issues as they apply to the business environment.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- BUSAD 18 Business Law 3
- BUSAD 29/ Project Management 3
- CCTIS 29
- BUSAD 155 Computerized Accounting for Business 4
- BUSAD 158 Payroll Accounting 3
- BUSAD 161A Small Business Accounting I (4) **AND**
- BUSAD 161B Small Business Accounting II (4)
- BUSAD 163 Business Mathematics 3
- BUSAD 164 Income Tax 2
- CCTIS 30 Financial Worksheets on Computers 3

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 29

Certificate of Achievement: Management

Students who complete the requirements for this certificate will be prepared for a management position in any field in which they have the background to understand the industry. Students will not only have the people skills necessary to manage the business they will have basic accounting knowledge, marketing knowledge and the required business math skills.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate the knowledge and skills to prepare and maintain accounting records.
- Demonstrate the ability to make decisions based on the laws.
- Demonstrate the knowledge and skills to market and manage and organization using current principles and customer service tools.
- Demonstrate the knowledge and skill to use appropriate software for the needed applications.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- BUSAD 18 Business Law 3
- BUSAD 24 Human Relations in Organizations 3
- BUSAD 29/ Project Management 3
- CCTIS 29
- BUSAD 30 Principles of Marketing 3
- BUSAD 40 Principles of Management 3
- BUSAD 41 Small Business Management 3
- BUSAD 161A Small Business Accounting I (4) **AND**
- BUSAD 161B Small Business Accounting II (4)
- BUSAD 163 Business Mathematics 3
- CCTIS 10 Computer Concepts & Information Systems 4
- MGMT 110 Communication in the Workplace .5
- MGMT 111 Customer Service .5
- MGMT 112 Team Building .5
- MGMT 113 Attitude in the Workplace .5
- MGMT 114 Values and Ethics in the Workplace .5
- MGMT 115 Time Management .5
- MGMT 116 Stress Management in the Workplace .5
- MGMT 117 Conflict Management .5
- MGMT 118 Decision-Making in the workplace .5
- MGMT 119 Managing Organizational Change .5
- MGMT 120 Generational Diversity: Managing Cross-Generational Teams .5

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 38.5

Recommended Optional Courses

- BUSAD 97 Work Experience in Business and Commerce (4 minimum) (1-4)
Certificate of Achievement: Organizational Behavior

Students completing the certificate will have the skills to be successful in the retail industry. They will learn how businesses work, business management, and customer service skills to be able to work in teams, manage conflict and how to communicate with the varying generations to name a few of the critical skills needed in the retail environment.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate customer service knowledge and skills for decision making, conflict management, working across generations and in teams, resolving conflict, and communication.
- Demonstrate the knowledge and skills to manage projects.
- Demonstrate the ability to use software effectively.
- Demonstrate the ability to work and communicate effectively.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 20</td>
<td>Principles of Business</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 24</td>
<td>Human Relations in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 29/2</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CCTIS 29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUSAD 40</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 110</td>
<td>Communication in the Workplace</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 111</td>
<td>Customer Service</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 112</td>
<td>Team Building</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 113</td>
<td>Attitude in the Workplace</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 114</td>
<td>Values and Ethics in the Workplace</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 115</td>
<td>Time Management</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 116</td>
<td>Stress Management in the Workplace</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 117</td>
<td>Conflict Management</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 118</td>
<td>Decision-Making in the workplace</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 119</td>
<td>Managing Organizational Change</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 120</td>
<td>Generational Diversity: Managing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Cross-Generational Teams</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 17.5

Certificate of Achievement: Payroll Clerk

Designed to provide entry level skills as a Payroll Clerk.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate the knowledge and skill to create and maintain accurate records using generally accepted accounting principles.
- Demonstrate the ability to use software effectively.
- Demonstrate the ability to work and communicate effectively.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 24</td>
<td>Human Relations in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 158</td>
<td>Payroll Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 161A</td>
<td>Small Business Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 161B</td>
<td>Small Business Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 163</td>
<td>Business Math</td>
<td>3</td>
</tr>
<tr>
<td>CCTIS 30</td>
<td>Financial Worksheets</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 20

Certificate of Achievement: Small Business Management

Designed to introduce students to common business tasks managers face.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate the knowledge and skills to manage an organization using current marketing and management principles.
- Demonstrate the ability to work collaboratively within a business organization.
- Demonstrate the knowledge and skills to accurately prepare and analyze payrolls and payroll documents.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 24</td>
<td>Human Relations in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 30</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 41</td>
<td>Small Business Management</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 158</td>
<td>Payroll Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 163</td>
<td>Business Math</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 15
Certificate of Achievement: Tax Clerk

Designed to provide skills as an entry level Tax Clerk.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Demonstrate the knowledge and skills to work and collaborate within an organization.
• Demonstrate the ability to use software appropriately.
• Demonstrate the knowledge and skills to prepare accurate and complete accounting and tax records and documents.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 24</td>
<td>Human Relations in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 161A</td>
<td>Small Business Accounting I AND</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 161B</td>
<td>Small Business Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 163</td>
<td>Business Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 164</td>
<td>Income Tax</td>
<td>2</td>
</tr>
<tr>
<td>CCTIS 10</td>
<td>Computer Concepts and Information Systems</td>
<td>4</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 20

Skills Attainment Certificate

Skills Attainment Certificate:* Customer Service Academy

The courses required for the certificate will help students succeed in current or future jobs, their personal lives and/or their own businesses.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Demonstrate the knowledge and skills to provide customer service utilizing time management, appropriate values and ethics, and a positive attitude.
• Demonstrate the knowledge and skills to manage stress and resolve conflict.
• Demonstrate the ability to work in teams and collaborate effectively.
• Demonstrate the ability to communicate effectively.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMT 110</td>
<td>Communication in the Workplace</td>
<td>.5</td>
</tr>
<tr>
<td>MGMT 111</td>
<td>Customer Service</td>
<td>.5</td>
</tr>
<tr>
<td>MGMT 112</td>
<td>Team Building</td>
<td>.5</td>
</tr>
<tr>
<td>MGMT 113</td>
<td>Attitude in the Workplace</td>
<td>.5</td>
</tr>
<tr>
<td>MGMT 114</td>
<td>Values and Ethics in the Workplace</td>
<td>.5</td>
</tr>
<tr>
<td>MGMT 115</td>
<td>Time Management</td>
<td>.5</td>
</tr>
<tr>
<td>MGMT 116</td>
<td>Stress Management in the Workplace</td>
<td>.5</td>
</tr>
<tr>
<td>MGMT 117</td>
<td>Conflict Management</td>
<td>.5</td>
</tr>
<tr>
<td>MGMT 118</td>
<td>Decision Making in the Workplace</td>
<td>.5</td>
</tr>
<tr>
<td>MGMT 119</td>
<td>Managing Organizational Change</td>
<td>.5</td>
</tr>
<tr>
<td>MGMT 120</td>
<td>General Diversity: Managing Cross-Generational Teams</td>
<td>.5</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 5.5

*Skills Attainment Certificates do not appear on student transcripts.
Chemistry
PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

AS-T Degree: Chemistry

The Associate in Science for Transfer (AS-T) degree in Chemistry provides students with the core curriculum required in the first two years of a college experience leading to a Bachelor of Science (BS) or Bachelor of Arts (BA) degree in chemistry. The curriculum is aligned with the American Chemical Society (ACS) guidelines for two year colleges. The basis for any physical sciences degree requires one year of calculus, one year of calculus based physics, and one year of general chemistry. This AS degree in chemistry further readies a student with a one year course in organic chemistry as well. Students should consult with a counselor to determine if this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

• Communicate scientific knowledge, understanding, and practices to peer and professional audiences.
• Demonstrate integration of theory and practice with scientific outcomes and investigations.
• Understand and evaluate scientific findings in light of global health and environmental issues.
• Use, apply, and understand scientific knowledge from mathematical theories.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. Either the California State University General Education Breadth Requirements (CSU-GE) OR the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses;
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.

RECOMMENDED OPTION

IGETC for STEM: Courses in Areas 1 (UC-bound students do not need 1C), 2, and 5 of the traditional IGETC; and one course in Area 3A; one course in Area 3B; and two courses in Area 4 from two different disciplines.*

*Two lower division general education courses are deferred and must be taken after transfer.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2A</td>
<td>General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2AL</td>
<td>General Chemistry I Laboratory</td>
<td>(2)</td>
</tr>
<tr>
<td>CHEM 2B</td>
<td>General Chemistry II</td>
<td>(3)</td>
</tr>
<tr>
<td>CHEM 2BL</td>
<td>General Chemistry II Laboratory</td>
<td>(2)</td>
</tr>
<tr>
<td>CHEM 4A</td>
<td>Organic Chemistry I</td>
<td>(3)</td>
</tr>
<tr>
<td>CHEM 4AL</td>
<td>Organic Chemistry I Laboratory</td>
<td>(1)</td>
</tr>
<tr>
<td>CHEM 4B</td>
<td>Organic Chemistry II</td>
<td>(3)</td>
</tr>
<tr>
<td>CHEM 4BL</td>
<td>Organic Chemistry II Laboratory</td>
<td>(1)</td>
</tr>
<tr>
<td>MATH 18A</td>
<td>Calculus I</td>
<td>(5)</td>
</tr>
<tr>
<td>MATH 18B</td>
<td>Calculus II</td>
<td>(5)</td>
</tr>
<tr>
<td>PHYS 5A</td>
<td>Introductory Physics I: Calculus Level</td>
<td>(4)</td>
</tr>
<tr>
<td>PHYS 5B</td>
<td>Introductory Physics II: Calculus Level</td>
<td>(4)</td>
</tr>
</tbody>
</table>

UNITS REQUIRED IN MAJOR: 36
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60
Associate Degrees

AS-T Degree: Early Childhood Education

Students who choose the Early Child Education Associate in Science for Transfer (AS-T) program will be prepared to transfer to a CSU to pursue a BA or BS in Early Childhood Education or Child Development. This degree provides a solid foundation in nationally recognized child development principles, observation and assessment techniques that lead to planning developmentally appropriate, inclusive curriculum, and awareness of diversity as it relates to children and families. This is the most efficient pathway for students desiring to transfer to a CSU in a timely manner. The major requirements align with the Transfer Model Curriculum (TMC) for Early Childhood Education. The Associate in Science for Transfer (AS-T) complies with the Student Transfer Achievement Reform Act (SB 1440, now codified in California Education Code sections 66746-66749, effective Fall 2011). The law states that students will have guaranteed admission to a California State University (CSU) campus upon successful completion of the specified program requirements. This option is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate knowledge of child growth, development and learning theories in an ecological context, and history of the American Disabilities Act and civil rights addressing the needs of children with disabilities.
- Design, implement and evaluate developmentally appropriate, healthy, safe, and inclusive learning environments and curriculum through systematic observation, screening, assessment, and documentation of children.
- Develop strategies that promote linguistically and culturally responsive, anti-bias approaches to ensure equity and respect while engaging children, families, teachers, programs, and communities in advocacy for high quality care and education.
- Describe effective guidance and interaction strategies that promote identity development, and relationship-based, child-centered, and play-oriented approaches in support of children and families becoming socially and emotionally competent members of a diverse society.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. Either the California State University General Education Breadth Requirements (CSU-GE) or the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHILD 1</td>
<td>Child Growth and Development</td>
<td>3</td>
</tr>
<tr>
<td>CHILD 3</td>
<td>Principles and Practices of Teaching Young Children</td>
<td>3</td>
</tr>
<tr>
<td>CHILD 4</td>
<td>Observation and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>CHILD 16</td>
<td>Practicum-Field Experience</td>
<td>3</td>
</tr>
<tr>
<td>CHILD 22</td>
<td>Child, Family, and Community</td>
<td>3</td>
</tr>
<tr>
<td>CHILD 26</td>
<td>Health, Safety, and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>CHILD 35</td>
<td>Introduction to Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>CHILD 36</td>
<td>Teaching in a Diverse Society</td>
<td>3</td>
</tr>
</tbody>
</table>

UNITS REQUIRED IN MAJOR: 24
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60
AS Degree: Child Development

The Child Development Associate in Science Degree is for students with varied professional goals related to working in direct services with culturally diverse infants, toddlers, preschool and/or school-aged children, and their families. The integration of theory with practical and experiential courses prepares students for a wide variety of careers in the field of Child Development. Completion of coursework provides students with in-depth knowledge, skills, and experience, with a focus on core concepts including growth and development, advocacy, developmentally appropriate practices in the classroom setting, and the ethical and professional behavior of educators. Preparation for the diverse workforce includes specializations in infant and toddler, early intervention, administration, and school-age care and education. Courses are aligned with the academic requirements for the Child Development Permits, issued by the California Commission on Teacher Credentialing.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate knowledge of child growth, development and learning theories in an ecological context, and history of the American Disabilities Act and civil rights addressing the needs of children with disabilities.
- Design, implement and evaluate developmentally appropriate, healthy, safe, and inclusive learning environments and curriculum through systematic observation, screening, assessment, documentation of children.
- Develop strategies that promote linguistically and culturally responsive, anti-bias approaches to ensure equity and respect while engaging children, families, teachers, programs, and communities in advocacy for high quality care and education.
- Describe effective guidance and interaction strategies that promote identity development, and relationship-based, child-centered, and play-oriented approaches in support of children and families becoming socially and emotionally competent members of a diverse society.
- Identify ethical guidelines, professional standards, reflective supervision practices, and advocacy approaches for high quality educational policies and procedures to administer a child care and education program.
- Evaluate practicum and internship relationship-based experiences in child care and education programs through systematic observation, documentation, and assessment of application of developmentally appropriate practices.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

**Required courses:**

- CHILD 1 Child Growth and Development 3
- CHILD 3 Principles and Practices of Teaching Young Children 3
- CHILD 4 Observation and Assessment 3
- CHILD 17 Adult Supervision and Mentoring in Early Care and Education 3
- CHILD 22 Child, Family, and Community 3
- CHILD 26 Health, Safety, and Nutrition 3
- CHILD 36 Teaching in a Diverse Society 3
- CHILD 41 Implementing Curriculum for Young Children 4

**Complete 3 units from this section:**

- CHILD 16 Practicum-Field Experience (3)
- OR
- CHILD 44 Infant/Toddler Practicum-Field Experience (3)

6 units required from one six-unit specialization group: 6

- CHILD 42 Infant/Toddler Development (3)
- CHILD 43 Infant/Toddler Care and Education (3)
- CHILD 19 Introduction to Children with Special Needs (3)
- EDUC 11 Introduction to Elementary Classroom Teaching (3)
- CHILD 30 Administration I: Programs in Early Childhood Education (3)
- CHILD 31 Admin II: Personnel & Leadership in Early Childhood Education (3)
- CHILD 45 School-Age Child Development, Care and Education (3)
- EDUC 11 Introduction to Elementary Classroom Teaching (3)

**UNITS REQUIRED IN MAJOR:** 34

**TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE:** 60
Certificates of Achievement

Certificate of Achievement: Associate Child Development Teacher/Future Educators

This certificate prepares future educators including infant, toddler, preschool, transitional kindergarten, before/after school, and elementary school teachers with a sound foundation in child development while meeting the education requirements of the Associate Teacher Permit issued through the California Commission on Teacher Credentialing.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Demonstrate knowledge of child growth, development and learning theories in an ecological context, and history of the American Disabilities Act and civil rights addressing the needs of children with disabilities.
• Design, implement and evaluate developmentally appropriate, healthy, safe, and inclusive learning environments and curriculum through systematic observation, screening, assessment, documentation of children.
• Develop strategies that promote linguistically and culturally responsive, anti-bias approaches to ensure equity and respect while engaging children, families, teachers, programs, and communities in advocacy for high quality care and education.
• Describe effective guidance and interaction strategies that promote identity development, and relationship-based, child-centered, and play-oriented approaches in support of children and families becoming socially and emotionally competent members of a diverse society.

CERTIFICATE REQUIREMENTS

■ To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:
CHILD 1 Child Growth and Development 3
CHILD 23 Guiding Children’s Social and Emotional Development 3

Choose to complete the group of courses from one emphasis below:

Early Childhood Education Emphasis 9
Complete 9 units from this section:
CHILD 3 Principles and Practices of Teaching Young Children (3) AND
CHILD 22 Child, Family, and Community (3) AND
CHILD 44 Infant/Toddler Practicum-Field Experience (3) OR
CHILD 16 Practicum-Field Experience (3)

OR
Future Educator Teaching Preparation Emphasis 9
Complete 9 units from this section:
EDUC 11 Intro to Elementary Classroom Teaching (3) AND
CHILD 19 Intro to Children With Special Needs (3) AND
CHILD 36 Teaching in a Diverse Society (3)

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 15

Certificate of Achievement: Associate Infant/Toddler Teacher

The Certificate of Achievement in Associate Infant/Toddler Teacher provides students with a foundation in high-quality caregiving and environments for infants and toddlers. Coursework includes knowledge of child development from the prenatal stage through age three, understanding the child in the context of his/her family, inclusive practice, health and safety, and observation and assessment. This certificate prepares students for entry-level teaching roles with infants and toddlers in private as well as state and federally-funded programs. The courses included satisfy the education requirements for the California Child Development Permit Matrix at the Associate Teacher level. This certificate prepares students to work at the aide or teacher level in infant/toddler care settings.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Demonstrate knowledge of child growth, development and learning theories in an ecological context for infants and toddlers, and history of the American Disabilities Act and civil rights addressing the needs of infants/toddlers with disabilities.
• Design, implement and evaluate developmentally appropriate, healthy, safe, and inclusive learning environments and relationship-planning through systematic observation, screening, assessment, documentation of infants and toddlers.
• Develop strategies that promote linguistically and culturally responsive, anti-bias approaches to ensure equity and respect while engaging infants/toddlers, families, teachers, programs, and communities in advocacy for high quality care and education.
• Describe effective guidance and interaction strategies that promote identity development, and relationship-based, child-centered, and play-oriented approaches in support of infants/toddlers and families becoming socially and emotionally competent members of a diverse society.

CERTIFICATE REQUIREMENTS

■ To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:
CHILD 1 Child Growth and Development 3
CHILD 22 Child, Family, and Community 3
CHILD 26 Health, Safety, and Nutrition 3
CHILD 42 Infant/Toddler Development 3
CHILD 43 Infant/Toddler Care and Education 3
CHILD 44 Infant/Toddler Practicum-Field Experience 3

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 18
Communication Studies
PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

Associate Degrees

AA-T Degree: Communication Studies

The Communication Studies program at Columbia College focuses on the areas of public speaking, argumentation and debate, small group communication, oral expression and interpretation, and intercultural communication. It is designed to increase student skills in verbal communication and public speaking, analysis and listening, interpersonal relationships, teamwork, leadership, motivation, initiative, and an appreciation for diversity.

The major requirements align with the Transfer Model Curriculum (TMC) for Communication Studies. The Associate in Arts for Transfer (AA-T) complies with the Student Transfer Achievement Reform Act (SB 1440, now codified in California Education Code sections 66746-66749, effective Fall 2011). The law states that students will have guaranteed admission to a California State University (CSU) campus upon successful completion of the specified program requirements. This option is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Analyze and synthesize key concepts within the field of communication.
- Demonstrate effective communication skills orally, in writing, and expressively.
- Apply strategies that reflect an understanding of reading, writing, and other communication processes that demonstrate critical thinking and an awareness of different cultural perspectives.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. Either the California State University General Education Breadth Requirements (CSU-GE) or the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.

Required courses:

- SPCOM 1 Introduction to Public Speaking 3
- SPCOM 2 Argumentation and Debate 3
- SPCOM 9 Introduction to Small Group and Team Communication 3

Complete 2 of the following courses: 6

- DRAMA 20 Oral Expression and Interpretation (3)
- SPCOM 4 Introduction to Human Communication (3)
- SPCOM 5 Intercultural Communication (3)
- SPCOM 7 Forensics Workshop (3)

Complete 1 of the following courses: 3

- ANTHR 2 Cultural Anthropology (3)
- ENGL 1B Advanced Composition and Introduction to Literature (3)
- ENGL 1C Advanced Composition and Critical Thinking (3)
- PSYCH 1 General Psychology (3)
- SOCIO 1 Introduction to Sociology (3)

UNITS REQUIRED IN MAJOR: 18
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60
AA Degree: Language Arts: Emphasis in Communication

An Associate in Arts Degree is earned in areas such as Fine Arts, Humanities, Social and Behavioral Science, and is often awarded to students who plan to transfer to a four-year institution.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate knowledge and skills of effective oral communication.
- Demonstrate an understanding of literary elements.
- Examine, identify, and communicate philosophical and cultural perspectives.

DEGREE REQUIREMENTS

- To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Complete 6 units from this section: 6
- SPCOM 1 Introduction to Public Speaking (3)
- SPCOM 2 Argumentation and Debate (3)

Complete 6 units from this section: 6
- ENGL 1B Advanced Composition and Introduction to Literature (3)
- ENGL 1C Advanced Composition and Critical Thinking (3)
- PHILO 1 Introduction to Philosophy (3)
- PHILO 25 Twentieth Century Philosophy (3)

Complete 6 units from this section: 6
- DRAMA 20 Oral Expression and Interpretation (3)
- ENGL 11 Film Appreciation (3)
- SPCOM 4 Introduction to Human Communication (3)
- SPCOM 5 Intercultural Communication (3)
- SPCOM 7 Forensics Workshop (3)
- SPCOM 9 Introduction to Small Group and Team Communication (3)

UNITS REQUIRED IN MAJOR: 18
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

COMPUTER & COMMUNICATIONS TECHNOLOGY
CCT: Digital Media

PROGRAM

Career and Technical Education Division
Manzanita, Upper Level, Room 267
(209) 588-5142
www.gocolumbia.edu/career_technical

Associate Degree

AS Degree: Multimedia Technology

The Multimedia Technology degree prepares people for entry-level jobs in Multimedia. Students learn to produce digital content combining components such as video, audio, graphics and text for application in areas such as entertainment, marketing and advertising or education and training. In this program, students develop professional and creativity skills while gaining hands-on experience with the latest technology as they work on projects and build a portfolio of multimedia content.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Employ creativity and problem solving skills to address customer needs.
- Build a professional development plan for continued education in the digital media field.
- Produce digital content including text, graphics, video, and audio.

