

M	IP	N	<p>The pattern below meets the associate general education degree requirements for graduation from Copper Mountain College. A total of 60 degree applicable units, including major requirements and General Education requirements are required for the Associate Degree. At least a 2.0 (“C”) grade point average is required in all courses applicable to the associate degree. All courses that count toward the Associate Degree major or area of emphasis must be satisfactorily completed with grades of A, B, C, or P. (Title 5, 55063).</p> <p><b>LEGEND:</b> <i>Courses without prerequisites are italicized</i> *Courses that appear in multiple areas below, can only be counted in one area. +Transfer credit may be limited by UC, CSU or both. Consult with a counselor. <b>M</b> = Met/Completed <b>IP</b> = In Progress <b>N</b> = Need to Complete</p>		
			<b>AREA C1 NATURAL SCIENCES</b>		
			3 Semester units minimum		
			A 001 <i>Descriptive Astronomy</i> (3) A 001L <i>Descriptive Astronomy Lab</i> (1) ANTH 001 <i>Introduction to Physical Anthropology</i> (3) BI 004 <i>Elements of Biology</i> (3) BI 004L <i>Elements of Biology Lab</i> (1) BI 005 <i>Molecular &amp; Cellular Biology</i> (5) (Effective Fall 2013) BI 006 <i>Biology of Organisms</i> (5) (Effective Fall 2013)	BI 015 <i>General Microbiology</i> (5) BI 022 <i>Human Anatomy</i> (4) BI 023 <i>Human Physiology</i> (5) CH 001A <i>General Chemistry</i> (5) CH 001B <i>General Chemistry</i> (5) CH 003 <i>Introductory General Chemistry</i> (4) G 001 <i>Physical Geology</i> (4)	G 005 <i>Environmental Geology</i> (4) G 010 <i>The Earth Sciences</i> (4) GEOG 001 <i>Physical Geography</i> (3) NR 001 <i>Conservation of Natural Resources</i> (3) PH 001 <i>Introductory Physics</i> (4) PH 004A <i>Physics for Scientists &amp; Engineers</i> (4) PH 004B <i>Physics for Scientists &amp; Engineers</i> (4) PH 004C <i>Physics for Scientists &amp; Engineers</i> (4)
			<b>AREA C2 SOCIAL &amp; BEHAVIORAL SCIENCES</b>		
			3 Semester units minimum		
			ANTH 002 <i>Cultural Anthropology</i> (3) ANTH 003 <i>Archaeology: An Introduction to Prehistory</i> (3) CD 010 <i>Child Development</i> (4) (Effective Fall 2010) CD 012 <i>Child, Family, &amp; Community</i> (3) (Effective Fall 2012) ^CD 074 <i>Living and Teaching in a Diverse Society</i> (3) (Effective Fall 2021) CJ 001 <i>Introduction to Criminal Justice</i> (3) CJ 002 <i>Criminal Law</i> (3) (Effective Spring 2011) CJ 010 <i>Juvenile Delinquency</i> (3) (Effective Spring 2011) CJ 032 <i>Introduction to Criminology</i> (3) (Effective Spring 2011) ECON 001 <i>Principles of Macroeconomics</i> (3) ECON 002 <i>Principles of Microeconomics</i> (3) ^EGSJ 014 <i>Introduction to Race and Ethnicity</i> (3) ^EGSJ 020 <i>Native American Studies</i> (3) ^EGSJ 074 <i>Living and Teaching in a Diverse Society</i> (3)	GEOG 002 <i>Cultural Geography</i> (3) GEOG 007 <i>World Regional Geography</i> (3) (Effective Fall 2015) HS 001 <i>Personal and Community Health</i> (3) HS 013 <i>General Nutrition</i> (3) HIST 003 <i>History of World Civilizations I</i> (3) HIST 004 <i>History of World Civilizations II</i> (3) HIST 017 <i>U.S. History Through Reconstruction</i> (3) HIST 018 <i>U.S. History from Reconstruction to Present</i> (3) HIST 019 <i>California History</i> (3) ^HIST 020 <i>Native American Studies</i> (3) PHIL 013 <i>Perspectives on Death &amp; Dying</i> (3) PS 001 <i>Introduction to Government</i> (3) PS 002 <i>Introduction to Comparative Governments.</i> (3)	PS 004 <i>Introduction to International Relations</i> (3) PSY 001 <i>General Psychology</i> (3) PSY 003 <i>Developmental Psychology</i> (3) PSY 012 <i>Human Sexuality</i> (3) (Effective Fall 2013) PSY 033 <i>Personal &amp; Social Adjustment</i> (3) SOC 001 <i>Introduction to Sociology</i> (3) SOC 002 <i>Social Problems</i> (3) *SOC 010 <i>Introduction to Marriage &amp; Family</i> (3) ^SOC 014 <i>Introduction to Race and Ethnicity</i> (3) STDV 65 <i>College and Personal Success</i> (3) (Effective Fall 2018)  ^ CD 074 and EGJS 074; HIST 020 and EGSI 020; SOC 014 and EGSI 014 are comparable courses. Therefore, credit is awarded for only one course.

