BIOCHEMISTRY B.A.: Sample Plan of Study
(2023-24 General Bulletin or later)

Freshman Year: Fall

BIOC 101	Frontiers in Biochemistry	1
BIOL 214	Genes, Evolution and Ecology	3
BIOL 214L	Genes, Evolution and Ecology Laboratory	1
CHEM 105	Principles of Chemistry I	3
or CHEM 111	or Principles of Chemistry for Engineers	
MATH 125	Math and Calculus Applications for Life…Sci I	4
or MATH 121	or Calculus for Science and Engineering I	
GER	Academic Inquiry Seminar or Breadth course	3
	Semester total:	**15 credit hours**

Freshman Year: Spring

BIOL 215	Cells and Proteins	3
BIOL 215L	Cells and Proteins Laboratory	1
CHEM 106	Principles of Chemistry II	3
or ENGR 145	or Chemistry of Materials	
CHEM 113	Principles of Chemistry Laboratory	2
MATH 126	Math and Calculus Applications for Life…Sci II	4
or MATH 122 or MATH 124	or Calculus for Science and Engineering II or Calculus II	
GER	Academic Inquiry Seminar or Breadth course	3
	Semester total:	**16 credit hours**

Sophomore Year: Fall

CHEM 223	Introductory Organic Chemistry I	3
or CHEM 323	or Organic Chemistry I	
CHEM 233	Introductory Organic Chemistry Laboratory I	2
PHYS 115	Introductory Physics I	4
or PHYS 121 or PHYS 123	or General Physics I or Physics and Frontiers I	
ENGR 131	Elementary Computer Programming	3
or CSDS 132	or Programming in Java	
GER	Breadth or elective course	3
(BIOC 285)	(Honors Readings in Biochemistry; research honors students only)	(1)
	Semester total:	**15 credit hours**

Sophomore Year: Spring

CHEM 224	Introductory Organic Chemistry II	3
or CHEM 324	or Organic Chemistry II	
CHEM 234	Introductory Organic Chemistry Laboratory II	2
PHYS 116	Introductory Physics II	4
or PHYS 122 or PHYS 124	or General Physics II or Physics and Frontiers II	
STAT 201 or STAT 312	Basic Statistics (for Social/Life Sciences or for	3
or STAT 312R or STAT 313	Engineering/Science (using R) or Statistics for Experimenters	
GER	Breadth or elective course	3
	Semester total:	**15 credit hours**

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Junior Year: Fall

BIOC 307	Introduction to Biochemistry: From Molecules to Medical Science	4
BIOC core or technical elective	BIOC 334 (core course) or approved technical elective course	3
Elective	Elective course	3
GER	Breadth or elective course	3
	Semester total:	**13 credit hours**

Junior Year: Spring

BIOC 308	Molecular Biology	4
BIOC 391	Capstone Research	3
BIOC core or technical elective	BIOC 312 (core course) or approved technical elective course	3
Elective	Elective course	3
GER	Breadth or elective course	3
	Semester total:	**16 credit hours**

Senior Year: Fall

BIOC 373	Biochemistry Senior Seminar	3
BIOC core or technical elective	BIOC 334 or BIOC 350 (core courses) or approved technical elective course	3
Electives	Two elective courses (one course should be BIOC 391 for research honors students)	6
GER	Breadth or elective course	3
	Semester total:	**15 credit hours**

Senior Year: Spring

BIOC 393 (BIOC 393R)	Senior Capstone Communication (BIOC 393R instead of BIOC 393 for research honors students)	3
BIOC core or technical elective	BIOC 312 (core course) or approved technical elective course	3
Electives	Two elective courses	6
GER	Breadth or elective course	3
	Semester total:	**15 credit hours**

Biochemistry B.A. total: 120 credit hours

BIOC core courses: Students must complete two of BIOC 312, BIOC 334, or BIOC 350. If students complete all three courses, the third can serve as a technical elective.

BIOC technical electives: B.A. students must complete two technical electives. Approved courses are listed on the Biochemistry major web page.

Research requirement: Students are expected to engage in research multiple semesters and are required to enroll in BIOC 391 at least one semester. (Research honors track students are required to enroll in BIOC 391 at least two semesters.)

BIOL lab requirement: Students must complete any two of BIOL 214L, BIOL 215L, BIOL 222L, or BIOL 216L to fulfill this requirement.