DEGREE REQUIREMENTS

- To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:
- CCTDM 5 Introduction to Digital Multimedia 3
- CCTDM 6 Writing for Multimedia 3
- CCTDM 10 Introduction to HTML and CSS 3
- CCTDM 28 Video Production 1 2
- CCTDM 50 Photo Editing for Digital and Print Publication 3
- CCTDM 53/ ART 53 Computer Graphics 1 3
- ENTRE 105 Social Media Marketing 2
- ENTRE 107 Contract Law for Entrepreneurs 2
Complete 1 course:  
CCTDM 40 Computer Graphics and Animation (3)  
CCTDM 45 Digital 3D Modeling and Animation (3)

Complete 1 course:  
CCTDM 51/ Publication Design I (3)  
ART 51  
CCTDM 56/ Typography (3)  
ART 56

UNITS REQUIRED IN MAJOR: 27  
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Certificate of Achievement

Certificate of Achievement: Multimedia Technician - Digital Media

The coursework in this certificate is designed to prepare students to assist clients in the creation and publishing of digital media. This certificate focuses on the development of digital media such as computer graphics, optimized photos, animation and electronic publications.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Create and edit a variety of digital media.
• Analyze different forms of writing for digital media.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:
CCTDM 5 Introduction to Digital Multimedia 3  
CCTDM 6 Writing for Multimedia 3  
CCTDM 28 Video Production I 2  
CCTDM 50 Photo Editing for Digital and Print Publication 3  
CCTDM 53/ Computer Graphics I 3  
ART 53  
ENTRE 107 Contract Law for Entrepreneurs 2

Select one of the following: 3
CCTDM 40 Computer Graphics and Animation (3)  
CCTDM 45 Digital 3D Modeling and Animation (3)

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 19

Skills Attainment Certificates

Skills Attainment Certificate:* Digital Graphic Arts for Entrepreneurs

The coursework in this certificate is designed to prepare students who plan to be entrepreneurs to create and publish digital graphic arts and marketing material.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Identify the process for protecting original media.
• Create and edit digital media for print and social media.
• Create a business plan.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:
CCTDM 40 Computer Graphics and Animation 3  
CCTDM 51/ Publication Design I 3  
CCTDM 53/ Computer Graphics I 3  
ART 53  
ENTRE 102 Entrepreneurial Marketing 2  
ENTRE 106 Patents, Copyrights and Trademarks 2  
ENTRE 107 Contract Law for Entrepreneurs 2

Complete 2 units from this section: 2
CCTDM 50 Photo Editing for Digital and Print Publication (3)  
CCTDM 54/ Computer Graphics II (3)  
ART 54  
ENTRE 104 Preparing Effective Business Plans (2)  
ENTRE 105 Social Media Marketing (2)

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 17

*Skills Attainment Certificates do not appear on student transcripts.
Skills Attainment Certificate:* Multimedia Technician for Entrepreneurs

The coursework in this Skills Attainment will prepare students to assist clients in creating and publishing multimedia for their businesses. The focus will be on skills needed for those students who want to operate in the Multimedia industry as freelance or consultant employees, in business for themselves.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Create and edit a variety of digital media.
• Create a marketing plan for print, digital, and social media.
• Identify the process for protecting original media.

SKILLS ATTAINMENT REQUIREMENTS

■ To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCTDM 5</td>
<td>Introduction to Digital Multimedia</td>
<td>3</td>
</tr>
<tr>
<td>CCTDM 6</td>
<td>Writing for Multimedia</td>
<td>3</td>
</tr>
<tr>
<td>ENTRE 106</td>
<td>Patents, Copyrights, and Trademarks</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 107</td>
<td>Contract Law for Entrepreneurs</td>
<td>2</td>
</tr>
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</table>

Complete 7 units from this section:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCTDM 12</td>
<td>Website Development Applications</td>
<td>3</td>
</tr>
<tr>
<td>CCTDM 28</td>
<td>Video Production I</td>
<td>2</td>
</tr>
<tr>
<td>CCTDM 29</td>
<td>Video Production II</td>
<td>2</td>
</tr>
<tr>
<td>CCTDM 50</td>
<td>Photo Editing for Digital and Print Publication</td>
<td>3</td>
</tr>
<tr>
<td>CCTDM 51/</td>
<td>Publication Design I (3)</td>
<td>3</td>
</tr>
<tr>
<td>ART 51</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ENTRE 102</td>
<td>Entrepreneurial Marketing (2)</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 104</td>
<td>Preparing Effective Business Plans (2)</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 105</td>
<td>Social Media Marketing (2)</td>
<td>2</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 17

*Skills Attainment Certificates do not appear on student transcripts.

Skills Attainment Certificate:* Video Production for Entrepreneurs

The coursework in this Skills Attainment Certificate is designed to prepare students who plan to own a business and/or consult in filming, editing and producing video content.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Create and edit video and still photography.
• Create a marketing plan for digital media.
• Create a business plan.
• Identify the process for protecting original media.

SKILLS ATTAINMENT REQUIREMENTS

■ To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCTDM 28</td>
<td>Video Production I</td>
<td>2</td>
</tr>
<tr>
<td>CCTDM 29</td>
<td>Video Production II</td>
<td>2</td>
</tr>
<tr>
<td>CCTDM 50</td>
<td>Photo Editing for Digital and Print Publication</td>
<td>3</td>
</tr>
<tr>
<td>ENTRE 105</td>
<td>Social Media Marketing</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 106</td>
<td>Patents, Copyrights, and Trademarks</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 107</td>
<td>Contract Law for Entrepreneurs</td>
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4 units required from this section:

<table>
<thead>
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<th>Course</th>
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<th>Units</th>
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<tr>
<td>ART 56</td>
<td>Typography</td>
<td>3</td>
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<tr>
<td>CCTDM 5</td>
<td>Introduction to Digital Multimedia</td>
<td>3</td>
</tr>
<tr>
<td>CCTIS 29/</td>
<td>Project Management (3)</td>
<td>3</td>
</tr>
<tr>
<td>ENTRE 102</td>
<td>Entrepreneurial Marketing (2)</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 104</td>
<td>Preparing Effective Business Plans (2)</td>
<td>2</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 17

*Skills Attainment Certificates do not appear on student transcripts.
COMPUTER & COMMUNICATIONS TECHNOLOGY

CCT: Information Systems

PROGRAM

Career and Technical Education Division
Manzanita, Upper Level, Room 267
(209) 588-5142
www.gocolumbia.edu/career_technical

Associate Degree

AS Degree:
Business Digital Media Development

- Previously offered as an ASOE degree

This degree includes a group of courses for students who want to create digital media for business. This Associate in Science Degree will provide students with skills and training for immediate entry into the workforce. This program is not designed for students planning to transfer to a four-year institution, although some courses in the AS degree may meet transfer requirements.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Prepare and use financial information about business organizations to support decision making.
- Manage business information using appropriate digital media software.

DEGREE REQUIREMENTS

- To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 161A</td>
<td>Small Business Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>CCTDM 10</td>
<td>Introduction to HTML and CSS</td>
<td>3</td>
</tr>
<tr>
<td>CCTDM 50</td>
<td>Photo Editing for Digital and Print Publication</td>
<td>3</td>
</tr>
<tr>
<td>CCTDM 51/ART</td>
<td>Publication Design I</td>
<td>3</td>
</tr>
<tr>
<td>CCTIS 8</td>
<td>Advanced Internet Research</td>
<td>1.5</td>
</tr>
<tr>
<td>CCTIS 10</td>
<td>Computer Concepts &amp; Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>CCTIS 29/BUS</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CCTIS 30</td>
<td>Financial Worksheets on Computers</td>
<td>3</td>
</tr>
<tr>
<td>CCTPG 5</td>
<td>Introduction to Programming</td>
<td>3</td>
</tr>
<tr>
<td>CCTPG 51</td>
<td>Database Management</td>
<td>3</td>
</tr>
<tr>
<td>MGMT 111</td>
<td>Customer Service</td>
<td>.5</td>
</tr>
<tr>
<td>MGMT 115</td>
<td>Time Management</td>
<td>.5</td>
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<tr>
<td>OFTEC 140</td>
<td>Beginning Word Processing</td>
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</tbody>
</table>

UNITS REQUIRED IN MAJOR: 33.5
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Certificate of Achievement

Certificate of Achievement: Business Emphasis

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Create programs for accounting and other financial applications expected in an entry level position.
- Demonstrate fundamental knowledge and skills required for database design management.

CERTIFICATE REQUIREMENTS

- To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 40</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 161A</td>
<td>Small Business Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 161B</td>
<td>Small Business Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>CCTIS 10</td>
<td>Computer Concepts &amp; Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>CCTIS 29/BUS</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CCTIS 30</td>
<td>Financial Worksheets on Computers</td>
<td>3</td>
</tr>
<tr>
<td>CCTPG 5</td>
<td>Introduction to Programming</td>
<td>3</td>
</tr>
<tr>
<td>CCTPG 51</td>
<td>Database Management</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 140</td>
<td>Beginning Word Processing</td>
<td>2</td>
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</tbody>
</table>

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 29
COMPUTER & COMMUNICATIONS TECHNOLOGY

CCT: Programming

PROGRAM

Career and Technical Education Division
Manzanita, Upper Level, Room 267
(209) 588-5142
www.gocolumbia.edu/career_technical

AS Degree:
Computer Programming

- Previously offered as an ASOE degree
- Previously offered as “Programming”

Computer programming skills are a vital component of many careers, this degree is intended as a stepping stone into the modern workforce. Students earning this degree will be prepared to write programs, apps, and with appropriate choices web design. Students intending to transfer will require further coursework.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Articulate how technological advances impact society and the social, legal, ethical, and cultural ramifications of computer technology.
- Apply problem solving skills and the knowledge of computer science to solve real problems.
- Demonstrate proficiency with algorithms, data structures, and complexity.
- Demonstrate proficiency with programming and compilers.

DEGREE REQUIREMENTS
- To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

- CCTPG 22 Programming Concepts and Methodology I 4
- CCTPG 24 Programming Concepts and Methodology II 4
- 6 units required from:
  - CCTIS 10 Computer Concepts and Information Systems (4)
  - CCTPG 5 Introduction to Programming (3)
  - CCTPG 51 Database Management (3)
  - PHYCS 5A Introductory Physics I: Calculus Level (4)
- 10 units required from:
  - MATH 8 Trigonometry (3)
  - MATH 16 Pre calculus (5)
  - MATH 18A Calculus I (5)
  - MATH 18B Calculus II (5)
  - MATH 18C Calculus III (5)

UNITS REQUIRED IN MAJOR: 24
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Earth Science:
see “Geology/Earth Science”

Economics

PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

AA-T Degree:
Economics

ABOUT THIS DEGREE

The AA-T in Economics will offer students an efficient pathway for transfer to the CSU system with coverage of the core courses required. Critical thinking, business conventions, economic principles, and the applicable higher level math will all be met in this course package.

The goal of the Associate in Arts in Economics for Transfer program is to prepare students for transfer to a California State University to pursue a B.A. or B.S. in Economics. The program is intended and designed to make the transfer of Columbia College students to CSU as seamless as possible. The major requirements of this degree align with the Transfer Model Curriculum. It is the most efficient pathway for students wishing to transfer to CSU in a similar major in a timely manner. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Generalize in writing the workings of a market system and describe how firms and households interact to maximize their various needs in light of constraints faced.
- Evaluate alternative fiscal and monetary policies in regards to reaching an intended economic outcome.
- Conceptualize, analyze, quantify and illustrate issues related to different states of the economy utilizing mathematical techniques and knowledge.

DEGREE REQUIREMENTS
- To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:
  1. Either the California State University General Education Breadth Requirements (CSU-GE) or the Intersegmental General Education Transfer Curriculum (IGETC); AND
  2. Semester units as specified below, with a grade of C or better in all courses; AND
  3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.
Required courses: 15

- ECON 10 Principles of Economics - Macro 3
- ECON 11 Principles of Economics - Micro 3
- MATH 2 Statistics 4
- MATH 18A Calculus I 5

List A: Select one course (3-5 units)
- MATH 12 Finite Mathematics (3)
- MATH 18B Calculus II (5)
- BUSAD 2A Financial Accounting (4)
- BUSAD 2B Managerial Accounting (4)

List B: Select one course (3-5 units)
- MATH 18C Calculus III (5)
- MATH 26 Linear Algebra (3)
- Any List A course not already used

UNITS REQUIRED IN MAJOR: 21-25
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Education

Program

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

Associate Degrees

AA-T Degree: Elementary Teacher Education

About this degree

The Associate of Arts for Transfer (AA-T) degree in Elementary Teacher Education provides students with a core curriculum in the concepts and issues related to teaching diverse learners in today’s contemporary schools, K-12. Topics include teaching as a profession and career, historical and philosophical foundations of the American education system, contemporary educational issues. California’s content standards and frameworks, and teacher performance standards. In addition to class time, the course requires 45 hours of structured fieldwork on a public school elementary classroom(s) that represent California’s diverse student population, and includes cooperation with at least one carefully selected and campus-approved certificated classroom teacher.

The goal of the Associate in Arts in Elementary Teacher Education for Transfer program is to prepare students for transfer to a California State University to pursue a Bachelor’s Degree in Liberal Studies, K-8 Teacher Preparation Program. The program is intended and designed to make the transfer of Columbia College students to CSU as seamless as possible. The major requirements of this degree align with the Transfer Model Curriculum. It is the most efficient pathway for students wishing to transfer to CSU in a similar major in a timely manner. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

Program student learning outcomes

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate ability to observe and work with teachers and students in the classroom.
- Develop a personal philosophy of education, including reflection on motivation for pursuing a teaching career.
- Develop expertise in the introductory content area subject matter required for teaching at the elementary school level.
- Identify cultural perspectives in the language of learning and describe how educators can structure positive learning situations for diverse learners.

An Academic Achievement Center (AAC) tutor at the AAC’s annual “Tacos with Tutors” event during Welcome Week. The AAC provides free tutoring services and more for all Columbia College Students.
AWARD REQUIREMENTS

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. Either the California State University General Education Breadth Requirements (CSU-GE) OR the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.

Required courses:

- BIOL 17 Fundamentals of Biology 4
- CHEM 30/ Survey of Chemistry and Physics 4
- PHYCS 30
- CHILD 1 Child Growth and Development 3
- EDUC 11 Introduction to Elementary Classroom Teaching 3
- ENGL 1A Reading and Composition: Beginning 3
- ENGL 1B Advanced Composition and Introduction to Literature 3
- ESC 33 Introduction to the Earth 4
- GEOGR 20 World Regional Geography 3
- HIST 13 World Civilizations: to 1500 3
- HIST 16 United States: to 1877 3
- MATH 4 Mathematics for Elementary Teachers 3
- POLSC 10 Constitutional Government 3
- SPCOM 1 Introduction to Public Speaking 3

Complete 1 course from the following:

- ENGL 1C Advanced Composition and Critical Thinking (3)
- HIST 5/ Introduction to the History and Philosophy of Science (3)
- PHILO 5 Philosophy of Science (3)

Complete 1 course from the following:

- DRAMA 10 Introduction to the Theatre (3)
- MUSIC 2 Introduction to Music (3)

UNITS REQUIRED IN MAJOR: 48
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Additional Strongly Recommended Preparation:

- CHILD 16 Practicum-Field Experience (3)
- CHILD 19 Introduction to Children With Special Needs (3)
- CHILD 22 Child, Family, and Community (3)
- CHILD 23 Guiding Children's Social and Emotional Development (3)
- CHILD 36 Teaching in a Diverse Society (3)

AA Degree:

Liberal Studies:
Elementary Teaching Preparation

This area of emphasis is intended to provide partial fulfillment of Freshman/Sophomore major preparation requirements towards transferring to a university in a Bachelor’s Degree in Liberal Studies, K-8 Teacher Preparation Program. Students planning to transfer in this major should consult with a counselor to create an Educational Plan, as requirements vary among transfer universities.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate breadth of knowledge in at least six fields.
- Apply knowledge from a particular field to issues in contemporary society.
- Demonstrate competency in writing or speaking.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Complete at least 1 course in at least 6 of the following areas: 18

Oral Communication Area
- SPCOM 1 Introduction to Public Speaking (3)
- SPCOM 4 Introduction to Human Communication (3)

Composition Area
- ENGL 1A Reading and Composition: Beginning (3)
- ENGL 1B Advanced Composition and Introduction to Literature (3)

Critical Thinking Area
- ENGL 1C Advanced Composition and Critical Thinking (3)
- HIST 5/ Introduction to the History and Philosophy of Science (3)
- PHILO 5 Introduction to the History and Philosophy of Science (3)
- SPCOM 2 Argumentation and Debate (3)

Chemistry Area
- CHEM 2A General Chemistry I (3)
- CHEM 2AL General Chemistry I Laboratory (2)
- CHEM 5 Introductory Chemistry: Environmental Emphasis (3)
- CHEM 5L Introductory Chemistry Laboratory (1)
- CHEM 14 Fundamental Chemistry for Allied Health (3)
- CHEM 14L Fundamental Chemistry for Allied Health Laboratory (1)
- CHEM 30/ Survey of Chemistry and Physics (4)

Introduction to Earth Science Area
- ESC 33 Introduction to the Earth (4)
- GEOGR 15 Physical Geography (3)

Physics Area
- PHYCS 1 Conceptual Physics (3)
- PHYCS 5A Introductory Physics I: Calculus Level (4)
- PHYCS 5B Introductory Physics II: Calculus Level (4)
- PHYCS 30/ Survey of Chemistry and Physics (4)
- CHEM 30
AWARD REQUIREMENTS

Biological Sciences Area
- BIOL 2 Cell and Molecular Biology (4)
- BIOL 10 Human Anatomy (4)
- BIOL 17 Fundamentals of Biology (4)

Mathematics Area
- MATH 4 Mathematics for Elementary Teachers (3)

Art Area
- ART 11 History of Art: Ancient and Medieval (3)
- ART 12 History of Art: Renaissance, Baroque and Modern (3)
- ART 13 Art of Africa, Asia, Australia and the Americas (3)

Music Area
- MUSIC 2 Introduction to Music (3)
- MUSIC 10 Survey of Music History and Literature: Ancient to 1750 (3)
- MUSIC 11 Survey of Music History and Literature: 1750 to Present (3)
- MUSIC 12 American Popular Music: Blues and Jazz to Rock ’n’ Roll (3)

Theatre Area
- DRAMA 10 Introduction to the Theatre (3)
- DRAMA 20 Oral Expression and Interpretation (3)
- DRAMA 42 Acting Fundamentals (3)
- DRAMA 43 Acting and Directing (3)

Philosophy or Humanities Area
- HIST 5/ PHILO 5 Introduction to the History and Philosophy of Science (3)
- HUMAN 1 Old World Culture (3)
- HUMAN 2 Modern Culture (3)
- HUMAN 3 World Culture (3)
- HUMAN 4 World Religions and Spirituality (3)
- PHILO 1 Introduction to Philosophy (3)
- PHILO 25 Twentieth Century Philosophy (3)

Early U.S. History Area
- HIST 16 United States: to 1877 (3)

American Government Area
- POLSC 10 Constitutional Government (3)

Ancient World History Area
- HIST 13 World Civilizations: to 1500 (3)

California History Area
- HIST 11 History of California (3)

Geography Area
- GEOGR 12 Cultural Geography (3)

Liberal Studies Teaching Prerequisite Area
- CHILD 1 Child Growth and Development (3)
- EDUC 11 Introduction to Elementary Classroom Teaching (3)
- PSYCH 10 Lifespan Human Development (3)

Computer Science Area
- CCTIS 10 Computer Concepts and Information Systems (4)

UNITS REQUIRED IN MAJOR: 18
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Certificates of Achievement

Certificate of Achievement:
CSU-GE Breadth

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:
- Demonstrate Effective Communication in the areas of writing, reading, speaking, and collaborating.
- Demonstrate Critical/Creative Thinking in the areas of problem solving, reasoning, information competency, and innovation.
- Demonstrate Awareness and Personal Responsibility in the areas of global issues, cultural factors, aesthetic factors and self-related issues.
- Demonstrate Breadth of Subject Area Knowledge in Natural Sciences and Mathematics, Arts and Humanities, Social and Behavioral Science and Personal and Professional growth.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement in CSU General Education Breadth, the student must complete the requirements detailed in the CSU-GE Breadth Pattern, Column 2, on pages 60-61. Each course must be completed with a grade of C or better, Pass/No Pass grades are not accepted, and 70% of the required courses must be completed within the Yosemite Community College District. Students who plan to transfer to the CSU should consult with a counselor regarding optimal selection of courses and General Education certification.

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 39
Certificate of Achievement: IGETC Pattern

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate Effective Communication in the areas of writing, reading, speaking, and collaborating.
- Demonstrate Critical/Creative Thinking in the areas of problem solving, reasoning, information competency, and innovation.
- Demonstrate Awareness and Personal Responsibility in the areas of global issues, cultural factors, aesthetic factors and self-related issues.
- Demonstrate Breadth of Subject Area Knowledge in Natural Sciences and Mathematics, Arts and Humanities, Social and Behavioral Science and Personal and Professional growth.

CERTIFICATE REQUIREMENTS
- To earn this Certificate of Achievement for the Intersegmental General Education Transfer Curriculum (IGETC), the student must complete the requirements detailed in the IGETC Requirements on pages 62-63. Each course must be completed with a grade of C or better, Pass/No Pass grades are not accepted, and 70% of the required courses must be completed within the Yosemite Community College District. Students who plan to transfer to the UC or the CSU should consult with a counselor regarding optimal selection of courses and IGETC certification.

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 37

Certificate of Competency: General Education Development Preparation

The General Educational Development (GED) Preparation Certificate of Competency is awarded to students who have completed SKLDV 706 (GED: Math and Language Arts), SKLDV 707 (GED: Science & Social Studies) and successfully pass the California GED examination.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Pass the official GED exam in the subjects of Math, Reasoning Through Language Arts, Science and Social Studies; leading to a High School Equivalency certificate.

CERTIFICATE REQUIREMENTS
- To earn this Certificate of Competency, students must complete courses with a designation of P (Pass).

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKLDV 706</td>
<td>GED: Math and Language Arts</td>
<td>54</td>
</tr>
<tr>
<td>SKLDV 707</td>
<td>GED: Science &amp; Social Studies</td>
<td>54</td>
</tr>
</tbody>
</table>

TOTAL HOURS REQUIRED FOR CERTIFICATE OF COMPETENCY: 108
Skills Attainment Certificate

Skills Attainment Certificate:*
Learning Design & Technology

The coursework in this Skills Attainment Certificate is designed to prepare students for online course development, emerging technologies and universal design techniques. The certificate serves as required training and advanced online development training for faculty and students who are interested in course design and development, online education and teaching careers. This is a broad based award that would also appeal to corporate trainers and Instructional Technologists.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate “best practices” in universal design and accessibility techniques.
- Develop online activities for learning units.
- Produce learning units that demonstrate knowledge and implementation of best uses of emerging technologies.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:
- EDUC 50 Online Course Development 3
- EDUC 51 Emerging Technologies for Online Course Development 3
- EDUC 52 Universal Design for Online Course Development 3

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 9

*Skills Attainment Certificates do not appear on student transcripts.

Emergency Medical Services

PROGRAM

Career and Technical Education Division
Manzanita, Upper Level, Room 267
(209) 588-5142
www.gocolumbia.edu/career_technical

Columbia College’s EMS program is certified by the Tuolumne County Emergency Medical Services Agency to provide training in preparation for EMT testing and certification.

