

CHEMISTRY ASSOCIATE IN SCIENCE



The chemistry curriculum is designed to provide students who choose to work toward a bachelor's degree a well-balanced, lower division program with a strong emphasis on fundamentals and problem solving. This major fulfills the lower division requirements (except for analytical chemistry) for chemistry majors and is typical of the requirements at four-year colleges and universities.

Program Learning Outcomes

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

- Comprehend and describe the nature of matter, including its classification, composition and structure.
- Demonstrate an understanding of the transformations of matter, both physical and chemical.
- Develop critical thinking skills by predicting interactions between different types of matter, both physical and chemical; analyzing matter in the laboratory both qualitatively and quantitatively and effectively communicating experimental results and conclusions; performing mathematical calculations related to the transformation and analysis of matter; and solving qualitative and quantitative problems in connection with the transformation and analysis of matter.

Career Opportunities

Chemists work in a variety of fields, primarily those of the chemical, biotechnological, environmental, biomedical, pharmaceutical, electronics, forensic, agricultural and food industries. They usually work in analysis, research, development or production of materials. Management, marketing and teaching opportunities are also available.

Agricultural Chemist¹
 Air Quality Control¹
 Analytical Chemist¹
 Biochemist¹
 Chemistry Teacher¹
 Dietician¹
 Environmental Technologist¹
 Fishery Specialist
 Food And Drug Inspector¹
 Forensic Specialist¹
 Laboratory Technician
 Materials Scientist¹
 Medical Technologist
 Microbiologist¹
 Organic Chemist¹
 Physician¹
 Polymer Chemist¹
 Sales Representative
 Sanitarian Technician

¹ Bachelor Degree or higher required.

Associate in Science Degree Requirements

Code	Title	Units
CHEM-141	General Chemistry I	5
CHEM-142	General Chemistry II	5
CHEM-231	Organic Chemistry I	5
MATH-180	Analytic Geometry and Calculus I	5
MATH-280	Analytic Geometry and Calculus II	4
MATH-281	Multivariable Calculus	4
PHYC-201	Mechanics and Waves	5
PHYC-202	Electricity, Magnetism, and Heat	5
PHYC-203	Light, Optics, and Modern Physics	5
Total Units		43

Plus General Education Requirements (<https://catalog.gcccd.edu/cuyamaca/degree-requirements-transfer-information/>)

Note:

1. Students pursuing an emphasis in biochemistry should also take the following courses: BIO-230 Principles of Cellular, Molecular and Evolutionary Biology, BIO-240 Principles of Ecology, Evolution and Organismal Biology.
2. Students who intend to enroll at UCSD should take MATH-285 Differential Equations and check with the Counseling Center regarding program options.