

**BSBE Biological Engineering
Fall 2019**

This document is an example of a BSBE 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 BSBE, 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	BIOL 1108&L	<i>Principles of Biology II</i>	4
ENGR 1920	Intro to Engineering	1	PHYS 1251	<i>Physics for Engineers I</i>	3
ENGL 1101	<i>English Composition I</i>	3	ENGR 1120	Engineering Graphics	2
FYOS	First-Year Odyssey	1			
Total Credit Hours		17	Total Credit Hours		17

YEAR TWO

Fall Semester		Hours	Spring Semester		Hours
MATH 2500	<i>Multivariable Calculus</i>	3	MATH 2700	<i>Differential Equations</i>	3
PHYS 1252	<i>Physics for Engineers II</i>	3	CHEM 2211&L	Organic Chemistry I	4
ENGR 1140	Computational Engr. Methods	2	BIOE 2920	Design Methodology	2
ENGR 2120	<i>Statics</i>	3	ENGR 2110	<i>Engineering Decision Making</i>	3
ENGL 1102	English Composition II	3	ENGR 2170	<i>Electrical Circuits</i>	3
COMM 1110	Public Speaking	3			
Total Credit Hours		17	Total Credit Hours		15

YEAR THREE

Fall Semester		Hours	Spring Semester		Hours
BCMB 3100	Intro Biochem. /Molecular Biology	3	ENGR 3140	<i>Thermodynamics I</i>	3
ENGR 3160	<i>Fluid Mechanics</i>	3	ENGR 2140	<i>Strength of Materials</i>	3
BCHE 3520	<i>Mass Transport/Rate Phenomena</i>	3	MIBO 3500	Intro Microbiology	4
	Social Sciences Elective	3		Social Sciences Elective	3
	World Lang & Culture Elective	3		World Lang & Culture Elective	3
Total Credit Hours		15	Total Credit Hours		16

YEAR FOUR

Fall Semester		Hours	Spring Semester		Hours
BIOE 3720	Engineering Physiology	3	BIOE 4740	Biomaterials	3
BIOE 4910	Engineering Design Project I	2	BIOE 4760	Biomechanics	3
ENGR 3150	<i>Heat Transfer</i>	3	BIOE 4911	Engineering Design Project II	2
	Biological Engineering Elective	3		Biological Engineering Elective	3
	Science Elective*	3		Biological Engineering Elective	3
	World Lang & Culture Elective	3		Social Sciences Elective	3
Total Credit Hours		17	Total Credit Hours		17

*Science Elective: Select any Biology or Ecology course at the 3000 level or above. Suggested courses are: BCMB (CHEM) 4110, BCMB (ENTO) 4200, CBIO (BIOL) 3400, CBIO (MIBO) 4100, CRSS 4600&L, ECOL (BIOL) 3500&L, MIBO 4090, VPHY 3100.

Biological Engineering Electives

Select three (3) courses from the list below. BIOE prefix courses are preferred over BCHE prefix courses. BIOE 4750 is highly recommended.

BCHE 4510/6510	Biochemical Engineering
BCHE 4655/6655	Metabolic Engineering and Synthetic Biology
BIOE 4625	Tissue Engineering
BIOE 4650/6650	Animal Cell Biomanufacturing
BIOE 4720	Biomedical Device Design
BIOE 4750	Biomedical Engineering Lab
BIOE 4780	Regulations and Ethics in BME
BIOE/CHEM 4615/6615	Soft Materials
*CSEE 4620/6620	Biomedical Imaging
CSEE 4750	Programming for Computational & Systems Biology
*CSEE 4790	Applied Biomedical Instrumentation

**Students may only choose one of these.*