Associate Degree

AS Degree: Emergency Medical Services

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate the knowledge and skills to industry standards needed as an entry-level Emergency Medical Technician.
- Apply the fundamental knowledge and skills related to the field of Emergency Medical Services.
- Communicate necessary care and medical terminology for emergency situations.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

- EMS 4 Emergency Medical Technician Training 7
- EMS 12 Pre-Paramedic Training (8)
- OR
- BIOL 10 Human Anatomy (4) AND
- BIOL 60 Human Physiology (4)
- EMS 157 Emergency Medical Responder and CPR 3
- EMS 165 Conversational Medical Spanish for Emergency Health Care Providers 3
- MATH 2 Statistics 4
- Complete 2 courses for a minimum of 4 units: 4
  - EMS 20 Basic Cardiology and Cardiac Dysrhythmias (3)
  - EMS 97 Work Experience in Emergency Medical Service (1-4)
  - EMS 175 EMS Skills Development (2)

UNITs REQUIRED IN MAJOR: 29–32
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60
AWARD REQUIREMENTS

Certificate of Achievement

Certificate of Achievement: Emergency Medical Services

This certificate will prepare a student to take a national test to become an EMT and prepare them to enter a paramedic program.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate the knowledge and skills to industry standards needed as an entry-level Emergency Medical Technician.
- Apply the fundamental knowledge and skills related to the field of Emergency Medical Services.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

**Required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 4</td>
<td>Emergency Medical Technician Training</td>
<td>7</td>
</tr>
<tr>
<td>EMS 12</td>
<td>Pre-Paramedic Training</td>
<td>8</td>
</tr>
<tr>
<td>BIOL 10</td>
<td>Human Anatomy (4) AND BIOL 60 Human Physiology (4)</td>
<td></td>
</tr>
<tr>
<td>EMS 157</td>
<td>Emergency Medical Responder and CPR</td>
<td>3</td>
</tr>
</tbody>
</table>

**Complete 3 units from this section:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 20</td>
<td>Basic Cardiology and Cardiac Dysrhythmias</td>
<td>3</td>
</tr>
<tr>
<td>EMS 97</td>
<td>Work Experience in Emergency Medical Services (1-4)</td>
<td></td>
</tr>
<tr>
<td>EMS 165</td>
<td>Conversational Medical Spanish for Emergency Health Care Providers (3)</td>
<td></td>
</tr>
<tr>
<td>EMS 175</td>
<td>EMS Skills Development</td>
<td>2</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT:** 21

Skills Attainment Certificate

Skills Attainment Certificate:* Emergency Medical Technician (EMT) Training

This Skills Attainment will prepare a student to take the national test to become an EMT.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate the knowledge and skills to industry standards needed as an entry-level Emergency Medical Technician.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

**Required course:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 4</td>
<td>Emergency Medical Technician Training</td>
<td>7</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE:** 7

Recommended Optional Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 157</td>
<td>Emergency Medical Responder and CPR</td>
<td>3</td>
</tr>
</tbody>
</table>

*Skills Attainment Certificates do not appear on student transcripts.

Skills Attainment Certificate:* Emergency Medical Responder

The Emergency Medical Responder (EMR) course is an entry-level emergency medical provider course that will prepare individuals for employment or a volunteer position in a variety of pre-hospital, industrial and first responder settings. The certificate can be a prerequisite to pursuing training as a firefighter and many law enforcement programs. Before enrolling in this course, students are strongly advised to satisfactorily complete BIOL 150 and/or satisfactorily complete OFTEC 50.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate the knowledge and skills to industry standards needed as a First Responder.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

**Required course:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 157</td>
<td>Emergency Medical Responder and CPR</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE:** 3

*Skills Attainment Certificates do not appear on student transcripts.
Engineering

PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

Associate Degree

AS Degree:
Engineering Fundamentals

The Associate in Science Degree - Engineering Fundamentals is designed to give students the background in math and physical sciences for a course of study in Engineering at a university.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:
• Utilize mathematics to solve physical problems.
• Utilize physical sciences to better understand the world.

DEGREE REQUIREMENTS
To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:
MATH 18A Calculus I 5
MATH 18B Calculus II 5
MATH 18C Calculus III 5
MATH 28 Differential Equations 3
PHYS 5A Introductory Physics I: Calculus Level 4
PHYS 5B Introductory Physics II: Calculus Level 4
CHEM 2A General Chemistry I 3
CHEM 2AL General Chemistry I Laboratory 2

UNITS REQUIRED IN MAJOR: 31
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Recommended Optional Courses
CCTPG 22 Programming Concepts and Methodology I (4)
CHEM 2B General Chemistry II (3)
CHEM 2BL General Chemistry II Laboratory (2)
MATH 26 Linear Algebra (3)
PHYS 5C Physics III: Calculus Level (4)

English

PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

Associate Degree

AA-T Degree: English

The English program provides students with a core curriculum in composition, literature, and critical thinking. The curriculum is designed in a sequential pattern to provide students with college-level writing and reading skills. The program is further designed to foster critical thinking and to apply analytical skills to upper-division course work and to everyday problem solving. The requirements of this degree satisfy the Transfer Model Curriculum (TMC) for English. The Associate in Arts for Transfer (AA-T) complies with the Student Transfer Achievement Reform Act (SB 1440, now codified in California Education Code section 66746-66749, effective Fall 2011). This law states that students will have guaranteed admission to a California State University (CSU) campus upon successful completion of the specified program requirements. This degree is for students who plan to complete a bachelor's degree in English at a CSU campus. Students should consult with a counselor to determine if this degree is the best option or plan for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:
• Identify the literary devices at work in a broad selection of literature, and to apply that knowledge to constructing meaningful interpretations of literature.
• Write college-level compositions that are cohesive, persuasive, and mechanically correct.
• Write using a wide range of rhetorical forms, including the documented research paper.

DEGREE REQUIREMENTS
To earn this degree, students must complete 60 CSU transferable units with a grade point average of 2.0 or better, including the completion of:

1. Either the California State University General Education Breadth Requirements (CSU-GE) or the Intersegmental General Education Transfer Curriculum); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.
AWARD REQUIREMENTS

Required courses:
- ENGL 1B Advanced Composition and Introduction to Literature 3
- ENGL 1C Advanced Composition and Critical Thinking 3

Complete two of the following courses (LIST A): 6
- ENGL 17 American Literature: Colonial Period - Late 19th Century (3)
- ENGL 18 American Literature: Late 19th Century - Modern Day (3)
- ENGL 46 Survey of English Literature: Anglo-Saxon Period - 18th Century (3)
- ENGL 47 Survey of English Literature: 19th and 20th Centuries (3)

Complete 1 of the following courses (LIST B): 3
- ENGL 10 Creative Writing (3)
- ENGL 50 Introduction to Shakespeare (3)
- Any course from List A not used above (3)

Complete 1 of the following courses: 3
- ENGL 11 Film Appreciation (3)
- ENGL 49 California Literature (3)
- ENGL 81 Introduction to World Literature: 1500 to present (3)
- Any course from LIST A or LIST B not used above (3)

UNITS REQUIRED IN MAJOR: 18
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Certificates of Competency

Noncredit Certificate of Competency: Beginning ESL

This Beginning ESL Certificate of Competency is awarded to students who have completed ENGL 705A and ENGL 705B. The emphasis is on speaking, listening, reading, and writing for practical communication.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:
- Participate in simple conversations in English in a variety of common and basic social situations.
- Recognize new words in simple reading materials.
- Write sentences and develop a short paragraph.

CERTIFICATE REQUIREMENTS
- To earn this Certificate of Competency, students must complete courses with a designation of P (Pass).

Required courses:
- ENGL 705A English as a Second Language: Low Beginning 90 Hours
- ENGL 705B English as a Second Language: High Beginning 90 Hours

TOTAL HOURS REQUIRED FOR CERTIFICATE OF COMPETENCY: 180

Noncredit Certificate of Competency: Intermediate ESL

This Intermediate ESL Certificate of Competency is awarded to students who have completed ENGL 705C and ENGL 705D. The emphasis is on speaking, listening, and reading with an increased emphasis on intermediate reading and written communication skills.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:
- Process essential information in spoken and written English.
- Interpret reading materials on common topics.
- Produce brief compositions, showing clear organization and a working knowledge of basic grammar and punctuation rules.

CERTIFICATE REQUIREMENTS
- To earn this Certificate of Competency, students must complete courses with a designation of P (Pass).

Required courses:
- ENGL 705C English as a Second Language: Low Intermediate 90 Hours
- ENGL 705D English as a Second Language: High Intermediate 90 Hours

TOTAL HOURS REQUIRED FOR CERTIFICATE OF COMPETENCY: 180
Entrepreneurship

Career and Technical Education Division
Manzanita, Upper Level, Room 267
(209) 588-5142
www.gocolumbia.edu/career_technical

Associate Degree

AS Degree: Entrepreneurship

The Entrepreneurship degree focuses on many aspects of business. Students who enroll in the entrepreneurship major should expect a strong emphasis on business management, communication, and business development. They must also be ready for constant change and be adaptable. The field of entrepreneurship is one that relies heavily on the ability to change and exploit new markets and opportunities.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

• Demonstrate the knowledge and skills to create, manage, and market a business.
• Demonstrate the knowledge and skills to use appropriate software effectively for researching information, creating documents, and accounting purposes.
• Demonstrate the knowledge and skills to work collaboratively within an organization.
• Demonstrate the knowledge and skills to protect intellectual property.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 41</td>
<td>Small Business Management</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 161A</td>
<td>Small Business Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>CCTIS 8</td>
<td>Advanced Internet Research</td>
<td>1.5</td>
</tr>
<tr>
<td>CCTIS 30</td>
<td>Financial Worksheets on Computers</td>
<td>3</td>
</tr>
<tr>
<td>ENTRE 101</td>
<td>Introduction to Entrepreneurship</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 102</td>
<td>Entrepreneurial Marketing</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 103</td>
<td>Financial Management for Entrepreneurs</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 104</td>
<td>Preparing Effective Business Plans</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 105</td>
<td>Social Media Marketing</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 106</td>
<td>Patents, Copyrights, and Trademarks</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 107</td>
<td>Contract Law for Entrepreneurs</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 108</td>
<td>Negligence Law for Entrepreneurs</td>
<td>2</td>
</tr>
</tbody>
</table>

UNITS REQUIRED IN MAJOR: 27.5
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Certificate of Achievement

Certificate of Achievement: Entrepreneurship

The Entrepreneurship Certificate can be valuable for any student on campus. It is designed for the student who seeks to be an entrepreneur in start-up ventures, operate a family business, or work as an entrepreneurial change agent within a corporate setting. Companies want to hire graduates with initiative and who show entrepreneurial characteristics. Students who display entrepreneurial attributes will add more value to their companies, eventually start their own business, and can make a big contribution to the overall economy.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

• Demonstrate the knowledge and skills to create, manage, and market a business.
• Demonstrate the knowledge and skills to use appropriate software for researching information, creating documents, and accounting purposes.
• Demonstrate the knowledge and skills to work collaboratively within an organization.
• Demonstrate the knowledge and skills to protect intellectual property.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 24</td>
<td>Human Relations in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 29/</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CCTIS 29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUSAD 135</td>
<td>Computerized Accounting (QuickBooks)</td>
<td>2</td>
</tr>
<tr>
<td>BUSAD 158</td>
<td>Payroll Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 161A</td>
<td>Small Business Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>CCTIS 8</td>
<td>Advanced Internet Research</td>
<td>1.5</td>
</tr>
<tr>
<td>CCTIS 138</td>
<td>Excel Spreadsheets</td>
<td>2</td>
</tr>
<tr>
<td>OFTEC 140</td>
<td>Beginning Word Processing</td>
<td>2</td>
</tr>
<tr>
<td>OFTEC 141</td>
<td>Intermediate Word Processing</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete 8 units from this section: 8

Complete 3 units from this section: 3

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTRE 101</td>
<td>Introduction to Entrepreneurship</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 102</td>
<td>Entrepreneurial Marketing</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 103</td>
<td>Financial Management for Entrepreneurs</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 104</td>
<td>Preparing Effective Business Plans</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 105</td>
<td>Social Media Marketing</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 106</td>
<td>Patents, Copyrights, and Trademarks</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 107</td>
<td>Contract Law for Entrepreneurs</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 108</td>
<td>Negligence Law for Entrepreneurs</td>
<td>2</td>
</tr>
<tr>
<td>MGMT 110</td>
<td>Communication in the Workplace (.5)</td>
<td></td>
</tr>
<tr>
<td>MGMT 111</td>
<td>Customer Service (.5)</td>
<td></td>
</tr>
<tr>
<td>MGMT 112</td>
<td>Team Building (.5)</td>
<td></td>
</tr>
<tr>
<td>MGMT 113</td>
<td>Attitude in the Workplace (.5)</td>
<td></td>
</tr>
</tbody>
</table>
AWARD REQUIREMENTS

Skills Attainment Certificate:*
Entrepreneur Business Startup

This certificate will prepare students to start their own businesses and/or get their inventions started and protected.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:
- Demonstrate the knowledge and skills to market a business using various medias.
- Demonstrate the knowledge and skills to manage finances for a business.
- Demonstrate the knowledge and skills to protect intellectual property.

SKILLS ATTAINMENT REQUIREMENTS
- To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:
- ENTRE 101 Introduction to Entrepreneurship 2
- ENTRE 102 Entrepreneurial Marketing 2
- ENTRE 103 Financial Management for Entrepreneurs 2
- ENTRE 104 Preparing Effective Business Plans 2
- ENTRE 105 Social Media Marketing 2
- ENTRE 106 Patents, Copyrights, and Trademarks 2
- ENTRE 107 Contract Law for Entrepreneurs 2
- ENTRE 108 Negligence Law for Entrepreneurs 2

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 16
*Skills Attainment Certificates do not appear on student transcripts.

Skills Attainment Certificate:*
E-Marketing Your Business

E-Marketing represents one of the most significant changes in consumer purchasing behavior in history, resulting in fundamental shifts in the way marketers communicate and interact with consumers. This certificate provides the practical knowledge and insights required to establish objectives and strategies, to properly select the marketing platforms to engage consumers, and measure the results of these efforts.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:
- Demonstrate the knowledge and skills to market a business using various medias.
- Demonstrate the knowledge and skills to create a business presence on the web.
- Demonstrate the knowledge and skills to develop documents in several formats.

SKILLS ATTAINMENT REQUIREMENTS
- To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:
- BUSAD 30 Principles of Marketing 3
- ENTRE 101 Introduction to Entrepreneurship 2
- ENTRE 102 Entrepreneurial Marketing 2
- ENTRE 105 Social Media Marketing 2
- ENTRE 107 Contract Law for Entrepreneurs 2
- OFTEC 140 Beginning Word Processing 2
- OFTEC 168 Creating a Virtual Office 3

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 16
*Skills Attainment Certificates do not appear on student transcripts.

Entrepreneurship awards are also listed in:
- Automotive Technology
- Digital Media
- Welding
Environmental Sciences

PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

Associate Degrees

AS-T Degree: Environmental Science

The Associate in Science for Transfer (AS-T) degree in Environmental Science provides students with the core curriculum required in the first two years of a college experience leading to a Bachelor of Science (BS) or Bachelor of Arts (BA) degree in Environmental Science. The basis for any environmental sciences degree requires courses in biology, chemistry, math, physics, earth science, economics and environmental science.

The goal of the Associate in Science in Environmental Science for Transfer program is to prepare students for transfer to a California State University to pursue a B.A. or B.S. in Environmental Science. The program is intended and designed to make the transfer of Columbia College students to CSU seamless. The requirements of this degree align with the Transfer Model Curriculum. It is the most efficient pathway for students desiring to transfer to CSU in a similar major in a timely manner. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

• Explain the scientific theories that are the foundation of the Environmental Sciences.
• Verbalize the effects of humans on the local and global environments.
• Demonstrate social and professional skills needed to be successful in the modern work place, e.g., communications, working in groups, working with technology.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. Either the California State University General Education Breadth Requirements (CSU-GE) OR the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

RECOMMENDED OPTION

IGETC for STEM: Courses in Areas 1 (UC-bound students do not need 1C), 2, and 5 of the traditional IGETC; and One course in Area 3A; one course in Area 3B; and two courses in Area 4 from two different disciplines. ** Two lower division general education courses are deferred and must be taken after transfer.

Note: Students earning this degree are exempt from the Activities Requirement.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 2</td>
<td>Cell and Molecular Biology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 24</td>
<td>Introduction to Environmental Science</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2A</td>
<td>General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2AL</td>
<td>General Chemistry I Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 2B</td>
<td>General Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2BL</td>
<td>General Chemistry II Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>ECON 11</td>
<td>Principles of Economics - Micro</td>
<td>3</td>
</tr>
<tr>
<td>ESC 5</td>
<td>Physical Geology</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2</td>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>MATH 18A</td>
<td>Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>PHYCS 4A</td>
<td>Introductory Physics I: Trigonometry Level (4)</td>
<td>AND</td>
</tr>
<tr>
<td>PHYCS 4B</td>
<td>Introductory Physics II: Trigonometry Level (4)</td>
<td>OR</td>
</tr>
<tr>
<td>PHYCS 5A</td>
<td>Introductory Physics I: Calculus Level (4)</td>
<td>AND</td>
</tr>
<tr>
<td>PHYCS 5B</td>
<td>Introductory Physics II: Calculus Level (4)</td>
<td></td>
</tr>
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</table>

UNITS REQUIRED IN MAJOR: 42
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

AS Degree: Science: Emphasis in Environmental Science

The Associate in Science Degree is awarded in Science and Technical fields. It is specifically designed for students who intend to transfer to a four-year institution.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

• Describe how human activities impact the environment and how the environment impacts human society over time.
• Demonstrate knowledge of the interconnections among the lithosphere, biosphere, hydrosphere, and atmosphere.
• Apply critical thinking to establish connections and evaluate the extent to which human activities degrade, protect, or rehabilitate environmental health.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Complete 10 units from this section: 10

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 24</td>
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<tr>
<td>ESC 5</td>
<td>Physical Geology</td>
<td>4</td>
</tr>
<tr>
<td>ESC 10</td>
<td>Environmental Geology</td>
<td>3</td>
</tr>
<tr>
<td>ESC 33</td>
<td>Introduction to the Earth</td>
<td>4</td>
</tr>
</tbody>
</table>
AWARD REQUIREMENTS

ESC 42  Natural Hazards (3)
FNR 1  Natural Resource Conservation (3)
INDIS 48  Sustainable Living (3)
PHYS 1  Conceptual Physics (3)

Complete 4 units from this section: 4

BIOL 2  Cell and Molecular Biology (4)
BIOL 4  Principles and Evolution of Zoology (4)
BIOL 6  Plant Biology and Ecology (4)
BIOL 17  Fundamentals of Biology (4)

Complete 4 units from this section: 4

CHEM 2A  General Chemistry I (3) AND
CHEM 2AL  General Chemistry I Laboratory (2)
OR
CHEM 5  Introductory Chemistry: Environmental Emphasis (3) AND
CHEM 5L  Introductory Chemistry: Laboratory (1)

Complete 2 units from this section: 2

BIOL 39  Field Biology (1-2)
ESC 35  Field Geology (1-3)
ESC 35CC  Geology and Gold Mining of Calaveras County (1-3)
ESC 35DV  Geology of Death Valley (1-3)
ESC 35LS  Geology of Lassen, Shasta, Lava Beds (1-3)
ESC 35LT  Geology of the Lake Tahoe Region (1-3)
ESC 35LV  Geology of the Long Valley Caldera (1-3)
ESC 35ML  Geology of the Mother Lode (1-3)
ESC 35SA  Geology of the San Andreas Fault (1-3)
ESC 35SN  Geology of the Sierra Nevada (1-3)
ESC 35SP  Geology of the Sonora Pass Area (1-3)
ESC 35TR  Geology of the Tuolumne River (1-3)
FNR 10  Dendrology (3)

UNITS REQUIRED IN MAJOR: 20
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Associate Degrees

AS Degree: Fire Science

Previously offered as “AS: Fire Technology”

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate knowledge and skills in compliance with state fire training requirements for applicable certifications.
- Demonstrate the necessary knowledge and skills as an Emergency Medical Technician (EMT) according to industry standards.
- Examine and identify real-world examples of concepts explored in coursework and their implication for fire science.
- Describe procedures in compliance with laws, regulations, codes, and standards that influence fire department operations.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

FIRE 1  Fire Protection Organization  3
FIRE 2  Fire Prevention Technology  3
FIRE 3  Fire Protection Equipment/Systems  3
FIRE 4  Building Construction for Fire Protection  3
FIRE 5  Fire Behavior and Combustion  3
EMS 4  Emergency Medical Technician Training  7
EMS 157  Emergency Medical Responder and CPR  3

Complete 3-4 units from this section: 3-4

EMS 97*  Work Experience in Emergency Medical Service (1-4)
FIRE 7  Wildland Fire Control (3)
FIRE 29A  Driver/Operator IA (1)
FIRE 29B  Driver/Operator IB (1)
FIRE 50  Low Angle Rope Rescue (1.5)
FIRE 51  High Angle Rope (1.5)
FIRE 97*  Work Experience (1-4)

*Credit may be earned for EMS 97 or FIRE 97 but not for both.

UNITS REQUIRED IN MAJOR: 28–29
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60
AS Degree: Fire Technology

- Previously offered as an ASOE degree

This associate degree is designed for students who desire to enter the firefighting field. Courses provide students with applicable, hands on experiences that meet requirements to be hired and start a career as a firefighter in California.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate knowledge and skills in compliance with state fire training requirements for Firefighter I and applicable certifications.
- Operate emergency and non-emergency vehicles in compliance with state fire training requirements.
- Demonstrate the necessary knowledge and skills as an Emergency Medical Technician (EMT) according to industry standards.
- Utilize knowledge and skills to maintain health and fitness levels necessary for industry standards and/or job-specific duties.

DEGREE REQUIREMENTS

- To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 4</td>
<td>Emergency Medical Technician Training</td>
<td>7</td>
</tr>
<tr>
<td>EMS 157</td>
<td>Emergency Medical Responder and CPR</td>
<td>3</td>
</tr>
<tr>
<td>FIRE 29A</td>
<td>Driver/Operator Training 1A</td>
<td>1</td>
</tr>
<tr>
<td>FIRE 29B</td>
<td>Driver/Operator Training 1B</td>
<td>1</td>
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<tr>
<td>FIRE 101</td>
<td>Firefighter I Academy</td>
<td>16</td>
</tr>
<tr>
<td>HHP 55A</td>
<td>Fitness Training I for Firefighting</td>
<td>1</td>
</tr>
</tbody>
</table>

UNITS REQUIRED IN MAJOR: 29
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Students learn about fire behavior and firefighter survival in the Fire Control segment of the Fire Academy.
Certificate of Achievement

Certificate of Achievement: Fire Technology

This certificate is designed for students who desire to enter the firefighting field and meets requirements, units A-X, for the California State Firefighter I certification. Upon successful completion of FIRE 101 and EMS 157, it is then the student's responsibility to complete the required field experience with Fire Department verification (either six months full-time or one year part-time or volunteer) before submitting an application to the State. This certificate also introduces students entering the field to the Candidate Physical Ability Test (CPAT) which is a requirement to be hired as a firefighter in California.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate knowledge and skills in compliance with state fire training requirements for Firefighter I and applicable certifications.
- Demonstrate the necessary knowledge and skills as an Emergency Medical Responder (EMR) according to industry standards.
- Utilize knowledge and skills to maintain health and fitness levels necessary for industry standards and/or job-specific duties.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRE 101</td>
<td>Firefighter I Academy</td>
<td>16</td>
</tr>
<tr>
<td>EMS 157</td>
<td>Emergency Medical Responder and CPR</td>
<td>3</td>
</tr>
<tr>
<td>HHP 55A</td>
<td>Fitness Training I for Firefighting</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 20

Forestry & Natural Resources

PROGRAM

Career and Technical Education Division
Manzanita, Upper Level, Room 267
(209) 588-5142
www.gocolumbia.edu/career_technical

Forestry

AS Degree: Forestry

- Previously offered as an ASOE degree

This Associate in Science (AS) Degree equips students with the applied skills, training, and experience for immediate entry into the workforce, and if desired can be optimized to prepare students for transfer to Forestry programs at four-year colleges and universities.

