

# CHEMISTRY, ASSOCIATE IN ARTS DEGREE

Banner Code: 2\_AA\_CHEM  
Financial Aid Eligible

The Associate in Arts Degree in Chemistry prepares students for further study in chemistry or related physical and life science disciplines. It also provides a background in general chemistry that includes skills appropriate for entry-level employment in science-related industries or laboratories, such as environmental, pharmaceutical, or materials chemistry. Coursework includes instruction in molecular-level interpretations of the properties and reactions of inorganic and organic substances.

## Program Level Learning Outcomes

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

1. Develop a working knowledge of inorganic and organic chemistry, including calculations, reactions, and nomenclature.
2. Develop an understanding of how chemistry is applied in other fields.
3. Improve problem-solving and critical thinking skills.
4. Actively engage in hands-on experiences in both the classroom and the laboratory.
5. Interpret experimental information, develop relationships, and correlate that experimental information with theory.
6. Write quality laboratory reports, with well-developed discussions and conclusions.
7. Develop laboratory skills, operate independently during many procedures, and learn to design experiments.

Review Graduation Requirements (<https://catalog.cccd.edu/golden-west/graduation-requirements/associate-degree/>) and General Education (<https://catalog.cccd.edu/golden-west/general-education/>).

Course	Title	Units
<b>Required Courses</b>		
CHEM G180	General Chemistry A	5
CHEM G185	General Chemistry B	5
CHEM G220	Organic Chemistry A	5
CHEM G225	Organic Chemistry B	5
MATH G180	Calculus 1	4
<b>Major Total</b>		<b>24</b>
<b>GE Pattern (Local, CSU GE-Breadth, or IGETC)</b>		<b>18-39</b>
<b>Total Units</b>		<b>60</b>

## Recommended Program Sequence

These sequences are general course maps for students to finish all major and general education requirements for two-year completion of degrees, completion of short-term certificates, and/or fulfillment of transfer requirements. However, this may not be an appropriate path for all students. The two-year sequence is based on English and Math placement and meeting other course prerequisites. **Students are advised to meet with a GWC Counselor to review course selections**

and sequences to ensure that completion of this program will meet a student's transfer and career goals.

### Year 1:

Course	Title	Units
<b>Semester 1</b>		
CHEM G130	Preparation for General Chemistry (or placement - prerequisite for CHEM G180)	4
ENGL G100	Freshman Composition <sup>^</sup>	4
Area E: Lifelong Understanding and Self-Development or any additional course from Area A-D		3
Elective coursework for a total of 3 units		3
<b>Units</b>		<b>14</b>

Course	Title	Units
<b>Semester 2</b>		
CHEM G180	General Chemistry A	5
Area D: Social & Behavioral Sciences course		3
Elective coursework for a total of 6 units		6
<b>Units</b>		<b>14</b>

### Year 2:

Course	Title	Units
<b>Semester 3</b>		
CHEM G185	General Chemistry B	5
MATH G180	Calculus 1	4
Area C: Arts & Humanities course		3
<b>Units</b>		<b>12</b>

Course	Title	Units
<b>Semester 4</b>		
CHEM G220	Organic Chemistry A	5
Elective coursework for a total of 9 units		9
Ethnic Studies Competency		3
<b>Units</b>		<b>17</b>

Course	Title	Units
<b>Semester 5</b>		
CHEM G225	Organic Chemistry B	5
<b>Units</b>		<b>5</b>
<b>Total Degree Units</b>		<b>60</b>

<sup>^</sup> Program sequence may not be recommended for students who self-place into ENGL G100S. Students should see a Counselor for appropriate advisement.