CHEMISTRY FOR PROSPECTIVE HIGH SCHOOL TEACHERS (BA)

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
Required Courses		
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-4457	Methods of Teaching Secondary Science	2
CHEM-4900 & CHEM-4901 & CHEM-4902	Chemistry & Biochem Colloquium and Chem & Biochem Colloquium 2 and Chem & Biochem Colloquium 3	3
CHEM-COMP	Senior Comprehensive Exam	0
Required Supporting Courses		
MATH-1300	Calculus I	4
MATH-1350	Calculus II	4
PHYS-2100	Classical Physics I	3
PHYS-2110	Classical Physics II	3
Total Hours		**52**