Transfer-oriented students should see a guidance counselor for additional required coursework in ANTHR, BIOL, Calculus, CHEM, Computer Science, ESC, ECON, GEOGR, PHYCS, and Statistics.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Use acquired knowledge of forestry to make informed decisions about their personal lives, career choices, and the communities in which they live.
- Use multiple thinking strategies to identify and examine real-world examples of concepts explored in coursework and their implications for forestry.
- Acquire, articulate, create and convey knowledge and understanding on the subject of forestry using a variety of methods of communication.
- Attain, use, and develop knowledge and understanding in the subject of forestry.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>FNR 2</td>
<td>Introduction to Forestry</td>
<td>3</td>
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<tr>
<td>FNR 6</td>
<td>Soil Resources</td>
<td>3</td>
</tr>
<tr>
<td>FNR 10</td>
<td>Dendrology</td>
<td>3</td>
</tr>
<tr>
<td>FNR 53</td>
<td>Forest Surveying</td>
<td>3</td>
</tr>
<tr>
<td>FNR 60</td>
<td>Introduction to Maps and Remote Sensing</td>
<td>2</td>
</tr>
<tr>
<td>FNR 62</td>
<td>Applied Forest Inventory &amp; Management</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Complete 1 course</td>
<td>2-3</td>
</tr>
<tr>
<td>FNR 22</td>
<td>Ecology and the Use of Fire in Forest Ecosystems (2)</td>
<td></td>
</tr>
<tr>
<td>FNR 24</td>
<td>Fire-Fuels Management</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Complete 1 course</td>
<td>2-3</td>
</tr>
<tr>
<td>GEOGR 59</td>
<td>Geographic Information and Global Positioning Systems (2-3)</td>
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</tr>
<tr>
<td>GEOGR 60</td>
<td>Introduction to Geographic Information Systems (3)</td>
<td></td>
</tr>
</tbody>
</table>
Complete 1 course:  
1-3

- BIOL 39 Field Biology (1-2)
- BIOL 40 Field Biology: Ecosystems (1)
- BIOL 100 A Natural History of California (3)
- BIOL 158 Birds of Central California (1)
- BIOL 159 Wildflowers (1.5)
- BIOL 160 Mushrooms and Other Fungi (1.5)
- BIOL 179 Fishing and Fishery Biology of the Sierra Nevada (2)
- ESC 35 Field Geology (1-2)
- FNR 11 Natural Resources Field Camp (3)
- FNR 12 Tallest, Oldest, Largest (3)
- FNR 50 Natural History and Ecology (2)
- FNR 83 Ecological Restoration (1)
- FNR 172 Nature Photography (1.5)
- FNR 173 Drawing Nature (3)
- FNR 174 Nature Journaling (3)
- FNR 182 Techniques of Surveying Sierra Nevada Wildlife (2)
- FNR 184 Field Ornithology (1)
- FNR 187 Edible and Medicinal Plants (3)

Complete 1 course:  
3-4

- BIOL 24 Introduction to Environmental Science (4)
- ESC 5 Physical Geology (4)
- FNR 30 Introduction to Watershed Management (3)
- FNR 81 California Wildlife (3)

Complete 1 course:  
2-3

- FNR 1 Natural Resource Conservation (3)
- FNR 3 Natural Resources Law and Policy (3)
- FNR 9 Parks and Forests Law Enforcement (2)

TOTAL REQUIRED UNITS 25–32
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Certificate of Achievement

Certificate of Achievement: Forestry

- Previously offered as “Forestry Technology”

The Certificate of Achievement in Forestry helps prepare recipients for immediate employment in entry-level positions in the field of forestry. The courses that make up the Forestry Certificate are also applicable to the Forestry AS degree, which has additional General Education requirements.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Use acquired knowledge of forestry to make informed decisions about their personal lives, career choices, and the communities in which they live.
- Use multiple thinking strategies to identify and examine real-world examples of concepts explored in coursework and their implications for forestry.
- Acquire, articulate, create and convey knowledge and understanding on the subject of forestry using a variety of methods of communication
- Attain, use, and develop knowledge and understanding in the subject of forestry.

CERTIFICATE REQUIREMENTS

- To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Forestry and Natural Resources Work Experience (FNR 97) provides an opportunity to practice advanced skills including tree falling.
<table>
<thead>
<tr>
<th>Required courses:</th>
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<tbody>
<tr>
<td>FNR 2 Introduction to Forestry</td>
<td>3</td>
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<tr>
<td>FNR 6 Soil Resources</td>
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<tr>
<td>FNR 10 Dendrology</td>
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</tr>
<tr>
<td>FNR 53 Forest Surveying</td>
<td>3</td>
</tr>
<tr>
<td>FNR 60 Introduction to Maps and Remote Sensing</td>
<td>2</td>
</tr>
<tr>
<td>FNR 62 Applied Forest Inventory and Management</td>
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</table>

<table>
<thead>
<tr>
<th>Complete 1 course:</th>
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<tbody>
<tr>
<td>FNR 22 Ecology and Use of Fire in Forest Ecosystems (2)</td>
<td></td>
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<tr>
<td>FNR 24 Fire-Fuels Management (3)</td>
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<table>
<thead>
<tr>
<th>Complete 1 course:</th>
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<tbody>
<tr>
<td>GEOGR 59 Geographic Information and Global Positioning Systems (2-3)</td>
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<tr>
<td>GEOGR 60 Introduction to Geographic Information Systems (3)</td>
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<table>
<thead>
<tr>
<th>Complete 1 course:</th>
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<tbody>
<tr>
<td>BIOL 39 Field Biology (1-2)</td>
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<tr>
<td>BIOL 40 Field Biology: Ecosystems (1)</td>
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<td>BIOL 100 A Natural History of California (3)</td>
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<tr>
<td>BIOL 158 Birds of Central California (1)</td>
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<tr>
<td>BIOL 159 Wildflowers (1.5)</td>
<td></td>
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<tr>
<td>BIOL 160 Mushrooms and Other Fungi (1.5)</td>
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<tr>
<td>BIOL 179 Fishing and Fishery Biology of the Sierra Nevada (2)</td>
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<tr>
<td>ESC 35 Field Geology (1-2)</td>
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<tr>
<td>FNR 11 Natural Resources Field Camp (3)</td>
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<tr>
<td>FNR 12 Tallest, Oldest, Largest (3)</td>
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<tr>
<td>FNR 50 Natural History and Ecology (2)</td>
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<tr>
<td>FNR 83 Ecological Restoration (1)</td>
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<td>FNR 172 Nature Photography (1.5)</td>
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<td>FNR 173 Drawing Nature (3)</td>
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<td>FNR 174 Nature Journaling (3)</td>
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<td>FNR 182 Techniques of Surveying Sierra Nevada Wildlife (2)</td>
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<tr>
<td>FNR 184 Field Ornithology (1)</td>
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<td>FNR 187 Edible and Medicinal Plants (3)</td>
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</table>

<table>
<thead>
<tr>
<th>Complete 1 course:</th>
<th>3-4</th>
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<tbody>
<tr>
<td>BIOL 24 Introduction to Environmental Science (4)</td>
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<tr>
<td>ESC 5 Physical Geology (4)</td>
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<tr>
<td>FNR 30 Introduction to Watershed Management (3)</td>
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<tr>
<td>FNR 81 California Wildlife (3)</td>
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<table>
<thead>
<tr>
<th>Complete 1 course:</th>
<th>2-3</th>
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</thead>
<tbody>
<tr>
<td>FNR 1 Natural Resource Conservation (3)</td>
<td></td>
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<tr>
<td>FNR 3 Natural Resources Law and Policy (3)</td>
<td></td>
</tr>
<tr>
<td>FNR 9 Parks and Forests Law Enforcement (2)</td>
<td></td>
</tr>
</tbody>
</table>

**Skills Attainment Certificate**

**Skills Attainment Certificate:**

**Management & Restoration of Fire-Adapted Ecosystems**

Management and restoration of fire-adapted ecosystems is critical to fire safety and forest health locally and throughout the region.

Courses that make up this certificate will provide students with the training and skills to obtain employment in this exciting field.

**PROGRAM STUDENT LEARNING OUTCOMES**

Upon satisfactory completion of this award, the student should be prepared to:

- Attain, use, and develop knowledge and understanding in the subject of the management and restoration of fire-adapted ecosystems.
- Use multiple thinking strategies to identify and examine real-world examples of concepts explored in coursework and their implications for the management and restoration of fire-adapted ecosystems.
- Acquire, articulate, create and convey knowledge and understanding on the subject of the management and restoration of fire-adapted ecosystems using a variety of methods of communication.
- Use acquired knowledge of the management and restoration of fire-adapted ecosystems to make informed decisions about their personal lives, career choices, and the communities in which they live.

**SKILLS ATTAINMENT REQUIREMENTS**

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

**Required courses:**

- FNR 22 Ecology and Use of Fire in Forest Ecosystems 2
- FNR 24 Fire-Fuels Management 3
- FNR 62 Applied Forest Inventory and Management 2
- FNR 83 Ecological Restoration 1
- FIRE 111 Basic Power Saw Safety 1

**TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE:** 9

*Skills Attainment Certificates do not appear on student transcripts.*
## Natural Resources

### AS Degree: Natural Resources

- Previously offered as an ASOE degree

This Associate in Science (AS) Degree equips students with the applied skills, training, and experience for immediate entry into the workforce, and if desired can be optimized to prepare students for transfer to Natural Resources programs at four-year colleges and universities.

Transfer-oriented students should see a guidance counselor for additional required coursework in ANTHR, BIOL, Calculus, CHEM, Computer Science, ESC, ECON, GEOGR, PHYCS, and Statistics.

### PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Acquire, articulate, create and convey knowledge and understanding on the subject of natural resources management using a variety of methods of communication.
- Attain, use, and develop knowledge and understanding in the subject of natural resources management.
- Use acquired knowledge of natural resources management to make informed decisions about their personal lives, career choices, and the communities in which they live.
- Use multiple thinking strategies to identify and examine real-world examples of concepts explored in coursework and their implications for natural resources management.

### DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

#### Required courses:

- **FNR 1** Natural Resource Conservation 3
- **FNR 3** Natural Resources Law and Policy 3
- **FNR 60** Introduction to Maps and Remote Sensing 2

**Complete 1 course:**

- **FNR 30** Introduction to Watershed Management (3)
- **FNR 61** Introduction to Water Resources Management (3)
- **FNR 63** Water for Consumption (3)
- **FNR 64** Water Infrastructure in California (3)
- **FNR 65** Rural Wastewater Strategies (3)
- **FNR 66** Decentralized Wastewater Management (3)
- **FNR 67** Operation of Wastewater Treatment Plants (3)
- **FNR 74** Wastewater Collection Systems (3)

**UNITS REQUIRED IN MAJOR:** 20–31

**TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE:** 60

#### Complete 1 course:

- **GEOGR 59** Geographic Information and Global Positioning Systems (2-3)
- **GEOGR 60** Introduction to Geographic Information Systems (3)

**Complete 3 courses:**

- **BIOl 39** Field Biology (1-2)
- **BIOl 40** Field Biology: Ecosystems (1)
- **BIOl 100** A Natural History of California (3)
- **BIOl 158** Birds of Central California (1)
- **BIOl 159** Wildflowers (1.5)
- **BIOl 160** Mushrooms and Other Fungi (1.5)
- **BIOl 179** Fishing and Fishery Biology of the Sierra Nevada (2)
- **ESC 35** Field Geology (1)
- **FNR 11** Natural Resources Field Camp (3)
- **FNR 12** Tallest, Oldest, Largest (3)
- **FNR 50** Natural History and Ecology (2)
- **FNR 71** Water Use Efficiency (1)
- **FNR 83** Ecological Restoration (1)
- **FNR 86** California Naturalist Certification (3)
- **FNR 172** Nature Photography (1.5)
- **FNR 173** Drawing Nature (3)
- **FNR 174** Nature Journaling (3)
- **FNR 182** Techniques of Surveying Sierra Nevada Wildlife (2)
- **FNR 184** Field Ornithology (1)
- **FNR 187** Edible and Medicinal Plants (3)

**Complete 2 courses:**

- **BIOl 24** Introduction to Environmental Science (4)
- **ESC 5** Physical Geology (4)
- **FNR 2** Introduction to Forestry (3)
- **FNR 10** Dendrology (3)
- **FNR 22** Ecology and the Use of Fire in Forest Ecosystems (2)
- **FNR 24** Fire-Fuels Management (3)
- **FNR 53** Forest Surveying (3)
- **FNR 62** Applied Forest Inventory & Management (2)
- **FNR 81** California Wildlife (3)

**UNITS REQUIRED IN MAJOR:** 4-8

**TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE:** 60
AWARD REQUIREMENTS

Certificate of Achievement:
Natural Resources

- Previously offered as “Natural Resources Technology”

The Certificate of Achievement in Natural Resources helps prepare recipients for immediate employment in entry-level positions in the field of natural resources. The courses that make up the Natural Resources Certificate are also applicable to the Natural Resources AS degree, which has additional General Education requirements.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Acquire, articulate, create and convey knowledge and understanding on the subject of natural resources management using a variety of methods of communication.
- Attain, use, and develop knowledge and understanding in the subject of natural resources management.
- Use acquired knowledge of natural resources management to make informed decisions about their personal lives, career choices, and the communities in which they live.
- Use multiple thinking strategies to identify and examine real-world examples of concepts explored in coursework and their implications for natural resources management.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>FNR 1</td>
<td>Natural Resource Conservation</td>
<td>3</td>
</tr>
<tr>
<td>FNR 3</td>
<td>Natural Resources Law and Policy</td>
<td>3</td>
</tr>
<tr>
<td>FNR 60</td>
<td>Introduction to Maps and Remote Sensing</td>
<td>2</td>
</tr>
</tbody>
</table>

Complete 1 course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FNR 30</td>
<td>Introduction to Watershed Management</td>
<td>3</td>
</tr>
<tr>
<td>FNR 61</td>
<td>Introduction to Water Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>FNR 63</td>
<td>Water for Consumption</td>
<td>3</td>
</tr>
<tr>
<td>FNR 64</td>
<td>Water Infrastructure in California</td>
<td>3</td>
</tr>
<tr>
<td>FNR 65</td>
<td>Rural Wastewater Strategies</td>
<td>3</td>
</tr>
<tr>
<td>FNR 66</td>
<td>Decentralized Wastewater Management</td>
<td>3</td>
</tr>
<tr>
<td>FNR 67</td>
<td>Operation of Wastewater Treatment Plants</td>
<td>3</td>
</tr>
<tr>
<td>FNR 74</td>
<td>Wastewater Collection Systems</td>
<td>3</td>
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</table>

Complete 1 course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>GEOGR 59</td>
<td>Geographic Information and Global Positioning Systems</td>
<td>2-3</td>
</tr>
<tr>
<td>GEOGR 60</td>
<td>Introduction to Geographic Information Systems</td>
<td>3</td>
</tr>
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</table>

Complete 3 courses:

<table>
<thead>
<tr>
<th>Course</th>
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<th>Units</th>
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<tbody>
<tr>
<td>BIOL 39</td>
<td>Field Biology (1-2)</td>
<td></td>
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<tr>
<td>BIOL 40</td>
<td>Field Biology: Ecosystems (1)</td>
<td></td>
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<tr>
<td>BIOL 100</td>
<td>A Natural History of California (3)</td>
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<tr>
<td>BIOL 158</td>
<td>Birds of Central California (1)</td>
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<tr>
<td>BIOL 159</td>
<td>Wildflowers (1.5)</td>
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<tr>
<td>BIOL 160</td>
<td>Mushrooms and Other Fungi (1)</td>
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<tr>
<td>BIOL 179</td>
<td>Fishing and Fishery Biology of the Sierra Nevada (2)</td>
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<tr>
<td>ESC 35</td>
<td>Field Geology (1-2)</td>
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<tr>
<td>FNR 11</td>
<td>Natural Resources Field Camp</td>
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</tr>
<tr>
<td>FNR 12</td>
<td>Tallest, Oldest, Largest</td>
<td></td>
</tr>
<tr>
<td>FNR 50</td>
<td>Natural History and Ecology</td>
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</tr>
<tr>
<td>FNR 71</td>
<td>Water Use Efficiency</td>
<td></td>
</tr>
<tr>
<td>FNR 83</td>
<td>Ecological Restoration</td>
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<tr>
<td>FNR 86</td>
<td>California Naturalist Certification</td>
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<tr>
<td>FNR 172</td>
<td>Nature Photography (1.5)</td>
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<tr>
<td>FNR 173</td>
<td>Drawing Nature</td>
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<tr>
<td>FNR 174</td>
<td>Nature Journaling</td>
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<td>FNR 182</td>
<td>Techniques of Surveying Sierra Nevada Wildlife (2)</td>
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<tr>
<td>FNR 184</td>
<td>Field Ornithology</td>
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</tr>
<tr>
<td>FNR 187</td>
<td>Edible and Medicinal Plants</td>
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</tbody>
</table>

Total units required for Certificate of Achievement: 20–31

Water Resources Management

see "Water Resources Management"
**Geographic Information Systems (GIS) PROGRAM**

**Associate Degree**

**AS Degree: Geographic Information Systems**

- Previously offered as an ASOE degree

The Associate in Science Degree (AS) in Geographic Information Systems (GIS) prepares recipients for entry level jobs. Students learn to collect geospatial data, design and maintain geodatabases, produce digital and hard copy map products, and perform geospatial analyses for decision-making purposes. Recipients of the AS in GIS will gain hands-on project-based experience and may end up working in natural resources, forestry, geology, watershed, business, social sciences, health, fire and emergency services, and other related disciplines. Maps exist in almost every field and GIS is the technology used for making and analyzing maps.

**PROGRAM STUDENT LEARNING OUTCOMES**

Upon satisfactory completion of this award, the student should be prepared to:

- Plan a program of data collection and analysis that employs modern scientific procedures and the use of GIS and geospatial technology.
- Use acquired knowledge of GIS to make informed decisions about problems in society and public policy.
- Develop social and professional skills needed to be successful in the modern workplace (e.g. communications, working in collaborative teams, working with technology).

**DEGREE REQUIREMENTS**

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

**Required courses:**

- CCTIS 10: Computer Concepts & Information Systems 4
- FNR 1: Natural Resource Conservation 3
- FNR 53: Forest Surveying 3
- FNR 60: Introduction to Maps and Remote Sensing 2
- GEOGR 59: Geographic Information and Global Positioning Systems 2-3
- GEOGR 60: Introduction to Geographic Information Systems 3
- GEOGR 61: Introduction to GIS Incident Mapping 1
- GEOGR 63: Creating a Basic GIS Map 1
- GEOGR 66: Web Mapping 1
- GEOGR 68: UAV/Drone Mapping 3
- GEOGR 70: Introduction to Raster-Based GIS 3
- GEOGR 75: Introduction to Remote Sensing 3

**Complete 3-4 units:**

- ESC 5: Physical Geology (4)
- ESC 10: Environmental Geology (3)
- ESC 23: Historical Geology (4)
- ESC 33: Introduction to the Earth (4)
- ESC 42: Natural Hazards (3)
- GEOGR 15: Physical Geography (3)

**UNITS REQUIRED IN MAJOR:** 32-34

**TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE:** 60

**Recommended Optional Courses**

- BUSAD 29: Project Management (3)
- CCTIS 29
- CCTPG 5: Introduction to Programming (3)
- CCTPG 22: Programming Concepts and Methodology I (4)
- CCTPG 51: Database Management (3)
- MATH 2: Statistics (4)
- MATH 8: Trigonometry (3)
- SPCOM 1: Introduction to Public Speaking (3)
Certificate of Achievement: Geographic Information Systems

The Geographic Information Systems (GIS) Certificate Program is designed to prepare students for entry-level employment. Students are trained in the practical application of GIS software, importation of GIS data, display, visualization, exploration, query, analysis, and production of maps and reports. Business partnerships with private and governmental agencies allow students to earn additional units, gaining firsthand on-the-job experience while attending classes.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Plan a program of data collection and analysis that employs modern scientific procedures and the use of modern technology.
- Use acquired knowledge of geology to make informed decisions about problems in society and public policy.
- Develop social and professional skills needed to be successful in the modern workplace (e.g., communications, working in collaborative teams, working with technology).

CERTIFICATE REQUIREMENTS
■ To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- CCTIS 10 Computer Concepts & Information Systems 4
- ENGL 1A Reading and Composition: Beginning 3
- FNR 1 Natural Resource Conservation 3
- FNR 53 Forest Surveying 3
- FNR 60 Introduction to Maps and Remote Sensing 2
- GEOGR 59 Geographic Information and Global Positioning Systems (2-3)
- GEOGR 60 Introduction to Geographic Information Systems 3
- GEOGR 63 Creating a Basic GIS Map 1
- GEOGR 66 Web Mapping 1
- GEOGR 70 Introduction to Raster-Based GIS 3
- GEOGR 75 Introduction to Remote Sensing 3
- MATH 104 Algebra II 5

3-4 units required from this section: 3-4

ESC 5 Physical Geology (4)
ESC 23 Historical Geology (4)
ESC 33 Introduction to the Earth (4)
ESC 42 Natural Hazards (3)
GEOGR 15 Physical Geography (3)

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 36-38

Recommended Optional Courses

- BUSAD 29/ Project Management (3)
- CCTIS 29
- CCTPG 51 Database Management (3)
- MATH 2 Statistics (4)
- MATH 8 Trigonometry (3)
- SPCOM 1 Introduction to Public Speaking (3)

Skills Attainment Certificate: GIS Geospatial Micro-Credential

The purpose of this micro-credential is to certify skills attainment in the geospatial areas of GPS, raster GIS, and remote sensing. Courses in the micro-credential can also lead to the GIS certificate and AS degree. The micro-credential will help students meet industry needs in geospatial technology.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Plan a program of data gathering and analysis that employ modern scientific procedures and the use of geospatial technology.
- Use acquired knowledge of geology to make informed decisions about problems in society and public policy.
- Demonstrate social and professional skills needed to be successful in the modern workplace, (e.g., communications, working in groups, working with technology).

SKILLS ATTAINMENT REQUIREMENTS
■ To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- GEOGR 59 Geographic Information and Global Positioning Systems (2-3)
- OR
- GEOGR 60 Introduction to Geographic Information Systems (3)
- GEOGR 70 Introduction to Raster-Based GIS 3
- GEOGR 75 Introduction to Remote Sensing 3

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 8-9

*Skills Attainment Certificates do not appear on student transcripts.
Skills Attainment Certificate:*
**GIS Emergency Response Micro-Credential**

The purpose of this micro-credential is to certify skills attainment in emergency response in GIS, including search and rescue (SAR) as well as fire incident mapping. Courses in the micro-credential can also lead to the GIS certificate and AS degree. The micro-credential will help students meet industry needs in geospatial technology.

