BIOCHEMISTRY MAJOR

Biochemistry is an interdisciplinary field that uses the principles of chemistry to explore the molecular basis of life. The Biochemistry major provides a strong foundation in chemistry and allows students to investigate the structure and function of biomolecules and the complex reactions, mechanisms, and pathways that sustain life. With a hands-on, investigative approach, we incorporate extensive laboratory work that builds proficiency in experimental design, uses modern biochemical and molecular techniques, and trains students to quantitatively evaluate and effectively communicate scientific findings. A Biochemistry degree opens opportunities to diverse careers and postgraduate studies, including pharmaceutical and biotechnological industries, forensics, research, food science, or the pursuit of an advanced degree in chemistry, biochemistry, pharmacology, or professional health fields.

Requirements

Biochemistry major requirements comprise 53-57 hours, including:

Code	Title	Credits
Required Core		
CHEM 231	General Chemistry I	4
CHEM 232	General Chemistry II	4
CHEM 341	Organic Chemistry I	4
CHEM 342	Organic Chemistry II	4
CHEM 355	Introduction to Analytical Chemistry	2
CHEM 375	Biophysical Chemistry	3
CHEM 461	General Biochemistry	4
CHEM 462	Advanced Biochemistry	2
CHEM 463	Biochemistry Analysis	4
CHEM 294	Chemistry Colloquium (two credits are required, preferably taken each semester sophomore year)	2
CHEM 494	Chemistry In Context	2
BIOL 241	Organization of Life: Genetics and Cell Biology	4
Supporting courses		
MATH 235	Calculus I	4
PHYS 221	General Physics I	4
or PHYS 231	Introductory Physics I	
Elective Courses		
Choose (2) CHEM courses from the list below		*4-8*
CHEM 336	Inorganic Chemistry	
CHEM 372	Physical Chemistry II	
CHEM 436	Physical Inorganic Chemistry	
CHEM 441	Medicinal Chemistry	
CHEM 455	Advanced Analytical Chemistry I	
CHEM 437	Organometallic Chemistry	
CHEM 485	Synthesis And Analysis	
2 credits in in BIOL (300 level or above except for BIOL 494)		2
Total Credits		**53-57**