<b>AREA C3 HUMANITIES</b>			
3 Semester units minimum			
M	IP	N	
			<p>ART 003A <i>Introduction to Two-Dimensional Design</i> (3)</p> <p>ART 010 <i>Introduction to Art</i> (3)</p> <p>ART 033 <i>History of Photography</i> (3)</p> <p>ART 050 <i>History of Western Art: Prehistory - Middle Ages</i> (3)</p> <p>ART 051 <i>Western Art History: Renaissance to Contemporary</i> (3)</p> <p>ART 052 <i>History of Art: Modern to Contemporary Art with a Global Perspective</i> (3)</p> <p>ART 053 <i>Intro to the Visual Arts of Non-western Cultures</i> (3)</p> <p>ASL 001* <i>Elementary American Sign Language I</i> (5)</p> <p>ASL 002* <i>Elementary American Sign Language II</i> (5)</p> <p>ASL 003* <i>Intermediate American Sign Language I</i> (4)</p> <p>ASL 004* <i>Intermediate American Sign Language II</i> (4)</p>
			<p>ENG 001B <i>Composition &amp; Literature</i> (3)</p> <p>ENG 010A <i>American Literature I</i> (3)</p> <p>ENG 010B <i>American Literature II</i> (3)</p> <p>ENG 011A <i>Survey of English Literature: Old English to 18<sup>th</sup> Century</i> (3)</p> <p>ENG 011B <i>Survey of English Literature: Romantic-Postmodernism</i> (3)</p> <p>ENG 012A <i>World Literature I: Beg-1650</i> (3)</p> <p>ENG 012B <i>World Literature II: The Modern World (1650-Present)</i> (3)</p> <p>HIST 003* <i>History of World Civilizations I</i> (3)</p> <p>HIST 004* <i>History of World Civilizations II</i> (3)</p> <p>HIST 017* <i>U.S. History Through Reconstruction</i> (3)</p> <p>HIST 018* <i>U.S. History from Reconstruction to Present</i> (3)</p>
			<p>MUS 005 <i>History of Rock 'N' Roll</i> (3)</p> <p>MUS 010 <i>Introduction to Music</i> (3)</p> <p>PHIL 006 <i>Introduction to Philosophy</i> (3)</p> <p>PHIL 008 <i>Philosophy from Ancient Times to the Renaissance</i> (3)</p> <p>PHIL 012* <i>Religions of the World</i> (3)</p> <p>PHIL 013 <i>Perspectives on Death &amp; Dying</i> (3)</p> <p>PHIL 014 <i>Introduction to Ethics</i> (3)</p> <p>SPAN 001 <i>Elementary Spanish</i> (5)</p> <p>SPAN 002* <i>Elementary Spanish</i> (5)</p> <p>SPAN 003* <i>Intermediate Spanish</i> (4)</p> <p>SPAN 004* <i>Intermediate Spanish</i> (4)</p> <p>TA 001 <i>Introduction to Theatre</i> (3)</p> <p>TA 002 <i>Acting I</i> (3)</p>
<b>AREA C4-LANGUAGE AND RATIONALITY</b>			
1 course from A, 1 course from B			
			<b>A ENGLISH COMPOSITION</b> (1 course 3 – semester units): ENG 003A <i>College Composition</i> (3)
			<b>B COMMUNICATION, MATHEMATICS, AND CRITICAL THINKING</b> (1 course 3 – semester units): MATH 040 <i>Intermediate Algebra</i> (4) or higher; BUMA 012 <i>Personal Finance</i> (3)
<b>AREA C5 TRADITIONS AND CULTURES</b>			
Minimum of 3 semester units.			
			<p>ANTH 001 <i>Introduction to Physical Anthropology</i> (3)</p> <p>ANTH 002 <i>Cultural Anthropology</i> (3)</p> <p>ART 010 <i>Introduction to Art</i> (3)</p> <p>ASL 001,002* <i>Elementary American Sign Language</i> (5)(5)</p> <p>ASL 003, 004* <i>Intermediate American Sign Language</i> (4)(4)</p> <p>^CD 074 <i>Living and Teaching in a Diverse Society</i> (3) (Effective Fall 2021)</p> <p>CJ 005A <i>Community &amp; the Justice System</i> (3)</p> <p>ENG 001B <i>Composition &amp; Literature</i> (3)</p> <p>ENG 010A <i>American Literature I</i> (3)</p> <p>ENG 010B <i>American Literature II</i> (3)</p> <p>ENG 011A <i>Survey of English Literature: Old English to 18<sup>th</sup> Century</i> (3)</p> <p>ENG 011B <i>Survey of English Literature: Romantic Through Postmodernism</i> (3)</p> <p>ENG 012A <i>World Literature I: Beginnings Through 1650</i> (3)</p>
			<p>ENG 012B <i>World Literature II: The Modern World (1650-Present)</i> (3)</p> <p>^EGSJ 014 <i>Introduction to Race and Ethnicity</i> (3)</p> <p>^EGSJ 020 <i>Native American Studies</i> (3)</p> <p>^EGSJ 074 <i>Living and Teaching in a Diverse Society</i> (3)</p> <p>GEOG 002 <i>Cultural Geography</i> (3)</p> <p>HS 001 <i>Personal &amp; Comm. Health</i> (3)</p> <p>HIST 003 <i>History of World Civilizations I</i> (3)</p> <p>HIST 004 <i>History of World Civilizations II</i> (3)</p> <p>HIST 019 <i>California History</i> (3)</p> <p>^HIST 020 <i>Native American Studies</i> (3)</p> <p>MUS 005 <i>History of Rock 'N' Roll</i> (3)</p> <p>PHIL 006 <i>Introduction to Philosophy</i> (3)</p> <p>PHIL 012 <i>Religions of the World</i> (3)</p> <p>PHIL 013 <i>Perspectives on Death &amp; Dying</i> (3)</p> <p>PHIL 014 <i>Introduction to Ethics</i> (3)</p>
			<p>PS 004 <i>Introduction to International Relations</i> (3)</p> <p>PSY 01 <i>General Psychology</i> (3)</p> <p>^PSY 010 <i>Introduction to Marriage and Family</i> (3)</p> <p>PSY 012 <i>Human Sexuality</i> (3)</p> <p>PSY 033 <i>Personal and Social Adjustment</i> (3) (Effective Fall 2018)</p> <p>SOC 001 <i>Introduction to Sociology</i> (3)</p> <p>SOC 002 <i>Social Problems</i> (3)</p> <p>SOC 004 <i>Sociological Analysis &amp; Critical Thinking</i> (3)</p> <p>^SOC 010 <i>Introduction to Marriage &amp; Family</i> (3)</p> <p>^SOC 014 <i>Introduction to Race &amp; Ethnicity</i> (3)</p> <p>SPAN 001, 002 <i>Elementary Spanish</i> (5) (5)</p> <p>SP 001 <i>Interpersonal Communication</i> (3)</p> <p>SP 002 <i>Oral Interpretation of Literature</i> (3)</p> <p>SP 015 <i>Intercultural Communication</i> (3)</p> <p>And all Languages other than English courses</p> <p>^ CD 074 and EGJS 074; HIST 020 and EGSJ 020; SOC 014 and EGSJ 014; PSY 10 and SOC 10 are comparable courses. Therefore, credit is awarded for only one course.</p>

