

# CHEMISTRY

ASSOCIATE DEGREE &amp; CERTIFICATE PROGRAMS

2023-2024 CATALOG

## DESCRIPTION

The Cuesta College Chemistry Program provides interesting and challenging opportunities for students who seek to learn about the atoms and molecules that comprise the building blocks of our world. The study of chemistry leads to a greater understanding of materials, medicine, engineering, forensics, environmental science, geology, molecular biology, agriculture and other related fields. Popular topics include the chemistry of the environment, batteries, fuels, household substances, polymers, biochemistry, and how chemists make the molecules that we use on a daily basis. The Chemistry Program offers courses in Introductory Chemistry (Chem 200 and Chem 211) for beginning science and nursing and allied health majors; General Chemistry (Chem 201A and 201B) for science and engineering majors; and Organic Chemistry (Chem 212 A and 212B) and Biochemistry (Chem 231) for science majors and students who intend to earn professional health degrees at medical, pharmacy or veterinary schools. Students can earn an A.S. degree in Chemistry at Cuesta College, preparing them for transfer to four-year institutions or for employment in technical careers and a Premedical Studies Certificate of Achievement, which fulfills the lower division prerequisites required by most U. S. medical schools for the study of medicine.

## ASSOCIATE DEGREE AND CERTIFICATE PROGRAMS

**An Associate Degree**, depending on the focus of study, is designed to prepare students for transfer into upper division course work in a bachelor's degree program, or, to prepare students to enter the workforce in a particular vocational field. To qualify for an Associate's Degree, a student must: (1) complete each major-specific course required for the degree with at least a "C" grade or better, (2) complete all Cuesta College general education, graduation and residency requirements, and (3) achieve an overall grade point average of 2.0 for all courses attempted (major, general education, elective).

**A Certificate Program** is designed for students who desire specific training to meet an immediate occupational or personal goal, or for promotion or lateral transfer within their existing field of employment. To qualify for a Certificate of Achievement or a Certificate of Specialization, a student must 1) complete all courses required for the Certificate with an overall grade point average of 2.0.

## DEGREES, CERTIFICATES & AWARDS

- Associate in Science (A.S.)
- Certificate of Achievement (C.A.)

## CAREER OPPORTUNITIES

- Chemical Equipment Operators and Tenders
- Chemical Plant and System Operators
- Chemical Lab Technicians
- Chemistry Teachers, Postsecondary
- Chemists
- Clinical Research Coordinators
- Environmental Science and Protection Technicians, Including Health
- Environmental Health and Safety
- Molecular Biologists
- Natural Sciences Managers
- Precision Agriculture Technicians
- Quality Control Analysts
- Remote Sensing Technicians
- Secondary School Chemistry and Physical Science Teachers
- Water Resource Specialists

## CONTACT

Division Chair: Bret Clark  
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**ASSOCIATE DEGREE PROGRAM****Chemistry** — Associate in Science

This degree is intended for students planning to transfer to a four-year university and major in chemistry or other STEM fields, to pursue professional health programs, or to work in chemistry related careers.

**Required Courses (38-40 credits)**

Note: Phys 208A and 208B are required for STEM majors at many universities. Check with a counselor or your transfer institution to determine which physics series is required for your target campus and major.

CHEM 201A. . . General College Chemistry I. . . . .	5
CHEM 201B. . . General College Chemistry II . . . . .	5
CHEM 212A. . . Organic Chemistry I. . . . .	5
CHEM 212B. . . Organic Chemistry II . . . . .	5
MATH 265A. . . Calculus I. . . . .	5
MATH 265B. . . Calculus II . . . . .	5
PHYS 208A . . . Principles Of Physics 1 . . . . .	5
and PHYS 208B Principles Of Physics 2 . . . . .	5
or PHYS 205A . General Physics . . . . .	(4)
and PHYS 205B General Physics . . . . .	(4)
<b>Total Credits:</b> . . . . .	<b>38 - 40</b>

[Click Here For Program Student Learning Outcomes](#)

**TRANSFER PREPARATION**

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare to transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Cuesta College counselor to develop a student education plan (SEP) before beginning their program.

**TRANSFER RESOURCES:**

CSU and UC Articulation Agreements and Majors Search Engine:

[www.ASSIST.org](http://www.ASSIST.org)

CSU System Information:

[www2.calstate.edu](http://www2.calstate.edu)

**FINANCIAL AID**

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Cuesta College offers a full array of financial aid programs—grants, work study, scholarships, federal loan programs, and fee waivers. These programs are available to both full-and part-time students who are seeking a degree or certificate. For those who qualify, financial aid is available to help with tuition, fees, books and supplies, food, housing, transportation, and childcare. Please log onto our website for additional information:

[www.cuesta.edu/student/student-services/finaid](http://www.cuesta.edu/student/student-services/finaid)

**CERTIFICATE PROGRAM****Premedical Studies** — Certificate of Achievement

The Premedical Studies Certificate of Achievement provides the first two years of college science education while fulfilling lower division prerequisites required by most U.S. medical schools for the study of medicine. It is aligned with Medical School Admission requirements (MSAR) published by the Association of American Medical Colleges. Students should confirm the specific requirements of the undergraduate university where they plan to transfer and the medical college(s) where they plan to apply for admission.

**Lower Division Courses Required by Most U.S. Medical Schools****Required Courses**

BIO 201A	.....Biology	5
BIO 201B	.....Biology	5
CHEM 201A	.....General College Chemistry I	5
CHEM 201B	.....General College Chemistry II	5
CHEM 212A	.....Organic Chemistry I	5
CHEM 212B	.....Organic Chemistry II	5
CHEM 231	.....Biochemistry	4
ENGL 201A	.....English Composition	4
ENGL 201B	.....Composition: Intro To Literature/Critical Thinking	4
or ENGL 201C	...English Composition: Critical Thinking	4
PHYS 208A	.....Principles Of Physics 1	5
and PHYS 208B	..Principles Of Physics 2	5
or PHYS 205A	...General Physics	4
and PHYS 205B	..General Physics	4

**Select a Required Math Track (Track A or Track B)****Track A**

MATH 265A	.....Calculus I	5
MATH 265B	.....Calculus II	5

or

**Track B**

MATH 229	.....Trigonometry	4
or MATH 231	...Trigonometry With Geometric Foundations	5
MATH 242	.....Precalculus Algebra	5

**Total Credits:** ..... 59 - 62[Click Here For Program Student Learning Outcomes](#)

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