

Chemistry

School of Mathematics, Science, and Engineering

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General Description

Chemistry is a physical science that focuses on the composition, structural properties, reaction of substances, and the means by which matter is converted from one form to another. This discipline explores the fundamentals of organic and inorganic matter, chemical structure and reactivity, qualitative and quantitative analyses, laboratory procedures that include strong emphasis on modern instrumental methods, research methodologies, and quantum mechanics.

Career Options

Below is a sample of the career options available to the chemistry major. A few require an associate in science degree, some require a bachelor's degree, and most require a graduate-level degree: high school or college teacher, analytical chemist, biochemist, polymer chemist, medical doctor, dentist, laboratory technician, and technical sales representative. Entry-level career opportunities are available in biotechnology, biomedical instrumentation, diagnostics, immunochemistry, pharmaceuticals, basic research, and environmental control agencies.

Degree/Certificate Options

Associate in Science Degree: Transfer Preparation

	Major Code
Chemistry	01530

Consult with a counselor to develop a Student Education Plan (SEP), which lists the courses necessary to achieve your academic goal.

Note: See also Pharmaceutical and Laboratory Science, page 239.

Web sites for chemistry majors:

SDSU:	http://www.chemistry.sdsu.edu
UCSD:	http://www.chemistry.ucsd.edu
CSU, San Marcos:	http://www.csusm.edu/chemistry
Articulation:	http://www.assist.org

ASSOCIATE IN SCIENCE DEGREE



Chemistry

Transfer Preparation * (Major Code: 01530)

Chemistry is the study of the composition of matter, its structure, and the means by which it is converted from one form to another. Related to chemistry is molecular biology. Students interested in matter as it applies to life should also take courses in the life sciences. Most courses require mathematics prerequisites. Placement is determined by the Mathematics Assessment Process, which should be taken before registration. It is essential that students start with mathematics during the first semester.

Chemistry majors are advised to give priority to lower-division requirements for the major as they are prerequisites for most upper division courses. Only as many general education courses should be taken as can be included in the 70-unit transfer limitation, and these must be chosen with care to insure that they fit into the general education pattern at the transfer institution.

First Semester **

CHEM 200	General Chemistry I	5
MATH 250	Analytic Geometry and Calculus I	5

Second Semester

CHEM 210	General Chemistry II	5
MATH 251	Analytic Geometry and Calculus II	4
PHYS 270	Principles of Physics I	3
PHYS 271	Principles of Physics Laboratory I	1

Third Semester

CHEM 240	Organic Chemistry I	5
MATH 252	Analytic Geometry and Calculus III	4
PHYS 272	Principles of Physics II	3
PHYS 273	Principles of Physics Laboratory II	1

Fourth Semester

CHEM 250	Analytical Chemistry	5
OR		
CHEM 242	Organic Chemistry II	

Total units	41
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Students who plan to major in Biochemistry at a four-year college or university should also enroll in BIOL 210 and 212.

** If you do not have the prerequisites for CHEM 200 and MATH 250, take CHEM 170 and MATH 101 in your first semester. This will add one semester to your program of studies.

To earn an associate degree, additional general education and graduation requirements must be completed. See page 51.

* Students planning to transfer to a four-year college or university should complete courses specific to the transfer institution of choice. University requirements vary from institution to institution and are subject to change. Therefore, it is important to verify transfer major preparation and general education requirements through consultation with a counselor in either the Counseling Center or Transfer Center. See catalog TRANSFER COURSES INFORMATION section on page 33 for further information.