

B.S. in BIOCHEMISTRY (Comprehensive Major)
2025-26 REPRESENTATIVE FOUR YEAR CURRICULUM GUIDE
DEPARTMENT OF CHEMISTRY/GEOLOGY/PHYSICS

3/4/25

Year 1	Fall Semester		Year 1	Spring Semester	
Course #	Title	Cr.	Course #	Title	Cr.
CHEM 103	Gen. Chem. I (fa only, Core 1)	4	CHEM 104	Gen. Chem. II (sp only)	4
MATH 205	Calculus I (fa only, Core 2)	5	MATH 206	Calculus II (sp only)	5
BIO 201	Molec. & Cellular Basis of Life (Core 3)	4	BIO 202	Organisms, Adap. & Divers.	4
ENG 101	Composition I (Core 4)	3	ENG 102	Composition II (Core 5)	3
	TOTAL	16		TOTAL	16

Year 2	Fall Semester		Year 2	Spring Semester	
Course #	Title	Cr.	Course #	Title	Cr.
CHEM 307	Organic Chem I (fa only)	3	CHEM 308	Organic Chem II (sp only)	3
CHEM 307L	Organic Chem I Lab (fa only)	1	CHEM 308L	Organic Chem II Lab (sp only)	1
PHYS 205	University Physics (fa only)	4	PHYS 206	University Physics (sp only)	4
CORE/CCI*	Inst. Requirement (Core 6)	3	BIO 303	Genetics	4
CORE	Inst. Requirement (Core 7)	3	ELECTIVE	General Elective	3
	TOTAL	14		TOTAL	15

Year 3	Fall Semester		Year 3	Spring Semester	
Course #	Title	Cr.	Course #	Title	Cr.
CHEM 429/429L	Biochemistry w. lab (fa only)	4	CHEM 439	Adv. Topics Biochem. (sp odd) or BIO 428 Elective (sp odd), BIO 340 (sp only)	3
CHEM 320	Quant. Analysis (fa only) or CHEM 411/L (fa odd)*	4	CHEM 412/412L	Thermodynamics w. lab (sp even)* or Chem 416/416L (sp odd)	4
CORE	Inst. Requirement (Core 8)	3	CORE	Inst. Requirement (Core 10)	3
CORE	Inst. Requirement (Core 9)	3	CORE	Inst. Requirement (Core 11)	3
			ELECTIVE	General Elective	3-4
	TOTAL	14		TOTAL	16-17

Year 4	Fall Semester		Year 4	Spring Semester	
Course #	Title	Cr.	Course #	Title	Cr.
CHEM 411/411L	Quantum Mechanics w. lab (fa odd)* or CHEM 320 (fa only)	4	ELECTIVE	BIO 428 Elective (sp odd), BIO340 Elective (sp only) or CHEM 439 (sp odd)	3
ELECTIVE	BIO 325 Elective (fa only), BIO424 Elective (fa only)	4	CHEM 416/416L	Chem 416/416L (sp odd) or CHEM 412/412L (sp even)*	4
CORE	Inst. Requirement (Core 12)	3	CORE	Inst. Requirement (Core 14)	3
CORE	Inst. Requirement (Core 13)	3	CORE	Inst. Requirement (Core 15)	3
			ELECTIVE	General Elective	3-4
	TOTAL	14		TOTAL	16-17

120 total credit hours required for degree

*Students only need to choose one course from Chem411/411L and 412/412L.

**The Critical Cultural Inquiry (CCI) requirement can be completed by either one value-added foreign language course, an approved study-away or study abroad experience, or one CCI course. One slot should be allotted for CORE/CCI, but students completing the requirement with study abroad, can substitute an elective if necessary to reach 120 hours. If students are continuing a language study, it is preferable to take the course during the first semester of the first year.

Students planning to attend graduate school should plan on conducting an independent research project (CHEM 497) or participate in a summer research program or internship. Develop a plan for this with your academic adviser.