

**BioChemistry Major (52 credit hours)**

**2018-2019**

**Major Requirements:**

- BIOL 2210, Foundations of Modern Biology I, 4 credit hours
- BIOL 2220, Foundations of Modern Biology II, 4 credit hours
- BIOL 2240, Cell Biology, 4 credit hours
- BIOL 4050, Genetics, 4 credit hours
- BIOL 4310, Molecular Biochemistry and Genetics, 4 credit hours
- CHEM 2110, General Chemistry I, 4 credit hours
- CHEM 2120, General Chemistry II, 4 credit hours
- CHEM 2210, Organic Chemistry I, 4 credit hours
- CHEM 2220, Organic Chemistry II, 4 credit hours
- CHEM 3100, Analytical Chemistry, 4 credit hours
- CHEM 4510, Senior Physical Science Practicum I, 1 credit hour
- CHEM 4520, Senior Physical Science Practicum II, 1 credit hour
- BIOL/CHEM 4210, Biochemistry, 4 credit hours
- BIOL/CHEM/PHYS 4910, Science Seminar I, 1 credit hour
- BIOL/CHEM/PHYS 4920, Science Seminar II, 1 credit hour

Elective hours from:

- CHEM 3140, 4090, 4110
- BIOL 3030, 4120

*It is suggested that students pursuing pre-medicine should elect BIOL 3030, 4120. They should also take PHYS 2140, 2150 or MATH 2010, 2020, PHYS 2240, 2250.*

*It is suggested that students pursuing graduate school should elect CHEM 3140, 4090, 4110; BIOL 3030. They should also take MATH 2010, 2020 and PHYS 2240, 2250.*

*It is suggested that students pursuing an industry career should elect CHEM 3140.*

Proposed course sequence:

- Freshman: BIOL 2210, CHEM 2110; BIOL 2220, CHEM 2120
- Sophomore: CHEM 2210; BIOL 2240, CHEM 2220, 3100
- Junior: BIOL 4050; BIOL/CHEM 4210, CHEM 4120, 3140
- Senior: BIOL/CHEM/PHYS 4910, CHEM 4510; BIOL 4310, BIOL/CHEM/PHYS 4920, CHEM 4110, 4520

- BIOL 2210, Foundations of Modern Biology I, is a Scientific Ways of Knowing course in the Liberal Arts Program.
- BIOL/CHEM/PHYS 4910/4920, Science Seminar I/II, is both a Speaking & Writing Intensive course in the Liberal Arts Program.
- CHEM 2110, General Chemistry I, is a Scientific Ways of Knowing course in the Liberal Arts Program.
- BIOL 4050, Genetics, is a Writing Intensive course in the Liberal Arts Program.

Questions? Please contact either the [Department of Biology](#) or the [Department of Physical Sciences & Engineering](#).

BioChemistry Major Suggested Course Sequence

2018-2019

SEMESTER 1		SEMESTER 2	
BIOL 2210	4 Hours	BIOL 2220	4 Hours
CHEM 2110	4 Hours	CHEM 2120	4 Hours
ENGL 1100/ENGL 1110	4-3 Hours	ENGL 1120	3 Hours
LART 1050	1 Hour	LART 1100	2 Hours
Foreign Language	4 Hours	Personal Wellness	2-Hours

SEMESTER 3		SEMESTER 4	
CHEM 2210	4 Hours	BIOL 2240	4 Hours
Social & Behavioral Ways of Knowing	3 Hours	CHEM 2220	4 Hours
COMM 1000	3 Hours	CHEM 3100	4 Hours
Global/Intercultural	3 Hours		

SEMESTER 5		SEMESTER 6	
BIOL 4050	4 Hours	CHEM 3140	4 Hours
BIBL 2000	3 Hours	CHEM 4120	4 Hours
Aesthetic Ways of Knowing	3 Hours	BIOL/CHEM 4210	4 Hours
Elective: CHEM 3140 or BIOL 3030	4 Hours	Civic Ways of Knowing	3 Hours

SEMESTER 7		SEMESTER 8	
CHEM 4510	1 Hour	CHEM 4520	1 Hour
BIOL/CHEM/PHYS 4910	1 Hour	BIOL/CHEM/PHYS 4920	1 Hour
Christian Ways of Knowing	3 Hours	BIOL 4310	4 Hours
Elective: CHEM 4090 or BIOL 4120	4 Hours	Elective: CHEM 4110	4 Hours
Elective	3 Hours	Elective	3 Hours

The Biochemistry major is an interdisciplinary major that applies the principles and methods of both biology and chemistry to understanding the molecular basis of life. The major requires a number of basic classes from each discipline with advanced courses in chemical instrumentation, cell and molecular biology, genetics, and biochemistry, and allows the student to select additional courses necessary to pursue certain career objectives.