

BSBCHE Biochemical Engineering
Fall 2019

This document is an example of a BSBCHE program of study. Several factors can affect the course scheduling sequence. For a copy of the official curriculum, please go to the UGA Bulletin: <http://bulletin.uga.edu/>

Major Requirements

Students must earn a grade of "C" (2.0) or better in the courses indicated in **bold**.

High Demand Entrance Requirements

To be considered as a candidate for BSBCHE, students must complete the courses indicated in *italics*. For more information on entrance requirements, please refer to the UGA Bulletin: <http://bulletin.uga.edu/> and our website.

YEAR ONE

Fall Semester		Hours	Spring Semester		Hours
MATH 2250	<i>Calculus I</i>	4	MATH 2260	<i>Calculus II</i>	4
CHEM 1211&L	<i>Freshman Chemistry I</i>	4	CHEM 1212&L	<i>Freshman Chemistry II</i>	4
BIOL 1107&L	<i>Principles of Biology I</i>	4	PHYS 1251	<i>Physics for Engineers I</i>	3
ENGR 1920	Intro to Engineering	1	ENGR 1120	Engineering Graphics	2
ENGL 1101	English Composition I	3	ENGL 1102	English Composition II	3
FYOS	First-Year Odyssey	1			
Total Credit Hours		17	Total Credit Hours		16

YEAR TWO

Fall Semester		Hours	Spring Semester		Hours
MATH 2500	Multivariable Calculus	3	MATH 2700	Differential Equations	3
ENGR 2120	Statics	3	CHEM 2211&L	Organic Chemistry I	4
PHYS 1252	Physics for Engineers II	3	ENGR 3140	Thermodynamics I	3
BCHE 2910	Intro Biochemical Engr. Design	3	ENGR 3160	Fluid Mechanics	3
ENGR 1140	Computational Engr. Methods	2	COMM 1110	Public Speaking	3
	Social Sciences Elective	3			
Total Credit Hours		17	Total Credit Hours		16

YEAR THREE

Fall Semester		Hours	Spring Semester		Hours
BCHE 3520	Mass Transport/Rate Phenomena	3	ENGR 3150	Heat Transfer	3
BCHE 3145	Equilibrium Thermodynamics	3	ENGR 2110	Engineering Decision Making	3
BCMB 3100	Intro Biochem./Molecular Biology	4	BCHE 3420	Kinetics & Reactor Design	3
MIBO 3500	Intro Microbiology	3	BCHE 3180	Biochemical Engineering Lab	3
	World Lang & Culture Elective	3	BCHE 4510	Biochemical Engineering	3
Total Credit Hours		16	Total Credit Hours		15

YEAR FOUR

Fall Semester		Hours	Spring Semester		Hours
BCHE 4910	BCHE Capstone Design I	2	BCHE 4911	BCHE Capstone Design II	2
BCHE 4550	Bioprocess Design & Simulation	3	BCHE 4180	Advanced Biochemical Engineering Lab	3
	Biochemical Engineering Elective	3	BCHE 4360	Biochemical Process Control	3
	Social Sciences Elective	3		Biochemical Engineering Elective	3
	World Lang & Culture Elective	3		Biochemical Engineering Elective	3
	World Lang & Culture Elective	3		Social Sciences Elective	3
Total Credit Hours		17	Total Credit Hours		17



Biochemical Engineering Electives

Select three (3) courses from the list below. Courses with BCHE prefixes are preferred over BIOE prefixes.

BCHE 4350	Bioprocess Quality Control
BCHE 4460	Bio-refinery Engineering
BCHE/ENVE 4490/6490	Environmental Engineering Remediation Design
BCHE 4520/6520	Design of Biochemical Separation Processes
BCHE 4550/6550	Bioprocess Design & Simulation
BCHE 4645	Biocatalysis & Protein Engineering
BCHE 4655/6655	Metabolic Engineering and Synthetic Biology
BCHE 4710/6710	Bio-electrochemical Engineering
*BIOE/CHEM 4615/6615	Soft Materials
BIOE 4625	Tissue Engineering
*BIOE 4740/6740	Biomaterials
ENGR 4490/6490	Renewable Energy Engineering

*Students may only choose one of these.

