

CHEMISTRY

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 Chemist
- * Air Quality Control
- * Analytical Chemist
- * Biochemist
- * Chemistry Teacher
- * Dietician
- * Environmental Technologist
- * Fishery Specialist
- * Food And Drug Inspector
- * Forensic Specialist
- * Laboratory Technician
- * Materials Scientist
- * Medical Technologist
- * Microbiologist
- * Organic Chemist
- * Physician
- * Polymer Chemist
- * Sales Representative
- * Sanitarian Technician

* Bachelor Degree or higher required

Associate in Science Degree Requirements:

Course	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 190	Mechanics and Heat	5
PHYC 200	Electricity and Magnetism	5
PHYC 210	Wave Motion and Modern Physics	5
	Total Required	43
	Plus General Education Requirements	

Note:

1. Students pursuing an emphasis in biochemistry should also take the following courses: BIO 230, 240.

2. Students who intend to enroll at UCSD should take MATH 285 and check with the Counseling Center regarding program options.