

Chemistry

Degree Type

Major

Chemistry Program Goals

Since a superior liberal arts education requires excellence in science education as well as in the humanities and social sciences and since a graduate in chemistry must be able to compete in the marketplace or in post-baccalaureate programs with students from a variety of educational backgrounds, the chemistry program strives to provide the following:

- The latest theoretical and applied body of knowledge that stresses scientific reasoning and analytical problem solving in the broad areas of the field including analytical, biochemical, inorganic, organic, and physical chemistry.
- The students with the computational and laboratory skills necessary to perform a variety of analyses and operations which are expected of a chemistry graduate .
- The students with the professional skills required to succeed in graduate programs, industry, or other fields.

The program of study works to be consistent with standards established by the American Chemical Society .

Requirements for the Major

All students majoring in Chemistry are required to complete the following core courses:

Item #	Title	Credits
CHEM 101	General Chemistry I	4
CHEM 102	General Chemistry II	4
CHEM 211	Organic Chemistry I	4
CHEM 212	Organic Chemistry II	4
CHEM 304	Descriptive Inorganic Chemistry	4
CHEM 320	Physical Chemistry I with Biological Applications	4
CHEM 324	Analytical Chemistry	4
CHEM 330	Instrumental Analysis	4
CHEM 351	Molecular Biology and Biochemistry I	4
CHEM 385	Writing for Chemistry I	1
CHEM 386	Writing for Chemistry II	1
CHEM 477	Senior Seminar in Chemistry	1
CHEM 490	Senior Project	2-4
CHEM 495	Comprehensive Exams	
PHYS 201	General Physics I	4
PHYS 202	General Physics II	4
MATH 201	Calculus I	4
MATH 202	Calculus II	4

In addition, each student must complete one of the following tracks:

Biochemistry Track:

Item #	Title	Credits
CHEM 352	Molecular Biology and Biochemistry II	4
BIOL 290	Genetics	4
	BIOL 341 or 343	4

Two additional courses from the following are recommended:

Item #	Title	Credits
BIOL 103	Introductory Biology I: Molecular Genetics, Cell, and Development	4
BIOL 104	Introductory Biology II: Evolution, Diversity, and Ecology	4
BIOL 251	Endocrinology	3
BIOL 308	Comparative Vertebrate Anatomy	4
BIOL 338	Plant Anatomy and Physiology	3
BIOL 442	Developmental Biology	4
CHEM 255	Introduction to Pharmacology	3
MATH 281	Statistical Methods I	3

Professional Chemistry Track:

Select one elective from each of the following two groups:

Group 1:

Item #	Title	Credits
CHEM 108	Introduction to Forensic Science	4
CHEM 255	Introduction to Pharmacology	3
CHEM 285	Data Analysis for Physical Science	3
	CHEM 300 level course or higher	3

Group 2:

Item #	Title	Credits
CPSC 151	Computer Science I	4
MATH 203	Calculus III	4
MATH 341	Differential Equations	3
MATH 354	Linear Algebra	3
PHYS 222	Electronics	4
PHYS 241	Mathematical Methods in the Physical Sciences	3
PHYS 300	Modern Physics	3

Students that are interested in entering a career in chemical engineering are recommended to take CPSC 151 and the three courses in mathematics. Students interested in pursuing a career in forensics are recommended to take CHEM 108 and 255 and complete the minor in criminal justice.

Entering freshmen interested in chemistry should enroll in CHEM 101 and a mathematics course at the appropriate level. Students with Level II placement must take a Level II course immediately to prepare themselves for the mathematics concepts in CHEM 102. Programs for subsequent semesters must be decided in consultation with the faculty advisors for Chemistry. Students with Advanced Placement (AP) in chemistry should consult immediately with a chemistry faculty member in the department for placement in a course at the appropriate level. Additional courses in mathematics are strongly encouraged.

All courses in chemistry and all required courses in mathematics, biology, psychology, and physics must be taken for a letter grade.

65-71