

	Fall Semester	Credits	Spring Semester	Credits
1 s t Y e a r	FCH150 General Chemistry I	3	FCH152 General Chemistry II	3
	FCH151 General Chemistry I Lab	1	FCH153 General Chemistry II Lab	1
	APM205 Calculus I	4	APM206 Calculus II	4
	FCH132 Orientation seminar	1	Gen Ed or Elective	3
	EFB101 General Biology I	3	EFB103 General Biology II	3
	EFB102 General Biology I Lab	1	EFB104 General Biology II Lab	1
	EWP190 College Writing	3		
	Semester Total	16	Semester Total	15
2 n d Y e a r	FCH221 Organic Chemistry I	3	FCH223 Organic Chemistry II	3
	FCH222 Organic Chemistry I Lab	1	FCH224 Organic Chemistry II Lab	1
	ESF200 Information Literacy	1	EWP290 Research Writing Hum.	3
	PHY211 Physics I	3	PHY212 Physics II	3
	PHY221 Physics I Lab	1	PHY222 Physics II Lab	1
	General Education	3	Elective or Gen Ed	3
	FCH232 Career Skills for Chemists	1		
	Math Elective (APM307/APM391)	3		
	Semester Total	16	Semester Total	14
3 r d Y e a r	FCH380 Analytical Chemistry I	3	FCH361 Physical Chemistry II	3
	FCH360 Physical Chemistry I	3	FCH495 Professional Chemistry	1
	FCH430 Biochemistry I	3	FCH432 Biochemistry II	3
	EFB307 Principles of Genetics	3	Professional Elective [†] (EFB 325 preferred)*	3
	EWP407 Writing for Sci. Prof.	3	Biochemistry Elective [#]	3
			Elective	3
	Semester Total	15	Semester Total	16
4 t h Y e a r	FCH431 Biochemistry Lab	3	FCH497 Senior Seminar	1
	Professional Elective	3	Professional Elective	3
	Professional Elective	3	Professional Elective	3
	Biochemistry Elective	3	Biochemistry Elective	3
	Elective	3	Elective	3
	Semester Total	15	Semester Total	13
	Total Credit Hours	120	total credits upper division	59

See notes below for specific courses that fulfill biochemistry and professional electives.

At least one Professional Elective must have a laboratory component. Suggested laboratory courses are marked with # in the tables below. This course can also count as a Biochemistry-focused Elective if chosen from one of the laboratory courses listed below.

* At least one Professional Elective must be a biology (EFB or BIO) course and at least one Professional Elective must be a chemistry (FCH or CHE) course. These courses can also count as biochemistry-focused professional electives if chosen from the list below.

† Of the 24 credits of Professional Electives, at least 12 credits must be chosen from the following short list of biochemistry-focused professional electives.

Coursework suitable for meeting the Biochemistry-focused Professional Electives			
BIO355 General Physiology	3	FCH 420 (biochemistry-focused)	1-5
BIO409 General Microbiology #	4	FCH 496 Research (biochemistry-focused)	1-3
BIO422 Bioinformatics for Life Scientists	3	FCH498 Research (biochemistry-focused)	1- 5
BIO464 Applied Biotechnology #	4	FCH 535 Plant Biochemistry	3
BTC401 Mol Biol Techniques #	4	FCH 524 Topics in Natural Products Chem.	3
BTC425 Plant Biotechnology	3	CHE414 Intro Medicinal Chem	3
BTC426 Intro Plant tissue Culture	3	CHE427: Org Chem of Biol Molecules	3
EFB303 Introductory Environmental Microbiology	4	CHE412 Metals in Medicine	3
EFB308 Genetics Lab	1	CHE474 Struct Phys Biochem	3
EFB325 Cell Biology (recommended)	3	CHE/BCM 477: Prep & Analysis of Proteins / Nucleic Acids lab	3
EFB462 Animal Physiology	3	PSE223 Intro to Lignocellulosics	3
EFB400 Toxic Health Hazards	3		
EFB530 Plant Physiology	3		
FCH325 Organic III #	4		
FCH584 Spectrometric Ident of Organic Compounds	3		
FCH390 Drugs from the Wild	3		

Suggested other Professional Electives (PEs) not considered as a biochemistry-focused elective. This list is not exhaustive; any science, math, or engineering course that is at least 300-level counts as a PE.			
EFB311 Principles of Evolution	3	FCH 381 Analytical II #	3
EFB320 General Ecology #	4		
EFB342 Fungal Diversity and Ecology	3	FCH410 Inorganic Chemistry	3
EFB415 Ecological Biogeochemistry	3	FCH496 Special Problems in Chemistry	1 to 3
EFB435 Flowering Plants: Diversity, Evolution, & Systematics #	3	FCH498 Research	1 to 5
EFB462 Animal Physiology	3	FCH510 Environmental Chem	3
EFB505 Microbial Ecology	3	FCH511 Atmospheric Chemistry	3
EFB570 Insect Physiology #	3	FCH515 Methods of Env. Chemical Analysis #	3

BPE300 Industrial Bioprocessing	3	FCH520 Marine Biogeochemistry	3
BPE420 Bioseparations	3	FCH 525 Oceanography	3
BPE421 Bioprocess Kinetics and Systems Engineering	3	FCH550 Polymer Science: Synthesis and Mechanisms	3
BPE430 Process Operations Laboratory #	3	FCH551 Polymer Science	3
BPE440 Bioprocess & Systems Lab #	3	FCH552 Polymer Science: Properties and Technologies #	3
BPE481 Bioprocess Eng. Design	3	FCH560 Chromatography	3