**PROGRAM STUDENT LEARNING OUTCOMES**
Upon satisfactory completion of this award, the student should be prepared to:

- Plan a program of data gathering and analysis that employ modern scientific procedures and the use of geospatial technology.
- Use acquired knowledge of geology to make informed decisions about problems in society and public policy.
- Demonstrate social and professional skills needed to be successful in the modern work place, (e.g. communications, working in groups, working with technology).

**SKILLS ATTAINMENT REQUIREMENTS**

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

**Required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOGR 59</td>
<td>Geographic Information and Global Positioning Systems</td>
<td>2-3</td>
</tr>
<tr>
<td>GEOGR 61</td>
<td>Introduction to GIS Incident Mapping</td>
<td>1</td>
</tr>
<tr>
<td>GEOGR 63</td>
<td>Creating a Basic GIS Map</td>
<td>1</td>
</tr>
<tr>
<td>GEOGR 66</td>
<td>Web Mapping</td>
<td>1</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE:** 5-6

*Skills Attainment Certificates do not appear on student transcripts.

Skills Attainment Certificate:*
**GIS UAV/Drone Mapping Micro-Credential**

The purpose of this micro-credential is to certify skills attainment in the geospatial technology areas of GPS, GIS, remote sensing, and UAV/Drone mapping. The micro-credential will help students meet industry needs in UAV/Drone mapping geospatial technology.

**PROGRAM STUDENT LEARNING OUTCOMES**
Upon satisfactory completion of this award, the student should be prepared to:

- Plan a program of data gathering and analysis that employ modern scientific procedures and the use of geospatial technology.
- Use acquired knowledge of GIS to make informed decisions about problems in society and public policy.
- Demonstrate social and professional skills needed to be successful in the modern work place, (e.g. communications, working in groups, working with technology).

**SKILLS ATTAINMENT REQUIREMENTS**

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

**Required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOGR 68</td>
<td>UAV/Drone Mapping</td>
<td>3</td>
</tr>
<tr>
<td>GEOGR 70</td>
<td>Introduction to Raster-Based GIS</td>
<td>3</td>
</tr>
<tr>
<td>GEOGR 75</td>
<td>Introduction to Remote Sensing</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT:** 9

---

The High Sierra Institute at Baker Station near Sonora Pass offers field-oriented summer courses in Forestry, Natural Resources, Health and Human Performance, and Biology. Students can stay in the bunkhouse for free.
AWARD REQUIREMENTS

Geology/Earth Science

PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

Associate Degrees

AS-T Degree: Geology

The Geology Associate in Science for Transfer (AS-T) degree includes lower division coursework that is required for transfer and which focuses on mastery of the identification of earth materials and the use of geologic maps, stratigraphic sections, remote sensing imagery, and plate tectonic concepts, using these techniques and theory to model real-world applications. The major requirements align with the Transfer Model Curriculum (TMC) for Geology. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

The goal of the Associate in Science in Geology for Transfer program is to prepare students for transfer to a California State University to pursue a B.A. or B.S. in Geology. The program is intended and designed to make the transfer of Columbia College students to CSU as seamless as possible. The requirements of this degree align with the Transfer Model Curriculum. It is the most efficient pathway for students desiring to transfer to CSU in a similar major in a timely manner.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

• Plan a program of data gathering and analysis that employ modern scientific procedures and the use of geologic concepts and geospatial technology.
• Use acquired knowledge of geology to make informed decisions about problems in society and public policy.
• Demonstrate social and professional skills needed to be successful in the modern workplace (e.g. communications, working in groups working with technology).

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. Either the California State University General Education Breadth Requirements (CSU-GE) OR the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ESC 5</td>
<td>Physical Geology</td>
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<td>ESC 23</td>
<td>Historical Geology</td>
<td>4</td>
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<tr>
<td>CHEM 2A</td>
<td>General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2AL</td>
<td>General Chemistry I Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 2B</td>
<td>General Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2BL</td>
<td>General Chemistry II Laboratory</td>
<td>2</td>
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<tr>
<td>MATH 18A</td>
<td>Calculus I</td>
<td>5</td>
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<tr>
<td>MATH 18B</td>
<td>Calculus II</td>
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UNITS REQUIRED IN MAJOR: 28
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Recommended Optional Courses

<table>
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<tr>
<td>PHYCS 5A</td>
<td>Introductory Physics I: Calculus Level</td>
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<tr>
<td>PHYCS 5B</td>
<td>Introductory Physics II: Calculus Level</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 17</td>
<td>Fundamentals of Biology</td>
<td>4</td>
</tr>
<tr>
<td>GEOGR 59</td>
<td>Geographic Information and Global Positioning Systems</td>
<td>2-3</td>
</tr>
</tbody>
</table>

AS Degree:

Science: Emphasis in Earth Science

The Associate in Science Degree is awarded in Science and Technical fields.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

• Plan a program of data gathering and analysis that employs modern scientific procedures and the use of Earth Science concepts and geospatial technology.
• Use acquired knowledge of Earth Science to make informed decisions about problems in society and public policy.
• Demonstrate social and professional skills needed to be successful in the modern workplace (e.g. communications, working in groups, working with technology).

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60. NOTE: Students planning to become Earth Science majors upon transfer to a four-year school should take CHEM 2A, CHEM 2AL, CHEM 2B, CHEM 2BL, MATH 18A, PHYCS 5A and PHYCS 5B while at Columbia College.
AWARD REQUIREMENTS

Complete 10 units from this section: 10
ASTRO 40 Descriptive Astronomy (3)
ESC 5 Physical Geology (4)
ESC 10 Environmental Geology (3)
ESC 23 Historical Geology (4)
ESC 33 Introduction to the Earth (4)
ESC 42 Natural Hazards (3)
ESC 35 Field Geology (1-3) OR

Up to 3 units from the following may be substituted for ESC 35 in the above list:
ESC35CC Geology and Gold Mining of Calaveras County (1-3)
ESC35DV Geology of Death Valley (1-3)
ESC35LS Geology of Lassen, Shasta, Lava Beds (1-3)
ESC35LT Geology of the Lake Tahoe Region (1-3)
ESC35LV Geology of the Long Valley Caldera (1-3)
ESC35ML Geology of the Mother Lode (1-3)
ESC35SA Geology of the San Andreas Fault (1-3)
ESC35SN Geology of the Sierra Nevada (1-3)
ESC35SP Geology of the Sonora Pass Area (1-3)
ESC35TR Geology of the Tuolumne River (1-3)

Complete 4 units from this section: 4
BIOL 2 Cell and Molecular Biology (4)
BIOL 17 Fundamentals of Biology (4)
BIOL 24 Introduction to Environmental Science (4)

Complete 4 units from this section: 4
CHEM 2A General Chemistry I (3) AND
CHEM 2AL General Chemistry I Laboratory (2)
OR
CHEM 5 Introductory Chemistry: Environmental Emphasis (3) AND
CHEM 5L Introductory Chemistry: Laboratory (1)

Complete 3 units from this section: 3
PHYCS 1 Conceptual Physics (3)
PHYCS 4A Introductory Physics I: Trigonometry Level (4)
PHYCS 5A Introductory Physics I: Calculus Level (4)

UNITS REQUIRED IN MAJOR: 21
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Health PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

Associate Degrees

AS-T Degree: Public Health Science

The Public Health Science Associate in Science Degree for Transfer (AS-T) program trains students in multidisciplinary approaches to public health practice and research, which is essential to recognizing and addressing public health issues at the state, national and global levels.

The goal of the AS-T Public Health Science degree program is to prepare students for transfer to the California State University (CSU) to pursue a BA or BS in a similar major such as Health Science or Health Education. The program is intended and designed to make the transfer of Columbia College students to the CSU as seamless as possible. The requirements of this degree align with the Transfer Model Curriculum (TMC) for Public Health Science and comply with the Student Transfer Achievement Reform Act (SB 1440). Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

• Identify and address the concepts of population health, and the basic processes, approaches, and interventions which focus on the major health-related needs and concerns of populations.
• Identify and explain the socio-economic, behavioral, biological, environmental, and other factors that impact the health of individuals and communities.
• Engage with various organizational structures related to health including public and private health services systems, regulatory bodies, and government policy makers.
• Demonstrate use of research tools and analytical methods to critically analyze, monitor and assess the health status of populations.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. Either the California State University General Education-Breadth Requirements (CSU-GE) or the Intersegmental General Education Transfer Curriculum (IGETC);
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.
AWARD REQUIREMENTS

Required courses:
- BIOL 10 Human Anatomy 4
- BIOL 17 Fundamentals of Biology 4
- BIOL 60 Human Physiology 4
- CHEM 14 Fundamental Chemistry for Allied Health (3) **AND**
  - CHEM 14L Fundamental Chemistry for Allied Health Lab (1)
- OR
  - CHEM2A General Chemistry I (3) **AND**
  - CHEM 2AL General Chemistry I Laboratory (2)
- HE 112* Introduction to Public Health* 3
- HHP 60 Health and Fitness Education 3
- MATH 2 Statistics 4
- PSYCH 1 General Psychology 3

Complete one course:
- BIOL 50 Nutrition (3)
- ECON 10 Principles of Economics - Macro (3)
- ECON 11 Principles of Economics - Micro (3)
- PSYCH 5 Human Sexual Behavior (3)
- PSYCH 35 Introduction to Drugs and Behavior (3)
- SOCI 1 Introduction to Sociology (3)

<table>
<thead>
<tr>
<th>UNITS REQUIRED IN MAJOR</th>
<th>32–33</th>
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<tbody>
<tr>
<td>TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE:</td>
<td>60</td>
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</tbody>
</table>

*Offered Online or Face to Face through Modesto Junior College

AS Degree: Allied Health

The Associate in Science Degree is awarded in Science and Technical fields. It is specifically designed for students who intend to transfer to a four-year institution.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:
- Explain various examples of how structure complements function from the molecular to the organ systems.
- Explain how the human body maintains homeostasis from the molecular to organ systems.
- Use discipline-specific language to communicate technical information in written and/or verbal forms.

DEGREE REQUIREMENTS

- To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Complete 8 units from this section:
- BIOL 10 Human Anatomy (4)
- BIOL 60 Human Physiology (4)

Complete 4 units from this section including 1 unit from a lab course:
- CHEM 2A General Chemistry I (3)
- CHEM 2AL General Chemistry I Laboratory (2)
- CHEM 14 Fundamental Chemistry for Allied Health (3)
- CHEM 14L Fundamental Chemistry for Allied Health Laboratory (1)

Complete 7 units from this section:
- BIOL 50 Nutrition (3)
- BIOL 65 Microbiology (4)
- EMS 4 Emergency Medical Technician Training (7)
- HHP 60 Health and Fitness Education (3)
- HHP 62 Safety and First Aid Education (3)

<table>
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<tr>
<th>UNITS REQUIRED IN MAJOR</th>
<th>19</th>
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</thead>
<tbody>
<tr>
<td>TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE:</td>
<td>60</td>
</tr>
</tbody>
</table>

Claim Jumper spirit is alive and well at graduation.
Health & Human Performance

PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

Associate Degrees

AA-T Degree: Kinesiology

The Associate of Arts for Transfer (AA-T) degree in Kinesiology is for students who intend to transfer into the California State University (CSU) system with a major in Kinesiology or related field. This degree may allow students to pursue studies in fields such as exercise science, kinesiology/physical education credential programs, athletic training/sports medicine, sports administration, and other health related areas. Students should consult with a counselor to determine if this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:
• Define kinesiology and explain its sub-disciplines and career pathways.
• Demonstrate personal responsibility and teamwork within diverse and dynamic environments when applying knowledge of kinesiology.
• Apply the fundamental skills and knowledge related to kinesiology and the study of movement.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:
1. Either the California State University General Education Breadth Requirements (CSU-GE) OR the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.
AA Degree: Sport Science

The purpose of the Sport Science major is to provide a general program of study that focuses on the principles of physical education, fitness and sport. This program will also develop the student’s understanding of the sociological impact of recreation, leisure and sport, as well as provide an introduction to sport psychology, basic athletic injury prevention and treatment, and organization of fitness and sport management programs.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate basic knowledge of fundamental theories associated with physical education, recreation, fitness, and sport.
- Demonstrate the ability to critically analyze issues and trends in physical education, recreation, fitness, and sport.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHP 3</td>
<td>Introduction to Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>HHP 5</td>
<td>Introduction to Recreation and Leisure</td>
<td>3</td>
</tr>
<tr>
<td>HHP 62</td>
<td>Safety and First Aid Education</td>
<td>3</td>
</tr>
<tr>
<td>HHP 63</td>
<td>Sociology of Sport</td>
<td>3</td>
</tr>
<tr>
<td>HHP 74</td>
<td>Introduction to Sport Management</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 20</td>
<td>Sport Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete 3 units:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHP 2</td>
<td>Women’s Health Issues (3)</td>
<td>3</td>
</tr>
<tr>
<td>HHP 60</td>
<td>Health and Fitness Education (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete 4 units:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 10</td>
<td>Human Anatomy (4)</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 60</td>
<td>Human Physiology (4)</td>
<td>4</td>
</tr>
</tbody>
</table>

UNITS REQUIRED IN MAJOR: 25
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

The Columbia College Men’s Basketball team finished 21-8 and earned a CCCAA playoff berth as the #10 seed in Northern California.
History

PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

AA-T Degree: History

The History program provides students with a core curriculum covering introductory history content, theory, and methodology. The curriculum is designed to help students understand the broad scope of history as a comparative science. In addition, it covers the key theoretical approaches and insights that inform history, as well as the role of historical theory and research methods. Further, the program seeks to foster critical thinking, develop an awareness of diverse perspectives and their implications, and encourage effective approaches to problem solving. Students should consult with a counselor to determine if this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Interpret the principles of historiographical analysis.
- Demonstrate the contributions and experiences of significant ethnic and national heritage groups.
- Demonstrate critical analysis of historical research methods and theory.
- Demonstrate an appreciation of diverse perspectives and their implications.
- Contextualize the contributions of women.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. Either the California State University General Education Breadth Requirements (CSU-GE) OR the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 13</td>
<td>World Civilizations: to 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 14</td>
<td>World Civilizations: 1500 to Present</td>
<td>3</td>
</tr>
<tr>
<td>HIST 16</td>
<td>United States: to 1877</td>
<td>3</td>
</tr>
<tr>
<td>HIST 17</td>
<td>United States: 1877 to Present</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete 1 of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 5/</td>
<td>Introduction to the History and Philosophy of Science</td>
<td>3</td>
</tr>
<tr>
<td>PHILO 5</td>
<td>Philosophy of Science</td>
<td>3</td>
</tr>
<tr>
<td>HIST 21</td>
<td>Women in American History</td>
<td>3</td>
</tr>
<tr>
<td>SOCIO 5</td>
<td>Ethnicity and Ethnic Relations in America</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 1A</td>
<td>Spanish: Beginning</td>
<td>5</td>
</tr>
<tr>
<td>SPAN 1B</td>
<td>Spanish: Beginning</td>
<td>5</td>
</tr>
<tr>
<td>SPAN 2A</td>
<td>Spanish: Intermediate</td>
<td>5</td>
</tr>
<tr>
<td>SPAN 2B</td>
<td>Spanish: Intermediate</td>
<td>5</td>
</tr>
<tr>
<td>SPCOM 5</td>
<td>Intercultural Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete 1 of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 11</td>
<td>History of Art: Ancient and Medieval</td>
<td>3</td>
</tr>
<tr>
<td>ART 12</td>
<td>History of Art Renaissance, Baroque, and Modern</td>
<td>3</td>
</tr>
<tr>
<td>ART 13</td>
<td>Art of Africa, Asia, Australia, and the Americas</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 10</td>
<td>Survey of Music History and Literature: Ancient to 1750</td>
<td>3</td>
</tr>
<tr>
<td>MUSIC 11</td>
<td>Survey of Music History and Literature: 1750 to Present</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 1</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOCIO 1</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

Any history course not used above

UNITS REQUIRED IN MAJOR: 18–20
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60
AWARD REQUIREMENTS

Hospitality Management
PROGRAM

Career and Technical Education Division
Manzanita, Upper Level, Room 267
(209) 588-5142
www.gocolumbia.edu/career_technical

Specific Columbia College Hospitality Management Program degrees and certificates denoted below are accredited through the American Culinary Federation Education Foundation Accrediting Commission, ACFEFAC www.acfchefs.org.

Associate Degrees

AS Degree: Culinary Arts

This award is accredited by the American Culinary Federation Education Foundation Accrediting Commission.

Previously offered as “Hospitality: Emphasis in Culinary Arts”

This Associate in Science Degree will provide students with the skills and knowledge needed for direct entry into the workforce.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Perform job duties as chef de cuisine, kitchen manager, and executive sous chef.
- Train, manage, and motivate a team in the culinary environment.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPMGT 97</td>
<td>Work Experience in Hospitality Management</td>
<td>1-4</td>
</tr>
<tr>
<td>HPMGT 102</td>
<td>Introduction to Hospitality Careers</td>
<td>1.5</td>
</tr>
<tr>
<td>HPMGT 104</td>
<td>Hospitality Laws and Regulations</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 120</td>
<td>Safety and Sanitation</td>
<td>1</td>
</tr>
<tr>
<td>HPMGT 122</td>
<td>Restaurant Math</td>
<td>1</td>
</tr>
<tr>
<td>HPMGT 126</td>
<td>Nutrition for Chefs</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 128</td>
<td>Kitchen Management</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 133A</td>
<td>Intro to Commercial Food Preparation</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 133B</td>
<td>Commercial Food Preparation</td>
<td>4</td>
</tr>
<tr>
<td>HPMGT 134</td>
<td>Commercial Baking: Beginning</td>
<td>2.5</td>
</tr>
<tr>
<td>HPMGT 136</td>
<td>Dining Room Service and Management</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 140</td>
<td>Contemporary International Cuisine</td>
<td>3.5</td>
</tr>
<tr>
<td>HPMGT 141</td>
<td>Restaurant Desserts</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 142</td>
<td>Garde Manger</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 143</td>
<td>Advanced Garde Manger</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 148</td>
<td>Introduction to Wines</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 190</td>
<td>Hospitality Capstone</td>
<td>1</td>
</tr>
</tbody>
</table>

Complete 4 units from this section: 4

ENTRE 101  Introduction to Entrepreneurship (2)
ENTRE 104  Preparing Effective Business Plans (2)
HPMGT 146  Dining Room Service and Management II (2–3.5)
HPMGT 147  Beverage Management (2)

UNITS REQUIRED IN MAJOR: 41.5–44.5
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

AS Degree: Hotel and Restaurant Management

This Associate in Science Degree will provide students with skills and training for immediate entry into the workforce.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Perform job duties as a restaurant manager, banquet manager, night auditor, and food/beverage manager.
- Train, manage, and motivate a team in the restaurant/hotel environment.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>CCTIS 10</td>
<td>Computer Concepts and Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>BUSAD 161A</td>
<td>Small Business Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>HPMGT 97</td>
<td>Work Experience in Hospitality Management</td>
<td>1-4</td>
</tr>
<tr>
<td>HPMGT 102</td>
<td>Introduction to Hospitality Careers</td>
<td>1.5</td>
</tr>
<tr>
<td>HPMGT 104</td>
<td>Hospitality Laws and Regulations</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 112</td>
<td>Front Office Management/Hotel Catering</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 114</td>
<td>Introduction to Maintenance and Housekeeping</td>
<td>1.5</td>
</tr>
<tr>
<td>HPMGT 120</td>
<td>Safety and Sanitation</td>
<td>1</td>
</tr>
<tr>
<td>HPMGT 122</td>
<td>Restaurant Math</td>
<td>1</td>
</tr>
<tr>
<td>HPMGT 128</td>
<td>Kitchen Management</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 133A</td>
<td>Introduction to Commercial Food Preparation</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 134</td>
<td>Commercial Baking: Beginning</td>
<td>2.5</td>
</tr>
<tr>
<td>HPMGT 136</td>
<td>Dining Room Service and Management</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 142</td>
<td>Garde Manger</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 146</td>
<td>Dining Room Service and Management II</td>
<td>2-3.5</td>
</tr>
<tr>
<td>HPMGT 147</td>
<td>Beverage Management</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 148</td>
<td>Introduction to Wines</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 190</td>
<td>Hospitality Capstone</td>
<td>1</td>
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UNITS REQUIRED IN MAJOR: 39.5–44
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Recommended Optional Course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 161B</td>
<td>Small Business Accounting II (4)</td>
<td></td>
</tr>
</tbody>
</table>
AS Degree: Baking and Pastry Arts

- Previously offered as an ASOE degree (“Pantry & Dessert Chef”)

This award is accredited by the American Culinary Federation Education Foundation Accrediting Commission.