## Computer Programming AA

Semester: Fall Year:

COURSE	UNITS
CIS 70A Comp. Bus. Applications	3.00
CS 73 Intro to Comp. Sci.	3.00
ENG 3A College Composition	3.00
CS 1 Micro Comp A+ Training	3.00
<b>TOTAL UNITS</b>	<b>12.00</b>

Semester: Spring Year:

COURSE	UNITS
CS 3	3.00
CS 86 Visual Basic I	3.00
MATH 40 Intermediate Algebra	4.00
PSY 1 General Psychology	3.00
MUS 5 History of Rock 'N' Roll	3.00
<b>TOTAL UNITS</b>	<b>16.00</b>

Semester: Fall Year:

COURSE	UNITS
CS 86A visual Basic II	3.00
CS 89 C++ Programming I	3.00
CS 87 Assembler Language	3.00
CS 4	3.00
ANTH 1 Intro to Phys. Anthro.	3.00
<b>TOTAL UNITS</b>	<b>15.00</b>

Semester: Spring Year:

COURSE	UNITS
CS 89A C++ Programming II	3.00
CS 5	3.00
BUMA 10 Intro to Business	3.00
SOC 1 Introduction to Sociology	3.00
CIS 72D Excel I	3.00
CIS 74 Excel II	3.00
<b>TOTAL UNITS</b>	<b>18.00</b>

# CERTIFICATE OF ACHIEVEMENT IN COMPUTER-AIDED DESIGN AND DRAFTING (CADD) TECHNICIAN

with emphasis on employment preparation

Copper Mountain College offers courses in the Computer-Aided Design and Drafting (CADD) field that will count toward a certificate. These courses are designed for students who plan to gain employment in the CADD Industry, or as a refresher for those individuals currently employed in any area of CADD. Students learn AutoCAD Drafting Software used in all areas of drafting. Computer-Aided Design and Drafting skills can be utilized by architects, engineers, landscapers, fabricators, 3-D printing and Geographic Information Systems (GIS).

