

# Chemistry Emphasis

## Associate of Science

**Associate of Science: Chemistry Emphasis** This program combines general education requirements with a strong emphasis on math and science required for transfer into a chemistry program at a 4-year institution. Chemistry is the central science; it connects on one side with physics and mathematics, on another with earth and environmental sciences, and on yet another with biology and medicine. Chemists and biochemists are always in demand. Here are a few examples: chemist in a crime lab; environmental chemist; high school chemistry teacher, etc.

Chemistry is also an excellent major for students planning careers in health professions such as medicine, dentistry, optometry and veterinary medicine. Many students have found that having a chemistry background gives them a distinct advantage in medical or dental school. All schools of dentistry, medicine and optometry require chemistry for admission. Almost every medical school requires one year of general chemistry and one year of organic chemistry.

Transferability depends on the four-year institution. If you are planning to major in chemistry at a four-year college or university, you will find MAT 201 Calculus I is the (lowest level) mathematics course in which the credits earned will count toward a BA or BS degree. If you are a student just entering and are not prepared to take MAT 201, you will need to take the prerequisite course(s). All courses will count toward the AS degree. Additional courses may be transferable to one or more of the public four-year colleges or universities in Colorado. For specific information, please see your advisor.

See the section on Scholarships and Awards for scholarship opportunities related to this program. For a list of CMC campuses offering this program, please see the *Where Our Programs are Offered* table on page 39. Not every course is offered on every campus.

### State Guaranteed General Education Requirements

(35 credits minimum, plus 3 credits of Speech required)

**Communications** 3 courses (9 credit hours). Complete the following: (GT-C01-2)

GRADE/SEM	COURSE #	CREDIT
	🔒 ENG 121 English Composition I	3
	🔒 ENG 122 English Composition II	3
	* COM 115 Public Speaking	3
	OR	
	* COM 125 Interpersonal Communication	3

**Mathematics** 1 course (3-5 credits) Credits over 3 will be added to electives. (GT-MA1)

	🔒 MAT 121 College Algebra	4
	🔒 MAT 122 College Trigonometry	3
	🔒 MAT 201 Calculus I	5
	🔒 MAT 202 Calculus II	5
	🔒 MAT 203 Calculus III	4
	🔒 MAT 265 Differential Equations	3

**Arts & Humanities** 3 courses (9 credit hours). Select three courses, with no more than two courses from any one category.

#### Arts (GT-AH1)

	🔒 ART 110 Art Appreciation	3
	🔒 ART 111 Art History Ancient to Medieval	3

	🔒 ART 112 Art History Renaissance to Modern	3
	🔒 ART 207 Art History - 1900 to present	3
	🔒 DAN 125 History of Dance I	3
	🔒 MUS 120 Music Appreciation	3
	🔒 MUS 121 Music History I	3
	🔒 MUS 122 Music History II	3
	🔒 MUS 123 Survey of World Music	3
	🔒 MUS 125 History of Jazz	3
	🔒 THE 105 Theatre Appreciation	3
	🔒 THE 211 Development of Theatre I	3
	🔒 THE 212 Development of Theatre II	3

#### Literature & Humanities (GT-AH2)

	🔒 LIT 115 Introduction to Literature I	3
	🔒 LIT 201 Masterpieces of Literature I	3
	🔒 LIT 202 Masterpieces of Literature II	3
	🔒 LIT 205 Ethnic Literature	3
	🔒 LIT 211 Survey of American Literature I	3
	🔒 LIT 212 Survey of American Literature II	3
	🔒 LIT 221 Survey of British Literature I	3
	🔒 LIT 222 Survey of British Literature II	3
	🔒 LIT 225 Introduction to Shakespeare	3
	🔒 LIT 268 Celtic Literature	3
	🔒 HUM 115 World Mythology	3
	🔒 HUM 121 Early Civilizations	3
	🔒 HUM 122 From Medieval to Modern	3
	🔒 HUM 123 The Modern World	3

#### Ways of Thinking (GT-AH3)

	🔒 PHI 111 Introduction to Philosophy	3
	🔒 PHI 112 Ethics	3
	🔒 PHI 113 Logic	3
	🔒 PHI 114 Comparative Religions	3
	🔒 PHI 214 Philosophy of Religion	3
	🔒 PHI 218 Environmental Ethics	3