This Associates in Science Degree will provide students with the skills and knowledge needed for direct entry into the workforce.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Perform job duties as working pastry chef, production lead, and artisan bread baker.
- Train, manage, and motivate a team in the baking and pastry environment.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPMGT 97</td>
<td>Work Experience in Hospitality Management</td>
<td>1-4</td>
</tr>
<tr>
<td>HPMGT 102</td>
<td>Introduction to Hospitality Careers</td>
<td>1.5</td>
</tr>
<tr>
<td>HPMGT 104</td>
<td>Hospitality Laws and Regulations</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 120</td>
<td>Safety and Sanitation</td>
<td>1</td>
</tr>
<tr>
<td>HPMGT 122</td>
<td>Restaurant Math</td>
<td>1</td>
</tr>
<tr>
<td>HPMGT 126</td>
<td>Nutrition for Chefs</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 128</td>
<td>Kitchen Management</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 133A</td>
<td>Introduction to Commercial Food Preparation</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 133B</td>
<td>Commercial Food Preparation</td>
<td>4</td>
</tr>
<tr>
<td>HPMGT 134</td>
<td>Commercial Baking: Beginning</td>
<td>2.5</td>
</tr>
<tr>
<td>HPMGT 135</td>
<td>Commercial Baking: Advanced</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 136</td>
<td>Dining Room Service and Management I</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 141</td>
<td>Restaurant Desserts</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 142</td>
<td>Garde Manger</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 190</td>
<td>Hospitality Capstone</td>
<td>1</td>
</tr>
</tbody>
</table>

Complete 1 course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>HPMGT 137</td>
<td>Chocolate, Sugar, and Confections</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 138</td>
<td>Specialty Breads and Viennoiserie</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete 1 course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPMGT 146</td>
<td>Dining Room Service and Management II</td>
<td>2-3.5</td>
</tr>
<tr>
<td>HPMGT 147</td>
<td>Beverage Management</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 148</td>
<td>Introduction to Wines</td>
<td>2</td>
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</table>

UNITS REQUIRED IN MAJOR: 38–41

TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Recommended Optional Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>ENTRE 101</td>
<td>Introduction to Entrepreneurship</td>
<td>2</td>
</tr>
<tr>
<td>ENTRE 104</td>
<td>Preparing Effective Business Plans</td>
<td>2</td>
</tr>
</tbody>
</table>

Hospitality Program Coordinator Don Dickinson assists a student preparing cheese souffles in HPMGT 133A Introduction to Commercial Food Preparation.
Certificates of Achievement

Certificate of Achievement: Culinary Arts

- Previously offered as “Chef”

This award is accredited by the American Culinary Federation Education Foundation Accrediting Commission. This certificate encompasses all the competencies needed to gain employment in the culinary arts field.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate knowledge and understanding of flavor profiles, culinary techniques, knife skills, management skills, and nutrition.
- Perform job duties as a lead cook, sous chef, and shift supervisor.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- HPMGT 97 Work Experience in Hospitality Management 1-4
- HPMGT 102 Introduction to Hospitality Careers 1.5
- HPMGT 104 Hospitality Laws and Regulations 3
- HPMGT 120 Safety and Sanitation 1
- HPMGT 122 Restaurant Math 1
- HPMGT 126 Nutrition for Chefs 2
- HPMGT 128 Kitchen Management 3
- HPMGT 133A Introduction to Commercial Food Preparation 3
- HPMGT 133B Commercial Food Preparation 4
- HPMGT 134 Commercial Baking: Beginning 2.5
- HPMGT 136 Dining Room Service and Management I 2
- HPMGT 140 Contemporary International Cuisine 3.5
- HPMGT 141 Restaurant Desserts 2
- HPMGT 142 Garde Manger 3
- HPMGT 143 Advanced Garde Manger 2
- HPMGT 148 Introduction to Wines 2
- HPMGT 190 Hospitality Capstone 1

Complete 6 elective units from this section: 6

- ENTRE 101 Entrepreneurship (2)
- ENTRE 104 Preparing Effective Business Plans (2)
- HPMGT 146 Dining Room Service and Management II (2-3.5)
- HPMGT 147 Beverage Management (2)

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 43.5-46.5

Certificate of Achievement: Baking and Pastry Arts

- Previously offered as “Pantry & Dessert Chef”

This award is accredited by the American Culinary Federation Education Foundation Accrediting Commission. This certificate encompasses all the competencies needed to gain employment in the baking and pastry fields.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate knowledge and understanding of decorating and garnishing techniques, bread baking, dessert composition, and management skills.
- Perform duties as a lead baker, pastry chef, and cake decorator.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- HPMGT 97 Work Experience in Hospitality Management 1-4
- HPMGT 102 Introduction to Hospitality Careers 1.5
- HPMGT 104 Hospitality Laws and Regulations 3
- HPMGT 120 Safety and Sanitation 1
- HPMGT 122 Restaurant Math 1
- HPMGT 126 Nutrition for Chefs 2
- HPMGT 128 Kitchen Management 3
- HPMGT 133A Introduction to Commercial Food Preparation 3
- HPMGT 133B Commercial Food Preparation 3
- HPMGT 135 Commercial Baking: Advanced 3
- HPMGT 136 Dining Room Service and Management I 2
- HPMGT 137 Chocolate, Sugar, and Confections 3
- HPMGT 138 Specialty Breads and Viennoiserie 3
- HPMGT 141 Restaurant Desserts 2
- HPMGT 142 Garde Manger 3
- HPMGT 190 Hospitality Capstone 1

Complete 1 course: 2-3.5

- HPMGT 146 Dining Room Service and Management II 2-3.5
- HPMGT 147 Beverage Management 2
- HPMGT 148 Introduction to Wines 2

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 37-41.5

Recommended Optional Courses

- ENTRE 101 Introduction to Entrepreneurship (2)
- ENTRE 104 Preparing Effective Business Plans (2)
### Certificate of Achievement: Hotel and Restaurant Management

This Certificate of Achievement prepares students for employment in Hospitality positions such as server, cashier, shift supervisor, front desk agent, night auditor, catering coordinator, or banquet supervisor. This certificate, plus general education, lead to a Hospitality Management Degree in Hotel and Restaurant Management.

#### PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate correct cash handling practices.
- Describe effective supervisory communication techniques.
- Perform job duties as a server, cashier, shift supervisor, front desk agent, night auditor, catering coordinator, or banquet supervisor.

#### CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

<table>
<thead>
<tr>
<th>Required courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 161A Small Business Accounting I 4</td>
</tr>
<tr>
<td>CCTIS 10 Computer Concepts and Information Systems 4</td>
</tr>
<tr>
<td>HPMGT 97 Work Experience in Hospitality Management 1-4</td>
</tr>
<tr>
<td>HPMGT 102 Introduction to Hospitality Careers 1.5</td>
</tr>
<tr>
<td>HPMGT 104 Hospitality Laws and Regulations 3</td>
</tr>
<tr>
<td>HPMGT 112 Front Office Management/Hotel Catering 2</td>
</tr>
<tr>
<td>HPMGT 114 Introduction to Maintenance and Housekeeping 1.5</td>
</tr>
<tr>
<td>HPMGT 120 Safety and Sanitation 1</td>
</tr>
<tr>
<td>HPMGT 122 Restaurant Math 1</td>
</tr>
<tr>
<td>HPMGT 128 Kitchen Management 3</td>
</tr>
<tr>
<td>HPMGT 133A Introduction to Commercial Food Preparation 3</td>
</tr>
<tr>
<td>HPMGT 134 Commercial Baking: Beginning 2.5</td>
</tr>
<tr>
<td>HPMGT 136 Dining Room Service and Management I 2</td>
</tr>
<tr>
<td>HPMGT 142 Garde Manger 3</td>
</tr>
<tr>
<td>HPMGT 146 Dining Room Service and Management II 2-3.5</td>
</tr>
<tr>
<td>HPMGT 147 Beverage Management 2</td>
</tr>
<tr>
<td>HPMGT 148 Introduction to Wines 2</td>
</tr>
<tr>
<td>HPMGT 190 Hospitality Capstone 1</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT:** 39.5–44

<table>
<thead>
<tr>
<th>Recommended Optional Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 161B Small Business Accounting II (4)</td>
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</tbody>
</table>

### Skills Attainment Certificates

#### Skills Attainment Certificate:* Bakery Staff

- Previously offered as “Baker”

The Bakery Staff Skills Attainment Certificate encompasses all the skills needed to gain entry level employment in the baking and pastry field.

#### PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate the knowledge and skills required to operate a safe and sanitary pastry station.
- Perform job duties as a baker/pastry worker.

#### SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

<table>
<thead>
<tr>
<th>Required courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPMGT 102 Introduction to Hospitality Careers 1.5</td>
</tr>
<tr>
<td>HPMGT 120 Safety and Sanitation 1</td>
</tr>
<tr>
<td>HPMGT 122 Restaurant Math 1</td>
</tr>
<tr>
<td>HPMGT 134 Commercial Baking: Beginning 2.5</td>
</tr>
<tr>
<td>HPMGT 135 Commercial Baking: Advanced 3</td>
</tr>
<tr>
<td>HPMGT 141 Restaurant Desserts 2</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE:** 11

*Skills Attainment Certificates do not appear on student transcripts.*
Skills Attainment Certificate:*
Bartender

The Bartender Skills Attainment Certificate encompasses the skills and knowledge needed to become successfully employed as an entry level beverage department employee.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Safely set-up and operate a commercial bar station.
- Describe the implications of liquor liability law.
- Accurately craft cocktails.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPMGT 120</td>
<td>Safety and Sanitation</td>
<td>1</td>
</tr>
<tr>
<td>HPMGT 136</td>
<td>Dining Room Service and Management I</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 147</td>
<td>Beverage Management</td>
<td>2</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 5

*Skills Attainment Certificates do not appear on student transcripts.

Skills Attainment Certificate:*
Dining Room Staff

The Dining Room Staff Skills Attainment Certificate prepares students for entry level employment in Front of the House positions such as busser, host/hostess, expediter, or food runner.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate the knowledge and skills required to oversee safe and sanitary food service operations.
- Perform job duties as host/hostess, busser, and wait staff.
- Describe effective communication between the front and back of the house departments.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPMGT 102</td>
<td>Introduction to Hospitality Careers</td>
<td>1.5</td>
</tr>
<tr>
<td>HPMGT 120</td>
<td>Safety and Sanitation</td>
<td>1</td>
</tr>
<tr>
<td>HPMGT 122</td>
<td>Restaurant Math</td>
<td>1</td>
</tr>
<tr>
<td>HPMGT 136</td>
<td>Dining Room Service and Management I</td>
<td>2</td>
</tr>
<tr>
<td>HPMGT 146</td>
<td>Dining Room Service and Management II</td>
<td>2-3.5</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 7.5–9

*Skills Attainment Certificates do not appear on student transcripts.
Skills Attainment Certificate:*  
**Institutional Cook**

The coursework in this Skills Attainment Certificate is designed to prepare students who wish to obtain entry-level employment in an institutional environment such as schools, health-care, or event food service.

**PROGRAM STUDENT LEARNING OUTCOMES**

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate the knowledge and skills required to set up and operate a safe food preparation station.
- Perform job duties as a production cook.

**SKILLS ATTAINMENT REQUIREMENTS**

- To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

**REQUIRED COURSES:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPMGT 120</td>
<td>Safety and Sanitation</td>
<td>1</td>
</tr>
<tr>
<td>HPMGT 130</td>
<td>Survey of Commercial Food Service Operations</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 134</td>
<td>Commercial Baking: Beginning</td>
<td>2.5</td>
</tr>
<tr>
<td>HPMGT 142</td>
<td>Garde Manger</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE:** 9.5

*Skills Attainment Certificates do not appear on student transcripts.

---

Skills Attainment Certificate:*  
**Kitchen Staff**

- Previously offered as “Deli Cook & Baker”

The Kitchen Staff Skills Attainment Certificate encompasses the skills needed to become successfully employed as an entry level kitchen worker.

**PROGRAM STUDENT LEARNING OUTCOMES**

Upon satisfactory completion of this award, the student should be prepared to:

- Perform job duties as a culinarian.
- Demonstrate the knowledge and skills required to operate a safe and sanitary culinary station.

**SKILLS ATTAINMENT REQUIREMENTS**

- To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

**REQUIRED COURSES:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPMGT 102</td>
<td>Introduction to Hospitality Careers</td>
<td>1.5</td>
</tr>
<tr>
<td>HPMGT 120</td>
<td>Safety and Sanitation</td>
<td>1</td>
</tr>
<tr>
<td>HPMGT 122</td>
<td>Restaurant Math</td>
<td>1</td>
</tr>
<tr>
<td>HPMGT 133A</td>
<td>Intro to Commercial Food Preparation</td>
<td>3</td>
</tr>
<tr>
<td>HPMGT 134</td>
<td>Commercial Baking: Beginning</td>
<td>2.5</td>
</tr>
<tr>
<td>HPMGT 142</td>
<td>Garde Manger</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE:** 12

*Skills Attainment Certificates do not appear on student transcripts.

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Human Services  
**PROGRAM**

**Certificate of Achievement**

**Certificate of Achievement: Human Services**

**PROGRAM STUDENT LEARNING OUTCOMES**

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate active and empathetic listening skills to display understanding.
- Assist clients in identifying and moving toward goals.

**CERTIFICATE REQUIREMENTS**

- To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

**REQUIRED COURSES:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCTIS 10</td>
<td>Computer Concepts &amp; Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>GUIDE 10A</td>
<td>Introduction to Helping Skills</td>
<td>1.5</td>
</tr>
<tr>
<td>GUIDE 10B</td>
<td>Intermediate Helping and Basic Conflict Management Skills</td>
<td>1.5</td>
</tr>
<tr>
<td>OFTEC 131</td>
<td>Office Procedures and Technology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 30</td>
<td>Psychology of Adjustment</td>
<td>3</td>
</tr>
<tr>
<td>SOCIO 5</td>
<td>Ethnicity &amp; Ethnic Relations in America</td>
<td>3</td>
</tr>
<tr>
<td>SOCIO 12</td>
<td>Sociology of the Family</td>
<td></td>
</tr>
<tr>
<td>OR CHILD 22</td>
<td>Child, Family, and Community</td>
<td></td>
</tr>
</tbody>
</table>

**Complete 1 course from the following:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHILD 1</td>
<td>Principles of Child Development</td>
<td>3</td>
</tr>
<tr>
<td>GUIDE 1</td>
<td>Career/Life Planning</td>
<td></td>
</tr>
<tr>
<td>PSYCH 1</td>
<td>General Psychology</td>
<td></td>
</tr>
<tr>
<td>SOCIO 1</td>
<td>Introduction to Sociology</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT:** 22

**Recommended Optional Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 35</td>
<td>Introduction to Drugs &amp; Behavior</td>
<td>3</td>
</tr>
<tr>
<td>SPCOM 1</td>
<td>Introduction to Public Speaking</td>
<td></td>
</tr>
</tbody>
</table>
Skills Attainment Certificate

Skills Attainment Certificate:* Peer Support and Psychosocial Rehabilitation

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate helping and conflict resolution skills.
- Understand the roles of a peer counselor.
- Apply fundamental knowledge of the theories, principles, values, and ethics of psychosocial rehabilitation.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- **PSYCH 52** Introduction to Peer Support for Psychosocial Rehabilitation 3
- **PSYCH 56** Introduction to Psychosocial Rehabilitation 3
- **GUIDE 10A** Introduction to Helping Skills Management Skills 1.5
- **GUIDE 10B** Intermediate Helping and Basic Conflict Management Skills 1.5
- **WKE XP 97** General Work Experience 3

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: **12**

*Skills Attainment Certificates do not appear on student transcripts.

Kinesiology

see "Health and Human Performance"

Liberal Arts

PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

Associate Degrees

AA Degree: Liberal Arts: Emphasis in Arts and Humanities

ABOUT LIBERAL ARTS ASSOCIATE DEGREES

The Associate in Arts Degree in Liberal Arts is designed for students who wish to have a broad knowledge of liberal arts and sciences plus additional coursework in an “Area of Emphasis.” The curriculum in liberal arts allows students to develop an appreciation of the beauty and values that have shaped and enriched our culture, and may also be used to meet transfer requirements.

ABOUT THE EMPHASIS IN ARTS AND HUMANITIES

This area of emphasis can be used either to enhance employability in a broad range of career fields or as preparation for transfer to a university in a related discipline such as Art, Drama/Theatre, English, Humanities, Languages, Music or Philosophy.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Articulate theories in the fine, performing, and creative arts.
- Appreciate and understand various concepts in the creative and fine arts.
- Demonstrate a breadth of knowledge in humanities, languages, and philosophy.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/ AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Complete 6 units of Activity: Creative and Fine Arts 6

- **ART 3** 3-D Design: Mixed Media (3)
- **ART 9A** Figure Drawing: Beginning (3)
- **ART 9B** Figure Drawing: Intermediate (3)
- **ART 21A** Painting: Beginning (3)
- **ART 21B** Painting: Intermediate (3)
- **ART 23A** Watercolor: Beginning (3)
- **ART 23B** Watercolor: Intermediate (3)
- **ART 25** Mixed Media Painting (3)
- **ART 31** Ceramics: Introductory (3)
- **ART 32** Ceramics: Intermediate (3)
- **ART 40** Film Photography: Beginning (4)
- **ART 45** Field Photography (3)

Skills Attainment Certificate

Skills Attainment Certificate:* Peer Support and Psychosocial Rehabilitation

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate helping and conflict resolution skills.
- Understand the roles of a peer counselor.
- Apply fundamental knowledge of the theories, principles, values, and ethics of psychosocial rehabilitation.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- **PSYCH 52** Introduction to Peer Support for Psychosocial Rehabilitation 3
- **PSYCH 56** Introduction to Psychosocial Rehabilitation 3
- **GUIDE 10A** Introduction to Helping Skills Management Skills 1.5
- **GUIDE 10B** Intermediate Helping and Basic Conflict Management Skills 1.5
- **WKE XP 97** General Work Experience 3

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: **12**

*Skills Attainment Certificates do not appear on student transcripts.

Kinesiology

see "Health and Human Performance"
AWARD REQUIREMENTS

ART 46  Field Photography: Composition and Design (2)
ART 49  Intermediate Field Photography (3)
ART 71  Ceramic Sculpture: Introductory (3)
ART 72  Ceramic Sculpture: Advanced (3)
DRAMA 20  Oral Expression and Interpretation (3)
DRAMA 42  Acting Fundamentals (3)
DRAMA 43  Acting and Directing (3)
MUSIC 31A  Elementary Piano I (1)
MUSIC 36  Elementary Voice (1)
MUSIC 49  Beginning Guitar (1)
MUSIC 60  College Choir (1)
MUSIC 76  Community Orchestra (1)
SPCOM 7  Forensics Workshop (3)

Complete 6 units of Theory: Fine, Performing and Creative Arts  6
ART 11  History of Art: Ancient and Medieval (3)
ART 12  History of Art: Renaissance, Baroque and Modern (3)
ART 13  Art of Africa, Asia, Australia and the Americas (3)
DRAMA 10  Introduction to the Theatre (3)
ENGL 10  Creative Writing (3)
ENGL 11  Film Appreciation (3)
MUSIC 2  Introduction to Music (3)
MUSIC 10  Survey of Music History and Literature: Ancient to 1750 (3)
MUSIC 11  Survey of Music History and Literature: 1750 to Present (3)
MUSIC 12  American Popular Music: Blues and Jazz to Rock ‘n Roll (3)

Complete 6 units of Theory: Humanities, Languages and Philosophy  6
ENGL 1A  Reading and Composition: Beginning (3)
ENGL 1B  Advanced Composition and Introduction to Literature (3)
ENGL 1C  Advanced Composition and Critical Thinking (3)
ENGL 17  American Literature: Colonial Period - Late 19th Century (3)
ENGL 18  American Literature: Late 19th Century - Modern Day (3)
ENGL 46  Survey of English Literature: Anglo-Saxon Period - 18th Century (3)
ENGL 47  Survey of English Literature: 19th and 20th Centuries (3)
ENGL 49  California Literature (3)
ENGL 50  Introduction to Shakespeare (3)
ENGL 81  Introduction to World Literature: 1500 to Present (3)
HIST 5/  Introduction to the History and Philosophy of Science (3)
PHILO 5
HUMAN 1  Old World Culture (3)
HUMAN 2  Modern Culture (3)
HUMAN 3  World Culture (3)
HUMAN 4  World Religions and Spirituality (3)
PHILO 1  Introduction to Philosophy (3)
PHILO 25  Twentieth Century Philosophy (3)
SPAN 1A  Spanish: Beginning (5)
SPAN 1B  Spanish: Beginning (5)
SPAN 2A  Spanish: Intermediate (5)
SPAN 2B  Spanish: Intermediate (5)
SIGN 40A  ASL: Beginning Communication with the Deaf (3)
SIGN 40B  ASL: Elementary Communication with the Deaf (3)
SIGN 40C  ASL: Intermediate Communication with the Deaf (3)
SPCOM 4  Introduction to Human Communication (3)
SPCOM 5  Intercultural Communication (3)

UNITS REQUIRED IN MAJOR:  18
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE:  60

**AA Degree:**

**Liberal Arts: Emphasis in Behavioral and Social Sciences**

**ABOUT LIBERAL ARTS ASSOCIATE DEGREES**

The Associate in Arts Degree in Liberal Arts is designed for students who wish to have a broad knowledge of liberal arts and sciences plus additional coursework in an “Area of Emphasis.” The curriculum in liberal arts allows students to develop an appreciation of the beauty and values that have shaped and enriched our culture, and may also be used to meet transfer requirements.

**ABOUT THE EMPHASIS IN BEHAVIORAL & SOCIAL SCIENCES DEGREE**

This area of emphasis is intended for those students interested in developing an introductory knowledge base and content understanding in the behavioral and social sciences, or as preparation for transfer to a university in a related discipline such as Anthropology, Child Development, Economics, Geography, Psychology or Sociology.

**PROGRAM STUDENT LEARNING OUTCOMES**

Upon satisfactory completion of this award, the student should be prepared to:

- Articulate factors related to institutional and cultural contexts.
- Demonstrate a scope of world and American historical developments.
- Demonstrate and understand of human and individual development.

**DEGREE REQUIREMENTS**

- To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Complete 6 units of Human and Individual Development  6
ANTHR 1  Biological Anthropology (3)
CHILD 1  Child Growth and Development (3)
CHILD 22  Child, Family, and Community (3)
GUIDE 10A  Introduction to Helping Skills (1.5)
GUIDE 10B  Intermediate Helping and Basic Conflict Management Skills (1.5)
PSYCH 1  General Psychology (3)
PSYCH 5  Human Sexual Behavior (3)
PSYCH 10  Lifespan Human Development (3)
PSYCH 15  Research Methods in Psychology (3)
PSYCH 20  Sport Psychology (3)
PSYCH 30  Psychology of Adjustment (3)
PSYCH 35  Introduction to Drugs and Behavior (3)
PSYCH 40  Stress Management (3)
AWARD REQUIREMENTS

Complete 9 units of Institutional and Cultural Context
Select courses from at least 2 subject areas:
ANTHR 2 Cultural Anthropology (3)
ANTHR 3 Current Issues in Anthropology (3)
ANTHR 7/ Gender, Culture and Society (3)
SOCIO 7
ANTHR 10 Archaeology (3)
ANTHR 15 Native People of North America (3)
ECON 10 Principles of Economics - Macro (3)
ECON 11 Principles of Economics - Micro (3)
GEOGR 12 Cultural Geography (3)
POLSC 10 Constitutional Government (3)
POLSC 12 American Political Thought (3)
POLS C 14 International Relations (3)
SOCIO 1 Introduction to Sociology (3)
SOCIO 2 American Society: Social Problems and Deviance (3)
SOCIO 5 Ethnicity and Ethnic Relations in America (3)
SOCIO 12 Sociology of the Family (3)
SOCIO 28 Death and Dying (3)
SPCOM 5 Intercultural Communication (3)

Complete 1 course in Historical Foundations
HIST 11 History of California (3)
HIST 13 World Civilizations: to 1500 (3)
HIST 14 World Civilizations: 1500 to Present (3)
HIST 16 United States: to 1877 (3)
HIST 17 United States: 1877 to Present (3)
HIST 21 Women in American History (3)

UNITS REQUIRED IN MAJOR: 18
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

AA Degree:
Liberal Arts: Emphasis in Science

ABOUT LIBERAL ARTS ASSOCIATE DEGREES
The Associate in Arts Degree in Liberal Arts is designed for students who wish to have a broad knowledge of liberal arts and sciences plus additional coursework in an “Area of Emphasis.” The curriculum in liberal arts allows students to develop an appreciation of the beauty and values that have shaped and enriched our culture, and may also be used to meet transfer requirements.