### Program Learning Outcomes

Upon successful completion of this program, students will be able to:

1. Compose advanced CADD 2-D drawings and identify computer concepts and terms including the CADD Draw, Modify, Layers, Annotation and Properties menus and utilize their functions and draw an accurate representation of a complex two-dimensional object at an advanced level (Institutional SLOs: Communication Skills, Critical Thinking Skills, Personal Development and Information Competency).
2. Identify the CADD Rendering and Animations menus and utilize their functions at a beginning level (Institutional SLOs: Communication Skills, Critical Thinking Skills, Ethics, Personal Development and Information Competency).
3. Compose basic CADD 3-D and GIS drawings and identify computer concepts and terms (Institutional SLOs: Communication Skills, Critical Thinking Skills, Personal Development and Information Competency).
4. Identify the various CADD and 3-D drawing and animation menus and utilize their functions (Institutional SLOs: Communication Skills, Critical Thinking Skills, Ethics, Personal Development and Information Competency).
5. Draw an accurate representation of a complex three-dimensional object and print an accurate representation of it on a 3-D Printer (Institutional SLOs: Communication Skills, Critical Thinking Skills, Ethics, Personal Development and Information Competency).
6. Conduct an effective job search in the CADD field and complete a professional application packet (Institutional SLOs: Communication Skills, Critical Thinking Skills, Ethics, Personal Development and Information Competency).

Dept./ No.	Title	Units
Required Courses:		
CADD 001	Introduction to Computer-Aided Design and Drafting Fundamentals.....	3
CADD 002	Intermediate computer-Aided Design and Drafting .....	3
CADD 003	Advanced Computer-Aided Design and Drafting, Rendering & Animation .....	3
CADD 004	3-Dimensional computer-Aided Design and Drafting & 3-D Printing .....	3
MINIMUM CERTIFICATE UNITS .....		12
Advisor:	M. Barboza	

# COMPUTER PROGRAMMING

There is strong demand for Computer Science majors in the work force. It is estimated that there will be 20 openings for every Computer Science graduate in the US next year. The main reason for the rapid growth is a large increase in the demand for computer software. These entry level job opportunities have excellent salary and benefits with no job experience required.

CMC offers up-to-date training with transfer degrees and certificates that will prepare you for a four-year school or the job market.

## ASSOCIATE IN SCIENCE IN COMPUTER PROGRAMMING

with emphasis on employment preparation

### Program Student Learning Outcomes;

Upon successful completion of this program students will be able to:

1. Produce computer applications using structured programming techniques and object-oriented design. (Institutional SLOs: Critical Thinking and Information Competency)
2. Critically apply, analyze, and evaluate fundamental concepts of software applications and hardware development. (Institutional SLOs: Critical Thinking and Information Competency)
3. Articulate the historical evolution of computer systems, including the legal, moral, and ethical issues associated with computers. (Institutional SLOs: Critical Thinking and Ethics)
4. Design and create solutions to a real-world situation using the appropriate software. (Institutional SLOs: Information Competency)

Dept./ No.	Title	Units
Required Courses:		
CIS 070A	Computer Business Applications for Windows .....	3
CS 001	Microcomputer Support Specialist A+ Training .....	3
CS 073	Introduction to Computer Science .....	3
CS 086	Visual Basic Programming I .....	3
CS 086A	Visual Basic Programming II .....	3
CS 087	Assembler Language Programming .....	3
CS 089	C++ Programming I .....	3
CS 089A	C++ Programming II .....	3
Restricted Electives - choose eighteen (18) units from the following:		
ACCT 001, ACCT 002, ACCT 004, BUAC 010, BUAC 066, BUMA 001, BUMA 010, BUMA 020A, BUMA 027, CIS 030, CIS 062, CIS 063, CIS 072D, CIS 073C, CIS 074, CIS 076B, CIS 078B, CIS 082H, CIS 086, CS 003, CS 004, CS 005, CS 080 .....		18
Total Units for the Major.....		42
CMC General Education Requirement .....		18
MINIMUM DEGREE UNITS .....		60
Advisor:	J. Powell	

Students must complete the required courses for their major. General education units, transferable electives, and total degree units will vary for each student. Some considerations include the courses (and their respective units) chosen to complete a general education area or transferable elective, and if required courses for your major also count toward a general education area. Please see your academic counselor to help you reach your education goals.