#### Foreign Languages (GT-AH4)

	🔒 FRE 211 French Language III	3
	🔒 FRE 212 French Language IV	3
	🔒 GER 211 German Language III	3
	🔒 GER 212 German Language IV	3
	🔒 ITA 211 Italian Language III	3
	🔒 ITA 212 Italian Language IV	3
	🔒 JPN 211 Japanese Language III	3
	🔒 JPN 212 Japanese Language IV	3
	🔒 RUS 211 Russian Language III	3
	🔒 RUS 212 Russian Language IV	3
	🔒 SPA 211 Spanish Language III	3
	🔒 SPA 212 Spanish Language IV	3

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**Social & Behavioral Sciences** 3 courses (9 credit hours). Select 3 courses, 1 of which must be history, with no more than 2 courses from any 1 category

### History (GT-HI1)

_____	🔒 HIS 101 Western Civilization: Antiquity - 1650	3
_____	🔒 HIS 102 Western Civilization: 1650 - Present	3
_____	🔒 HIS 111 The World: Antiquity - 1500	3
_____	🔒 HIS 112 The World: 1500 - Present	3
_____	🔒 HIS 201 U.S. History to Reconstruction	3
_____	🔒 HIS 202 U.S. History Since the Civil War	3
_____	🔒 HIS 208 American Indian History	3
_____	🔒 HIS 225 Colorado History	3
_____	🔒 HIS 236 U.S. History Since 1945	3
_____	🔒 HIS 244 History of Latin America	3
_____	🔒 HIS 247 20th Century World History	3
_____	🔒 HIS 255 The Middle Ages	3
_____	🔒 HIS 260 U.S. Foreign Relations	3

### Economic & Political Systems (GT-SS1)

_____	🔒 ECO 201 Principles of Macroeconomics	3
_____	🔒 ECO 202 Principles of Microeconomics	3
_____	🔒 ECO 245 Environmental Economics	3
_____	🔒 POS 105 Introduction to Political Science	3
_____	🔒 POS 111 American Government	3
_____	🔒 POS 125 American State and Local Government	3

### Geography (GT-SS2)

_____	🔒 GEO 105 World Regional Geography	3
_____	🔒 GEO 106 Human Geography	3

### Human Behavior & Social Systems (GT-SS3)

_____	🔒 ANT 101 Cultural Anthropology	3
_____	🔒 ANT 107 Introduction to Archaeology	3
_____	🔒 ANT 111 Physical Anthropology	3
_____	🔒 ANT 215 Indians of North America	3
_____	🔒 JOU 105 Introduction to Mass Media	3
_____	🔒 PSY 101 General Psychology I	3
_____	🔒 PSY 102 General Psychology II	3
_____	🔒 PSY 205 Psychology of Gender	3
_____	🔒 PSY 217 Human Sexuality	3
_____	🔒 PSY 226 Social Psychology	3
_____	🔒 PSY 235 Human Growth and Development	3
_____	🔒 PSY 238 Child Development	3
_____	🔒 PSY 249 Abnormal Psychology	3
_____	🔒 SOC 101 Introduction to Sociology I	3
_____	🔒 SOC 102 Introduction to Sociology II	3
_____	🔒 SOC 215 Contemporary Social Problems	3
_____	🔒 SOC 216 Sociology of Gender	3

**Chemistry Program Requirements** Complete the following. Credits over 8 will be applied to the electives category. (GT-SC1)

_____	🔒 CHE 111 General College Chemistry I	5
_____	🔒 CHE 112 General College Chemistry II	5

**Wellness Requirements Transfer Level (\*)** PED/OUT/DAN/HWE 100 or 111: 2 credits.

### Colorado Mountain College Requirements

Colorado Mountain College requires its graduates to be proficient in computer use. To graduate, a student must demonstrate proficiency via an examination administered by the college or take CIS118. If you take the course, it will be applied to the elective credit.

### Electives

You must complete an additional 20 credits in any of the Science or Mathematics disciplines (BIO, CHE, ENV, GEY, MAT, MET, NRE-251 & NRE-252, PHY) numbered 100-299, marked with an (🔒) or general transfer marked with an asterisk (\*) in the course description section. CIS 118 may be used if required.

Total Elective Credits (min. 20) \_\_\_\_\_

### Total Credits Earned

State Guaranteed General Education Requirements (min. 35)	_____
COM 115 or COM 125 (3 credits)	_____
Wellness Requirement (min. 2)	_____
Electives (min. 20)	_____
Total credits toward Associate of Science degree (min. 60)	_____