ABOUT THE LIBERAL ARTS: EMPHASIS IN SCIENCE DEGREE

This area of emphasis is intended to introduce students to the tools and concepts of physical and life sciences, or as preparation for transfer to a university in a related discipline such as Biology, Chemistry, Computer Science, Earth Science, Environmental Science, Mathematics, or Physics.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Apply knowledge of various concepts related to physical science.
• Demonstrate basic knowledge of relevant applications related to science.
• Explain the scope of inquiry applicable to natural and life sciences.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Complete 2 units in Tools for Science
CCTIS 10 Computer Concepts and Information Systems (4)
GEOGR 59 Geographic Information and Global Positioning Systems (2-3)
GEOGR 60 Introduction to Geographic Information Systems (3)
CCTIS 138 Excel Spreadsheets (2)
CCTPG 5 Introduction to Programming (3)
CCTPG 45 Applied Java Programming (3)
CCTPG 51 Database Management (3)
MATH 2 Statistics (4)
MATH 8 Trigonometry (3)
MATH 16 Precalculus (5)
MATH 18A Calculus I (5)
MATH 18B Calculus II (5)

Complete 9 units in Physical Science
ASTRO 40 Descriptive Astronomy (3)
CHEM 2A General Chemistry I (3)
CHEM 2AL General Chemistry I Laboratory (2)
CHEM 2B General Chemistry II (3)
CHEM 2BL General Chemistry II Laboratory (2)
AWARD REQUIREMENTS

Mathematics

PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

AS-T Degree: Mathematics

The Associate of Science Transfer (AS-T) degree in Mathematics provides students with a core curriculum of mathematics content, theory, and methodology, building an understanding of the broader scope of mathematics and its relationship to other disciplines. Students will develop proficiency in quantitative reasoning using words, graphs, mathematical symbols and other appropriate means. The program integrates key theoretical approaches with insights that inform mathematical reasoning in addition to fostering critical thinking, persistence in problem solving and abstract reasoning.

The goal of the Associate in Science in Mathematics for Transfer program is to prepare students for transfer to a California State University to pursue a B.A. or B.S. in Mathematics. The program is intended and designed to make the transfer of Columbia College students to CSU as seamless as possible. The major requirements of this degree align with the Transfer Model Curriculum. It is the most efficient pathway for students wishing to transfer to CSU in a similar major in a timely manner. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

• Demonstrate a productive disposition toward mathematics.
• Organize information, reason mathematically and communicate their reasoning.
• Solve problems at a level appropriate to the classes taken.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. Either the California State University General Education-Breadth Requirements (CSU-GE) OR the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.

UNITS REQUIRED IN MAJOR: 18
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

*Transfer credit limited. See a counselor.

CHEM 5 Introductory Chemistry: Environmental Emphasis (3)
CHEM 5L Introductory Chemistry Laboratory (1)
CHEM 14 Fundamental Chemistry for Allied Health (3)  
CHEM 14L Fundamental Chemistry for Allied Health Laboratory (1)
GEOGR 15 Physical Geography (3)
HIST 5/ Introduction to the History and Philosophy of Science (3)
PHILO 5 Conceptual Physics (3)
PHYCS 1* Introductory Physics I: Trigonometry Level (4)
PHYCS 4A* Introductory Physics I: Calculus Level (4)
PHYCS 5A* Introductory Physics I: Calculus Level (4)
PHYCS 5B* Introductory Physics II: Calculus Level (4)
ESC 5 Physical Geology (4)
ESC 10 Environmental Geology (3)
ESC 23 Historical Geology (4)
ESC 33 Introduction to the Earth (4)
ESC 42 Natural Hazards (3)
ESC 50 Oceanography (4)
ESC 62 Meteorology (3)
ESC 35 Field Geology (1-3) OR
Up to 3 units from the following field geology courses:
ESC 35CC Geology and Gold Mining of Calaveras County (1-3)
ESC 35DV Geology of Death Valley (1-3)
ESC 35LS Geology of Lassen, Shasta, Lava Beds (1-3)
ESC 35LT Geology of the Lake Tahoe Region (1-3)
ESC 35LV Geology of the Long Valley Caldera (1-3)
ESC 35ML Geology of the Mother Lode (1-3)
ESC 35SA Geology of the San Andreas Fault (1-3)
ESC 35SN Geology of the Sierra Nevada (1-3)
ESC 35SP Geology of the Sonora Pass Area (1-3)
ESC 35TR Geology of the Tuolumne River (1-3)

Complete 7 units in Natural and Life Sciences

ANTHR 1 Biological Anthropology (3)
BIOL 2* Cell and Molecular Biology (4)
BIOL 4 Principles and Evolution of Zoology (4)
BIOL 6 Plant Biology and Ecology (4)
BIOL 10 Human Anatomy (4)
BIOL 17* Fundamentals of Biology (4)
BIOL 24 Introduction to Environmental Science (4)
BIOL 39 Field Biology (1-2)
BIOL 60 Human Physiology (4)
BIOL 65 Microbiology (4)
FNR 1 Natural Resource Conservation (3)
FNR 2 Introduction to Forestry (3)
FNR 3 Natural Resources Law and Policy (3)
FNR 10 Dendrology (3)
FNR 30 Introduction to Watershed Management (3)
FNR 50 Natural History and Ecology (2)
AWARD REQUIREMENTS

Required courses:

- MATH 18A Calculus I  5
- MATH 18B Calculus II  5
- MATH 18C Calculus III  5

1 course required from Group A:

- MATH 26 Linear Algebra (3)
- MATH 28 Differential Equations (3)

1 course required from Group B or the Group A course not already used:

- CCTPG 22 Programming Concepts and Methodology I (4)
- PHYS 5A Introductory Physics I: Calculus Level (4)
- MATH 2 Statistics (4)

UNITS REQUIRED IN MAJOR:  22
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE:  60

Music
PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

Associate Degrees

AA-T Degree: Music

The Associate of Arts Transfer (AA-T) degree in Music provides students with a core curriculum of music theory, musicianship, private study and performance. Students will develop proficiency in music reading, fundamentals, advanced harmony, sight-singing and performance literature and practices. The program integrates music study, aural skills, writing and performance in order to foster artistic and critical thinking and a broad foundation of musical skill.

The goal of the Associate in Arts in Music for Transfer program is to prepare students for transfer to a California State University to pursue a B.A. in Music. The program is intended and designed to make the transfer of Columbia College students to CSU as seamless as possible. The requirements of this degree align with the Transfer Model Curriculum. It is the most efficient pathway for students desiring to transfer to CSU in a similar major in a timely manner. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate competence in music theory terms and definitions.
- Demonstrate competence in music reading.
- Demonstrate competence in performance of music fundamentals, scales and chords in all keys.
- Present a solo performance of at least five representative music pieces or etudes.
- Demonstrate musicianship skills in sight-reading and ear training.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. The Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.

Julia set image created by Math major Anthony Felts during cross-disciplinary work in Differential Equations (MATH 28) and Introduction to Programming (CCPTG 5).
Required courses:

- MUSIC 4A  Elementary Musicianship  1
- MUSIC 4B  Elementary Musicianship  1
- MUSIC 5A  Intermediate Musicianship  1
- MUSIC 5B  Intermediate Musicianship  1
- MUSIC 20A  Elementary Music Theory  3
- MUSIC 20B  Elementary Music Theory  3
- MUSIC 21A  Intermediate Music Theory  3
- MUSIC 21B  Intermediate Music Theory II  3

Applied Music (Complete 2 units over 4 semesters)

- MUSIC 50  Private Lessons-Guitar (.5)
- MUSIC 51  Private Lessons-Keyboard (.5)
- MUSIC 52  Private Lessons-Woodwinds (.5)
- MUSIC 53  Private Lessons-Brass (.5)
- MUSIC 54  Private Lessons-Strings (.5)
- MUSIC 55  Private Lessons-Percussion (.5)
- MUSIC 56  Private Lessons-Voice (.5)

Large Ensemble (Complete 4 units over 4 semesters)

- MUSIC 60  College Choir (1)
- MUSIC 64  Jazz Choir (1)
- MUSIC 66  Columbia College Community Chorus (1)
- MUSIC 72  Jazz Ensemble (1)
- MUSIC 75  Jazz Studies (1)
- MUSIC 76  Community Orchestra (1)
- MUSIC 78  Ensemble: Instrumental Emphasis (1)

UNITS REQUIRED IN MAJOR:  22
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE:  60

Additional recommended preparation for those who major in an instrument other than piano:

- MUSIC 41B  Intermediate Piano II (1)  OR
  Earn credit by examination

AA Degree: Music

The Music Major is designed to prepare the student to be a well-rounded musician and enables the student to transfer to a four-year institution at the junior level.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate competence in music theory terms and definitions.
- Demonstrate competence in music reading.
- Demonstrate competence in performance of music fundamentals, scales and chords in all keys.
- Demonstrate musicianship skills in sight reading and ear training.
- Present a solo performance of at least five representative music pieces or etudes.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Complete 16 units from Theory/Musicianship:  16

- MUSIC 4A  Elementary Musicianship (1)
- MUSIC 4B  Elementary Musicianship (1)
- MUSIC 5A  Intermediate Musicianship (1)
- MUSIC 5B  Intermediate Musicianship (1)
- MUSIC 20A  Elementary Music Theory (3)
- MUSIC 20B  Elementary Music Theory (3)
- MUSIC 21A  Intermediate Music Theory (3)
- MUSIC 21B  Intermediate Music Theory II (3)
AWARD REQUIREMENTS

Office Technology PROGRAM

Career and Technical Education Division Manzanita, Upper Level, Room 267 (209) 588-5142 www.gocolumbia.edu/career_technical

Associate Degree

AS Degree: Administrative Office Professional

- Previously offered as an ASOE degree

This Associate in Science Degree is earned in an occupational program that provides students with skills and training for immediate entry into the workforce.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:
- Develop presentations using multimedia, graphic, and videos.
- Demonstrate an understanding of office management and relevant techniques.
- Apply and maintain a computerized accounting system for financial statements.

DEGREE REQUIREMENTS

- To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60. In addition, students will need to demonstrate a 50-word-per-minute keyboarding speed and accuracy competency as demonstrated by a five (5) minute timed writing.

Required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSAD 40</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 135</td>
<td>Computerized Accounting (QuickBooks)</td>
<td>2</td>
</tr>
<tr>
<td>BUSAD 161A</td>
<td>Small Business Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>CCTIS 8</td>
<td>Advanced Internet Research</td>
<td>1.5</td>
</tr>
<tr>
<td>OFTEC 125</td>
<td>Records Management and Filing Applications</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 130</td>
<td>Business English</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 131</td>
<td>Office Procedures and Technology</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 132</td>
<td>Business Communication</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 210</td>
<td>Typing Speed and Accuracy Building</td>
<td>1</td>
</tr>
</tbody>
</table>

Either the combination of four short classes OR the single, 4 unit course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCTIS 10</td>
<td>Computer Concepts and Information Systems (4)</td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td>Presentations Using Computers and Multimedia (1.5)</td>
<td></td>
</tr>
<tr>
<td>CCTIS 137</td>
<td>Excel Spreadsheets (2)</td>
<td></td>
</tr>
<tr>
<td>CCTIS 138</td>
<td>Access (1.5)</td>
<td></td>
</tr>
<tr>
<td>OFTEC 141</td>
<td>Intermediate Word Processing (3)</td>
<td></td>
</tr>
</tbody>
</table>

UNITS REQUIRED IN MAJOR: 27.5-31.5
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Natural Resources:

see "Forestry and Natural Resources"

Nursing: Columbia College does not offer a nursing program. However, within the Yosemite Community College District, Modesto Junior College offers an Associate Degree for Nursing satellite program that operates on the Columbia College campus. See a Columbia College counselor or call (209) 588-5109 for more information.

Complete 2 units from Applied Music*:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC 50</td>
<td>Private Lessons: Guitar (.5)</td>
<td></td>
</tr>
<tr>
<td>MUSIC 51</td>
<td>Private Lessons: Keyboard (.5)</td>
<td></td>
</tr>
<tr>
<td>MUSIC 52</td>
<td>Private Lessons: Woodwinds (.5)</td>
<td></td>
</tr>
<tr>
<td>MUSIC 53</td>
<td>Private Lessons: Brass (.5)</td>
<td></td>
</tr>
<tr>
<td>MUSIC 54</td>
<td>Private Lessons: Strings (.5)</td>
<td></td>
</tr>
<tr>
<td>MUSIC 55</td>
<td>Private Lessons: Percussion (.5)</td>
<td></td>
</tr>
<tr>
<td>MUSIC 56</td>
<td>Private Lessons: Voice (.5)</td>
<td></td>
</tr>
</tbody>
</table>

*It is suggested students take private instruction every semester at Columbia College although only 2 units are required for transfer.

Complete 4 units from Ensembles**:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSIC 60</td>
<td>College Choir (1)</td>
<td></td>
</tr>
<tr>
<td>MUSIC 64</td>
<td>Jazz Choir (1)</td>
<td></td>
</tr>
<tr>
<td>MUSIC 66</td>
<td>Columbia College Community Chorus (1)</td>
<td></td>
</tr>
<tr>
<td>MUSIC 72</td>
<td>Jazz Ensemble (1)</td>
<td></td>
</tr>
<tr>
<td>MUSIC 75</td>
<td>Jazz Studies (1)</td>
<td></td>
</tr>
<tr>
<td>MUSIC 76</td>
<td>Community Orchestra (1)</td>
<td></td>
</tr>
</tbody>
</table>

**Music majors need to be enrolled in an ensemble appropriate to their major instrument each semester at Columbia. Four units are required for transfer.

Demonstrate proficiency in:

VOICE: Voice proficiency (for non-voice majors; may be achieved independently through credit by examination or through the following course): MUSIC 36 Elementary Voice (1)

PIANO: Piano proficiency (for non-piano majors; may be achieved independently through credit by examination or through the following course): MUSIC 41B Intermediate Piano II (1)
Recommended Optional Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 51/</td>
<td>Publication Design</td>
<td>3</td>
</tr>
<tr>
<td>CCTDM 51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUSAD 25/</td>
<td>Job Search and Interview Strategies</td>
<td>1</td>
</tr>
<tr>
<td>GUIDE 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUSAD 29/</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>CCTIS 29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OFTEC 97</td>
<td>Work Experience in Office Technology</td>
<td>1-4</td>
</tr>
<tr>
<td>OFTEC 168</td>
<td>Creating a Virtual Office</td>
<td>3</td>
</tr>
</tbody>
</table>

Certificates of Achievement

Certificate of Achievement: Administrative Office Professional

This program is designed to prepare the student for employment in the modern office. Communication and office skills are emphasized. The student will be able to choose two additional courses, beyond the basic requirements, for specialization in an office technology area.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate advanced formatting skills in common office documents.
- Apply critical-thinking skills to common office situations and issues.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required. In addition, students will need to demonstrate a 45-word-per-minute keyboarding speed and accuracy competency as demonstrated by a five (5) minute timed writing.

Required courses:

- BUSAD 135 Computerized Accounting (QuickBooks) 2
- BUSAD 163 Business Mathematics 3
- CCTIS 8 Advanced Internet Research 1.5
- OFTEC 125 Records Management and Filing Applications 3
- OFTEC 130 Business English 3
- OFTEC 131 Office Procedures and Technology 3
- OFTEC 132 Business Communication 3
- OFTEC 210 Typing Speed and Accuracy Building 1

Either the combination of four short classes OR the single, 4 unit course:

- CCTIS 10 Computer Concepts and Information Systems (4)
- OR
- CCTIS 137 Presentations Using Computers and Multimedia (1.5)
- CCTIS 138 Excel Spreadsheets (2)
- CCTIS 139 Access (1.5)
- OFTEC 140 Beginning Word Processing (2)

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 23.5-26.5

Certificate of Achievement: Virtual Office Professional

The Virtual Office Professional Program prepares students as entrepreneurs or independent contractors who will be able to provide professional, administrative, creative, and technical assistance to clients in a virtual office environment using advanced communication technologies. The courses assist the student in developing skills which will work in virtual environments, and identify the student’s niche in the industry. Preparation includes topics related to creating a virtual office such as time management, customizing the workplace, evaluating software and hardware, and communicating effectively and efficiently with and through technology.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Identify various needs necessary to working a virtual environment.
- Create a marketing modality to present to potential clients.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- BUSAD 41 Small Business Management 3
- OFTEC 130 Business English 3
- OFTEC 131 Office Procedures and Technology 3
- OFTEC 132 Business Communications 3
- OFTEC 141 Intermediate Word Processing 3
- OFTEC 168 Creating a Virtual Office 3

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 18
Skills Attainment Certificates

Skills Attainment Certificate:* Office Technician

This Skills Attainment Certificate is designed to be a brief skills update program. Students wishing to return to the workforce after a hiatus need to learn the latest in technology. This program will give them the opportunity to learn the latest in word processing suites and refresh English and other office skills. This program contains the building blocks for a Certificate of Achievement or an AS degree. In addition, students will need to demonstrate a 45-word-per-minute speed and accuracy competency as demonstrated by a five (5)-minute timed writing.

**PROGRAM STUDENT LEARNING OUTCOMES**

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate competency of current office software programs.
- Apply a working knowledge of business English.
- Able to complete a 5-minute typing test with minimum speed of 45 w.p.m.

**SKILLS ATTAINMENT REQUIREMENTS**

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required. In addition, you will need to demonstrate a 45-word-per-minute keyboarding speed and accuracy competency as demonstrated by a five (5) minute timed writing.

**Required courses:**

- CCTIS 8 Advanced Internet Research 1.5
- OFTEC 100 Computer Keyboarding I (1)
- OR
- OFTEC 210 Typing Speed and Accuracy Building (1)
- OFTEC 125 Records Management and Filing Applications 3
- OFTEC 130 Business English 3
- Either the combination of 4 short courses OR the single, 4-unit course:
  - CCTIS 10 Computer Concepts and Information Systems (4)
  - OR
  - CCTIS 137 Presentations Using Computers and Multimedia (1.5)
  - CCTIS 138 Excel Spreadsheets (2)
  - CCTIS 139 Access (1.5)
  - OFTEC 140 Beginning Word Processing (2)

**TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE:** 12.5-15.5

**Recommended Optional Course**

- BUSAD 135 Computerized Accounting (QuickBooks) (2)

*Skills Attainment Certificates do not appear on student transcripts.*

---

Skills Attainment Certificate:* Virtual Entrepreneur Technician

Students completing this certificate will have the business skills to complete the startup requirements of a virtual office. In addition, students will have the skills to manage, market, and grow a virtual business.

**PROGRAM STUDENT LEARNING OUTCOMES**

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate the knowledge and skills to start and manage a virtual entrepreneur business.
- Demonstrate the knowledge and skills to use hardware and software to run the business effectively.
- Demonstrate the knowledge and skills to market business
- Demonstrate the knowledge and skills to plan and complete projects for customers.

**SKILLS ATTAINMENT REQUIREMENTS**

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

**Required courses:**

- ENTRE 101 Introduction to Entrepreneurship 2
- ENTRE 102 Entrepreneurial Marketing 2
- ENTRE 104 Preparing Effective Business Plans 2
- ENTRE 105 Social Media Marketing 2
- OFTEC 168 Creating a Virtual Office 3
- Complete 6 units from this section: 6
  - BUSAD 41 Small Business Management (3)
  - CCTIS 29/ Project Management (3)
  - BUSAD 29
  - OFTEC 130 Business English (3)
  - OFTEC 132 Business Communications (3)

**TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE:** 17

*Skills Attainment Certificates do not appear on student transcripts.*
Office Technology: Medical

AS Degree: Medical Office Specialist

- Previously offered as an ASOE degree

This Associate in Science Degree is earned in an occupational program that provides students with skills and training for immediate entry into the workforce. Note: A requirement for this degree is a 50-word-per-minute speed and accuracy competency as demonstrated by a five (5) minute timed writing.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate an understanding of medical office management and techniques.
- Understand the unique legal and ethical challenges presented in a medical environment.
- Apply mastery of an office suite related to typical documents required in medical office.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCTIS 138</td>
<td>Excel Spreadsheets</td>
<td>2</td>
</tr>
<tr>
<td>OFTEC 50</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 125</td>
<td>Records Management and Filing Applications</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 130</td>
<td>Business English</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 132</td>
<td>Business Communication</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 141</td>
<td>Intermediate Word Processing</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 149</td>
<td>Electronic Health Records</td>
<td>2</td>
</tr>
<tr>
<td>OFTEC 150</td>
<td>Medical Law and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 151</td>
<td>Medical Office Management</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 152A</td>
<td>Reimbursement Methodology</td>
<td>3</td>
</tr>
</tbody>
</table>

UNITS REQUIRED IN MAJOR: 28
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Recommended Optional Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 150</td>
<td>Elementary Anatomy and Physiology</td>
<td>3</td>
</tr>
<tr>
<td>BUSAD 25/</td>
<td>Job Search and Interviewing Strategies</td>
<td>1</td>
</tr>
<tr>
<td>GUIDE 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CCTIS 10</td>
<td>Computer Concepts and Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 152B</td>
<td>Basic ICD Coding</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 152C</td>
<td>Basic CPT Coding</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 210</td>
<td>Typing Speed and Accuracy Building</td>
<td>1</td>
</tr>
</tbody>
</table>

Certificate of Achievement

Certificate of Achievement: Medical Office Specialist

The Certificate of Achievement is earned in occupational programs that provide students with skills and training for immediate entry into the workforce. The student will have the skills necessary for entry level medical positions where knowledge of word processing, billing and coding, and communication skills are needed.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate HIPPA-compliant entry-level skills for communication in medical office positions.
- Apply techniques to bill various types of medical insurance programs.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCTIS 138</td>
<td>Excel Spreadsheets</td>
<td>2</td>
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<tr>
<td>OFTEC 50</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 125</td>
<td>Records Management and Filing Applications</td>
<td>3</td>
</tr>
<tr>
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<td>OFTEC 132</td>
<td>Business Communications</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 140</td>
<td>Beginning Word Processing</td>
<td>2</td>
</tr>
<tr>
<td>OFTEC 149</td>
<td>Electronic Health Records</td>
<td>2</td>
</tr>
<tr>
<td>OFTEC 150</td>
<td>Medical Law and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 151</td>
<td>Medical Office Management</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 152A</td>
<td>Reimbursement Methodology</td>
<td>3</td>
</tr>
<tr>
<td>OFTEC 210</td>
<td>Typing Speed and Accuracy Building</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 28

Recommended Optional Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 150</td>
<td>Elementary Anatomy and Physiology</td>
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<td>BUSAD 25/</td>
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<tr>
<td>GUIDE 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUSAD 135</td>
<td>Computerized Accounting (QuickBooks)</td>
<td>2</td>
</tr>
<tr>
<td>CCTIS 10</td>
<td>Computer Concepts and Information Systems</td>
<td>4</td>
</tr>
<tr>
<td>OFTEC 152B</td>
<td>Basic ICD Coding</td>
<td>3</td>
</tr>
</tbody>
</table>
Skills Attainment Certificate:

Medical Coding I

The Medical Coding Certificate program prepares individuals to perform the duties and functions of a medical billing and coding specialist. Upon completion of the program, the student will have the ability to: input patient information for coding and billing using medical software, use and understand medical terminology as it relates to coding and billing, organize information relating to patient medical records, and use codes from the CPT, ICD (International Classification of Diseases), and HCPCS for medical billing, coding, and completion of insurance forms.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Apply medical terminology to develop vocabulary for anatomical system recognition.
- Demonstrate an understanding of symptoms and procedures applicable to coding patients’ visits.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- OFTEC 50 Medical Terminology 3
- OFTEC 149 Electronic Health Records 2
- OFTEC 150 Medical Law and Ethics 3
- OFTEC 152A Reimbursement Methodology 3
- OFTEC 152B Basic ICD Coding 3
- OFTEC 152C Basic CPT Coding 3

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 17

Skills Attainment Certificate:

Medical Coding II

This program assumes that students have already completed Medical Coding Skills Attainment Certificate or the equivalent. The classes in this certificate program are designed to prepare students to take the AHIMA, (American Health Information Management Association), AACP (American Association Coding Professionals), or similar coding certification exams. In order to be employed as a beginning coder, a student must be certified. This program offers all the courses necessary for a student to take a national exam

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate a professional-level understanding of medical terminology.
- Demonstrate application of healthcare data laws and ethics.
- Review and abstract medical records for medical coding.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- OFTEC 152D Intermediate Coding 3
- OFTEC 152E Professional Coding 3
- OFTEC 170 Healthcare Delivery Systems 3
- OFTEC 171 Healthcare Data Content and Structure 3
- OFTEC 172 Computer Basics in Healthcare 3

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 15

*Skills Attainment Certificates do not appear on student transcripts.

