

CHEMISTRY (BA)

For chemistry majors, a GPA of at least 2.00 must be maintained in all courses with a "CHEM" course number taken to date. A grade of at least "C–" must be achieved in all required courses for the major with a 2.0 required in the major to graduate. A grade of "C" or better is required for all prerequisites. Courses required for the major may be repeated, but students must satisfactorily pass all required courses in their first or second attempt.

Program Mission

The mission of the Chemistry Program is to train ethically grounded critically thinking students to apply broad chemical knowledge to solve real-world problems and to prepare them for employment in chemistry-related fields, graduate studies in chemistry, or professional studies through a community of faith and scholarship.

Program Outcomes

1. Graduates will be able to explain fundamental concepts and solve problems in quantitative, biological, inorganic, organic and physical chemistry.
2. Graduates will be proficient in fundamental laboratory skills, including safety and use of instrumentation and computers and in the application of the scientific method.
3. Graduates will be able to communicate scientific results via oral and written reports, with effective use of scientific literature.
4. Graduates will be aware of major ethical issues at the forefront of their discipline and apply ethical principles of the discipline in regard to treatment of experimental data, use of sources, and in collaboration with colleagues in light of cultural differences present in a diverse and multicultural society.
5. Graduates in Chemistry-Secondary education will be competent in the content of chemistry and be able to teach it.

Program Requirements

Code	Title	Hours
CHEM-1200 & CHEM-1201	General Chemistry I Lecture and General Chemistry I Laboratory	4
CHEM-1210 & CHEM-1211	General Chemistry II Lecture and General Chemistry II Lab	4
CHEM-2200 & CHEM-2201	Organic Chemistry I Lecture and Organic Chemistry I Lab	4
CHEM-2210 & CHEM-2211	Organic Chemistry II Lecture and Organic Chem II Lab	4
CHEM-3300 & CHEM-3301	Quantitative Analysis and Quantitative Analysis Laboratory	4
CHEM-3311	Instrumental Analysis Laboratory	1
CHEM-3400 & CHEM-3401	Inorganic Chemistry and Inorganic Chemistry Laboratory	4
CHEM-3500 & CHEM-3501	Biochemistry I and Biochemistry I Laboratory	4
CHEM-3800 & CHEM-3801	Physical Chemistry I and Physical Chemistry I Laboratory	4
CHEM-4900 & CHEM-4901 & CHEM-4902 & CHEM-4903	Chemistry & Biochem Colloquium and Chem & Biochem Colloquium 2 and Chem & Biochem Colloquium 3 and Chem & Biochem Colloquium 4	4

CHEM-COMP	Senior Comprehensive Exam	0
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Advanced Courses

Select two of the following:		6
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CHEM-3150	Computational Chemistry	
CHEM-3250	Environmental Chemistry	
CHEM-3510	Biochemistry II	
CHEM-3650	Polymer Chemistry	
CHEM-3980/49	Special Topics	
CHEM-4350	Advanced Organic Chemistry I	
CHEM-4450	Topics in Biochemistry	
CHEM-4650	Organometallic Chemistry	
CHEM-4200	Physical Chemistry II	

Required Supporting Courses

MATH-1300	Calculus I	4
MATH-1350	Calculus II	4
PHYS-2100 & PHYS-2101	Classical Physics I and Classical Physics I Lab	4
PHYS-2110 & PHYS-2111	Classical Physics II and Classical Physics II Lab	4

Recommended Supporting Courses

MATH-2300	Calculus III	4
MATH-3100	Differential Equations	3
PHYS-3200 & PHYS-3201	Relativity & Atomic Physics and Modern Physics Lab	4

Total Hours		70
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