Photography:

see "Art"
Physics
PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

AS-T Degree: Physics

The Associate in Science for Transfer (AS-T) degree in Physics provides students with the core curriculum required in the first two years of a college experience leading to a Bachelor of Science (BS) or Bachelor of Arts (BA) degree in Physics or Physics Education. Students will enhance their problem solving and critical thinking skills by applying mathematical models to real world problems and by exploring the relationship of physics to other topics in science, technology, and engineering.

The goal of the AS-T Physics degree program is to prepare students for transfer to the California State University (CSU) to pursue a BA or BS in a similar major such as Physics and Physics Education. The program is intended and designed to make the transfer of Columbia College students to the CSU as seamless as possible. The requirements of this degree align with the Transfer Model Curriculum (TMC) for Physics and comply with the Student Transfer Achievement Reform Act (SB 1440). Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Develop theories and solve problems using lower division physics - level knowledge of mechanics, heat, waves, optics, thermodynamics, electricity & magnetism and modern physics.
- Use common laboratory instruments to make measurements and explain the scientific theories in lower division physics (of mechanics, heat, waves, optics, thermodynamics, electricity & magnetism and modern physics).
- Be able to succinctly report the results of experiments in a clear and technically correct manner.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. Either the California State University General Education-Breadth Requirements (CSU-GE) or the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYCS 5A</td>
<td>Introductory Physics I: Calculus Level</td>
<td>4</td>
</tr>
<tr>
<td>PHYCS 5B</td>
<td>Introductory Physics II: Calculus Level</td>
<td>4</td>
</tr>
<tr>
<td>PHYCS 5C</td>
<td>Physics III: Calculus Level</td>
<td>4</td>
</tr>
<tr>
<td>MATH 18A</td>
<td>Calculus I</td>
<td>5</td>
</tr>
<tr>
<td>MATH 18B</td>
<td>Calculus II</td>
<td>5</td>
</tr>
<tr>
<td>MATH 18C</td>
<td>Calculus III</td>
<td>5</td>
</tr>
</tbody>
</table>

UNITS REQUIRED IN MAJOR: 27
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Physics students read the voltage of a self-made battery during an electricity and magnatism lab.
Political Science
PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

AA-T Degree: Political Science

The Political Science program provides students with a core curriculum covering introductory political science content, theory, and methodology. The curriculum is designed to help students understand the broad scope of political science as a comparative science. In addition, it covers the key theoretical approaches and insights that inform political science, as well as the role of political theory and research methods. Further, the program seeks to foster critical thinking, develop an awareness of diverse perspectives and their implications, and encourage effective approaches to problem solving.

The goal of the Associate in Arts in Political Science for Transfer (AA-T) program is to prepare students for transfer to a California State University to pursue a B.A. or B.S. in Political Science. The program is intended and designed to make the transfer of Columbia College students to CSU as seamless as possible. The major requirements of this degree align with the Transfer Model Curriculum. It is the most efficient pathway for students wishing to transfer to CSU in a similar major in a timely manner. Students should consult with a counselor to determine if this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Reflect upon the problem solving dimensions of political science as it affects public opinion, political participation, voting and office holding.
- Demonstrate understanding of the main sub-disciplines of political science: their origins, histories, associated theories, principles, and methodologies.
- Compare contributions of political science to past and current human challenges in public policy and national decision-making.
- Demonstrate understanding of the comparative potential of political science analysis.
- Analyze the contextualization of the agents of political socialization and the consequences of socialization.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. Either the California State University General Education Breadth Requirements (CSU-GE) OR the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2</td>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>POLSC 10</td>
<td>Constitutional Government</td>
<td>3</td>
</tr>
<tr>
<td>POLSC 14</td>
<td>International Relations</td>
<td>3</td>
</tr>
<tr>
<td>POLSC 16</td>
<td>Comparative Government and Politics</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete 2 of the following: 6

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHR 2</td>
<td>Cultural Anthropology (3)</td>
</tr>
<tr>
<td>GEOGR 12</td>
<td>Cultural Geography (3)</td>
</tr>
<tr>
<td>POLSC 12</td>
<td>American Political Thought (3)</td>
</tr>
<tr>
<td>SOCIO 1</td>
<td>Introduction to Sociology (3)</td>
</tr>
</tbody>
</table>

UNITS REQUIRED IN MAJOR: 19
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Outdoor Adventure Club members bouldering on campus. The club hosts hiking, hammocking, and bouldering adventures for students.
Psychology
PROGRAM

Arts and Sciences Division
Manzanita, Upper Level, Room 271
(209) 588-5087
www.gocolumbia.edu/arts_sciences

AA-T Degree: Psychology

The Psychology program provides students with the basic core of curriculum in Psychology, including content, theories and methodology. The curriculum is designed to allow students to discover the fundamentals of Psychology, as well as provide them with a basic background in statistics, biology and other related fields of study. The program is further designed to foster critical thinking, the application of psychological concepts and the scientific method to one’s life and an understanding of diversity.

The requirements of this degree satisfy the Transfer Model Curriculum (TMC) for Psychology. The Associate in Arts for Transfer (AA-T) complies with the Student Transfer Achievement Reform Act (SB 1440, now codified in California Education Code section 66746-66749, effective Fall 2011). This law states that students will have guaranteed admission to a California State University (CSU) campus upon successful completion of the specified program requirements. This degree is for students who plan to complete a bachelor's degree in Psychology at a CSU campus. Students with a similar major should consult with a counselor to determine if this degree is the best option or plan for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Demonstrate an awareness and understanding of diverse perspectives and social diversity in psychology.
• Apply psychological and scientific knowledge to their ongoing studies, research, future occupations and personal life.
• Demonstrate the ability to critically analyze, evaluate and articulate theories and research in psychology.
• Demonstrate knowledge of the scientific method and research methodology.
• Describe and demonstrate knowledge of the basic theories of psychology.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU transferable units with a grade point average of 2.0 or better, including the completion of:

1. Either the California State University General Education Breadth Requirements (CSU-GE) or the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.

Required courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 2</td>
<td>Cell and Molecular Biology (4)</td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td>BIOL 17 Fundamentals of Biology (4)</td>
<td></td>
</tr>
<tr>
<td>MATH 2</td>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>PSYCH 1</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 15</td>
<td>Research Methods in Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete 3 units from this section:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHR 2</td>
<td>Cultural Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>SOCIO 1</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SPCOM 4</td>
<td>Introduction to Human Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete 3 units from this section:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYCH 5</td>
<td>Human Sexual Behavior</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 10</td>
<td>Lifespan Human Development</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 24</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH 40</td>
<td>Stress Management</td>
<td>3</td>
</tr>
</tbody>
</table>

UNITS REQUIRED IN MAJOR: 20
TOTAL UNITS FOR ASSOCIATE DEGREE: 60

Public Health Science:
see "Health"
AWARD REQUIREMENTS

Science

PROGRAM

AS Degree: Science: Emphasis in Physical Science

The Associate in Science Degree is awarded in Science and Technical fields. It is specifically designed for students who intend to transfer to a four-year institution.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate understanding and applications of the theories and practices of science.
- Communicate scientific knowledge, understanding, and practices with accuracy.
- Determine, analyze, and interpret quantitative information about natural phenomena.
- Understand and evaluate scientific findings in light of global health and environmental issues.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College Post Breadth Requirements on page 60.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2A</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>CHEM 2AL</td>
<td>General Chemistry I Laboratory</td>
</tr>
<tr>
<td>CHEM 2B</td>
<td>General Chemistry II</td>
</tr>
<tr>
<td>CHEM 2BL</td>
<td>General Chemistry II Laboratory</td>
</tr>
<tr>
<td>PHYSCS 5A</td>
<td>Introductory Physics I: Calculus Level</td>
</tr>
<tr>
<td>PHYSCS 5B</td>
<td>Introductory Physics II: Calculus Level</td>
</tr>
</tbody>
</table>

UNITS REQUIRED IN MAJOR: 18
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60

Sociology

PROGRAM

AA-T Degree: Sociology

The Sociology program provides students with a core curriculum covering introductory sociology content, theory, and methodology. The curriculum is designed to help students understand the structure, processes, and functions of society. In addition, it covers the key theoretical approaches and insights that inform sociology, as well as the role of social theory and research methods in understanding society. Further, the program seeks to foster critical thinking, develop an awareness of diverse perspectives and their implications, and encourage effective approaches to problem solving.

The major requirements align with the Transfer Model Curriculum (TMC) for Sociology. The Associate in Arts for Transfer (AA-T) complies with the Student Transfer Achievement Reform Act (SB 1440, now codified in California Education Code sections 66746-66749, effective Fall 2011). The law states that students will have guaranteed admission to a California State University (CSU) campus upon successful completion of the specified program requirements. This option is intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Describe the contributions of social, political, and philosophical antecedents to the founding of sociology.
- Articulate the legal, operational, and ethical dimensions of sociological work.
- Describe and demonstrate the relationship between sociology, social change, and emerging sciences.

DEGREE REQUIREMENTS

To earn this degree, students must complete 60 CSU-transferable semester units with a grade point average of 2.0 or better, including completion of:

1. Either the California State University General Education Breadth Requirements (CSU-GE) or the Intersegmental General Education Transfer Curriculum (IGETC); AND
2. Semester units as specified below, with a grade of C or better in all courses; AND
3. Any CSU-transferable electives needed to bring the total units to 60.

Note: Students earning this degree are exempt from the Activities Requirement.
Required courses:
SOCIO 1  Introduction to Sociology  3

Complete 6 units:
SOCIO 2  American Society: Social Problems and Deviance (3)
MATH 2  Statistics (4)
PSYCH 15  Research Methods in Psychology (3)

Complete 6 units:
SOCIO 5  Ethnicity and Ethnic Relations in America (3)
SOCIO 7/  Gender, Culture and Society (3)
ANTHR 7
SOCIO 12  Sociology of the Family (3)

Complete 3 units:
ANTHR 2  Cultural Anthropology (3)
ECON 10  Principles of Economics – Macro (3)
ECON 11  Principles of Economics – Micro (3)
GEOGR 12  Cultural Geography (3)
POLSC 10  Constitutional Government (3)
PSYCH 1  General Psychology (3)

Any course from the above lists not already chosen (3-4)

UNITS REQUIRED IN MAJOR:  18
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE:  60
AWARD REQUIREMENTS

Water Resources Management

PROGRAM

Career and Technical Education Division
Manzanita, Upper Level, Room 267
(209) 588-5142
www.gocolumbia.edu/career_technical

Associate Degree

AS Degree:
Water Resources Management

- Previously offered as an ASOE degree

The Associate in Science Degree (AS) in Water Resources Management prepares recipients for immediate employment in the fields of Watershed Management, Wastewater Treatment, and/or Drinking Water Treatment.

PROGRAM STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this award, the student should be prepared to:

- Use acquired knowledge of water resources management to make informed decisions about their personal lives, career choices, and the communities in which they live.
- Use multiple thinking strategies to identify and examine real-world examples of concepts explored in coursework and their implications for water resources management.
- Assimilate, use, and develop knowledge and understanding of water resources management.
- Acquire, articulate, create and convey knowledge and understanding on the subject of water resources management using a variety of methods of communication.

DEGREE REQUIREMENTS

To earn this associate degree, complete the requirements below with a C or better in each course, in addition to completing the AA/AS Degree Pathway (Column 1) of the Columbia College General Education Breadth Requirements on page 60.

Required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>FNR 1</td>
<td>Natural Resource Conservation</td>
<td>3</td>
</tr>
<tr>
<td>FNR 60</td>
<td>Introduction to Maps and Remote Sensing</td>
<td>2</td>
</tr>
<tr>
<td>FNR 61</td>
<td>Introduction to Water Resources Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete 4 courses: 10-12
- FNR 30 Introduction to Watershed Management (3)
- FNR 63 Water for Consumption (3)
- FNR 64 Water Infrastructure in California (3)
- FNR 65 Rural Wastewater Strategies (3)
- FNR 66 Decentralized Wastewater Management (3)
- FNR 67 Operation of Wastewater Treatment Plants (3)
- FNR 69 Operation of Wastewater Treatment Plants 2 (3)
- FNR 71 Water Use Efficiency (1)
- FNR 74 Wastewater Collection Systems (3)

Complete 1 course: 2-3
- GEOGR 59 Geographic Information and Global Positioning Systems (2-3)
- GEOGR 60 Introduction to Geographic Information Systems (3)

Complete 2 courses: 2-8
- BIOL 24 Introduction to Environmental Science (4)
- BIOL 65 Microbiology (4)
- BIOL 100 A Natural History of California (3)
- BIOL 179 Fishing and Fishery Biology of the Sierra Nevada (2)
- ESC 5 Physical Geology (4)
- ESC 35TR Geology of the Tuolumne River (1-3)
- ESC 50 Oceanography (4)
- ESC 62 Meteorology (3)
- FNR 3 Natural Resources Law and Policy (3)
- FNR 6 Soil Resources (3)
- FNR 11 Natural Resources Field Camp (3)
- FNR 53 Forest Surveying (3)
- FNR 83 Ecological Restoration (1)

UNITS REQUIRED IN MAJOR 22–31
TOTAL UNITS REQUIRED FOR ASSOCIATE DEGREE: 60
Certificate of Achievement

Certificate of Achievement: Water Resources Management

The Certificate of Achievement in Water Resources Management helps prepare recipients for immediate employment in entry level positions in the field of Watershed Management, Wastewater Treatment, and/or Drinking Water Treatment.

The courses that make up the Water Resources Management Certificate are also applicable to the Water Resources Management AS degree, which has additional General Education requirements.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Use acquired knowledge of water resources management to make informed decisions about their personal lives, career choices, and the communities in which they live.
• Use multiple thinking strategies to identify and examine real-world examples of concepts explored in coursework and their implications for the study of water resources management.
• Assimilate, use, and develop knowledge and understanding of water resources management.
• Acquire, articulate, create and convey knowledge and understanding on the subject of water resources management using a variety of methods of communication.

CERTIFICATE REQUIREMENTS

■ To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- FNR 1 Natural Resource Conservation 3
- FNR 60 Introduction to Maps and Remote Sensing 2
- FNR 61 Introduction to Water Resources Management 3

Complete 4 courses: 10-12

- FNR 30 Introduction to Watershed Management (3)
- FNR 63 Water for Consumption (3)
- FNR 64 Water Infrastructure in California (3)
- FNR 65 Rural Wastewater Strategies (3)
- FNR 66 Decentralized Wastewater Management (3)
- FNR 67 Operation of Wastewater Treatment Plants (3)
- FNR 69 Operation of Wastewater Treatment Plants 2 (3)
- FNR 71 Water Use Efficiency (1)
- FNR 74 Wastewater Collection Systems (3)

Complete 1 course: 2-3

- GEOGR 59 Geographic Information and Global Positioning Systems (2-3)
- GEOGR 60 Introduction to Geographic Information Systems (3)

Complete 2 courses: 2-8

- BIOL 24 Introduction to Environmental Science (4)
- BIOL 65 Microbiology (4)
- BIOL 100 A Natural History of California (3)
- BIOL 179 Fishing and Fishery Biology of the Sierra Nevada (2)
- ESC 5 Physical Geology (4)
- ESC 35TR Geology of the Tuolumne River (1-3)
- ESC 50 Oceanography (4)
- ESC 62 Meteorology (3)
- FNR 3 Natural Resources Law and Policy (3)
- FNR 6 Soil Resources (3)
- FNR 11 Natural Resources Field Camp (3)
- FNR 53 Forest Surveying (3)
- FNR 83 Ecological Restoration (1)

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 22-31
Skills Attainment Certificate

Skills Attainment Certificate:*
Wastewater Treatment Plant Operation

This 3-course, 9-unit certificate provides students with the educational units and information necessary to take the Grade I and II Wastewater Treatment Plant Operator Certification exams in California (other requirements exist, including Operator in Training wastewater treatment plant experience). The courses that make up the Water Treatment Plant Operation Skills Attainment are also applicable to the Water Resources Management certificate and AS degree, which have additional course requirements.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Acquire, articulate, create and convey knowledge and understanding on the subject of waste water management using a variety of methods of communication.
• Attain, use, and develop knowledge and understanding in the subject of waste water management.
• Use acquired knowledge of waste water management to make informed decisions about their personal lives, career choices, and the communities in which they live.
• Use multiple thinking strategies to identify and examine real-world examples of concepts explored in coursework and their implications for waste water management.

SKILLS ATTAINMENT REQUIREMENTS

To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- FNR 61 Introduction to Water Resources 3
- FNR 67 Operation of Wastewater Treatment Plants 3
- FNR 69 Operation of Wastewater Treatment Plants 2 3

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 9

*Skills Attainment Certificates do not appear on student transcripts.

Web Design/Development: see "Computer and Communications Technology: Digital Media"

Welding Technology

PROGRAM

Career and Technical Education Division
Manzanita, Upper Level, Room 267
(209) 588-5142
www.gocolumbia.edu/career_technical

Certificate of Achievement

Certificate of Achievement: Welding Technology

› Previously offered as "C: Welding Levels I, II, and III"

The Welding Technology Certificate of Achievement is aligned with the American Welding Society (AWS) course patterns. Students earning this award will have met AWS skills standards in welding.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

• Demonstrate knowledge of welding experience in various types of welding.
• Demonstrate an understanding of welding safety.

CERTIFICATE REQUIREMENTS

To earn this Certificate of Achievement, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- WT 97 Work Experience in Welding Technology 2
- WT 101 Practical Laboratory 1
- WT 121 Arc/Gas Welding 3
- WT 122 MIG Welding (GMAW/FCAW) 3
- WT 123 TIG Welding (GTAW) 3

TOTAL UNITS REQUIRED FOR CERTIFICATE OF ACHIEVEMENT: 12
Skills Attainment Certificates

Skills Attainment Certificate:* Welding Technology for Entrepreneurs

The coursework in this Skills Attainment Certificate is designed to prepare students who plan to own their business in the welding industry.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate an understanding of marketing and financial practices and strategies.
- Demonstrate knowledge of welding experience in various types of welding.

SKILLS ATTAINMENT REQUIREMENTS

- To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- ENTRE 102 Entrepreneurial Marketing (2)
- OR
- ENTRE 103 Financial Management for Entrepreneurs (2)
- ENTRE 104 Preparing Effective Business Plans 2
- WT 121 Arc/Gas Welding 3
- WT 122 MIG Welding (GMAW/FCAW) 3
- WT 123 TIG Welding (GTAW) 3

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 13

*Skills Attainment Certificates do not appear on student transcripts.

Skills Attainment Certificate:* Metal Sculpture for Entrepreneurs

The coursework in this Skills Attainment Certificate is designed to prepare students who plan to own their business in the metal sculpture industry.

PROGRAM STUDENT LEARNING OUTCOMES
Upon satisfactory completion of this award, the student should be prepared to:

- Demonstrate an understanding of strategies related to entrepreneurship.
- Demonstrate knowledge of metal working techniques related to aesthetic design.

SKILLS ATTAINMENT REQUIREMENTS

- To earn this Skills Attainment Certificate, complete the course requirements below with at least a C, unless the course can only be completed for P/NP. In those instances, a grade of P is required.

Required courses:

- WT 103/  Practical Laboratory - Metal Sculpture  1
- WT 165/  Metal Sculpture 1.5
- WT 166/  Metal Sculpture Projects  1
- ART 165
- ART 166
- ENTRE 101  Introduction to Entrepreneurship  2
- ENTRE 102  Entrepreneurial Marketing  2
- ENTRE 103  Financial Management for Entrepreneurs  2
- ENTRE 104  Preparing Effective Business Plans  2
- 2 units from ART courses numbered 1-99  2

TOTAL UNITS REQUIRED FOR SKILLS ATTAINMENT CERTIFICATE: 13.5

*Skills Attainment Certificates do not appear on student transcripts.
Institutional Student Learning Outcomes

The Institutional Student Learning Outcomes (ISLOs) for Columbia College also serve as the college’s general education learning outcomes and represent the knowledge, skills, and abilities that students will accomplish after completing the general education requirements for an associate/transfer degree. Students completing a certificate or skill attainment program will accomplish some of the ISLOs. It is expected that all students who attend Columbia College will accomplish one or more ISLOs as a result of their overall experience which includes both instructional and non-instructional areas.

Effective Communication

Students will demonstrate:

- **WRITING**: Write clearly and persuasively (e.g. academic essays, research papers, journal entries, etc.)
- **READING**: Evaluate and analyze texts critically
- **SPEAKING**: Articulate clearly (e.g. formal presentations, persuasive speeches, debate, peer-to-peer teaching, etc.)
- **COLLABORATING**: Participate (e.g. work effectively, teamwork, groups, etc.)

Critical/Creative Thinking

Students will demonstrate:

- **PROBLEM SOLVING**: Solve problems using available techniques and tools
- **REASONING**: Articulate unstated assumptions and draw reasonable conclusions (based on reliable data)
- **INFORMATION COMPETENCY**: Locate, analyze, and communicate information appropriately and accurately
- **INNOVATION**: Use cognitive and technical skills to create new ideas and approaches

Awareness and Personal Responsibility

Students will demonstrate awareness of:

- **GLOBAL FACTORS**: Articulate factors that influence global issues (biodiversity, politics, economics, sustainable practices, human activity on the physical environment, social justice, etc.)
- **CULTURAL FACTORS**: Describe how multiple perspectives and values contribute to a diverse society
- **AESTHETIC FACTORS**: Describe and interpret a variety of visual arts, dance, music, and/or literature
- **SELF**: Set and monitor goals (e.g. health, education, careers, relationships, etc.)

Breadth of Subject Area Knowledge

Students will demonstrate knowledge of:

- **NATURAL SCIENCES AND MATHEMATICS**: Describe and define the scope, key principles and methods of scientific inquiry and quantitative reasoning
- **ARTS AND HUMANITIES**: Describe and define the scope and key principles of the arts and/or humanities
- **SOCIAL AND BEHAVIORAL SCIENCES**: Describe and define the scope and key principles related to the complexities of social interaction and human experiences
- **PROFESSIONAL GROWTH**: Demonstrate technical skills, abilities, and/or knowledge applicable to the workplace environment