

Recommended course plan for BSE students graduating in 2018 and interested in careers in
BIOMEDICAL ENGINEERING
 (133 credits)

Fall 1st Year 16 cr.	Chem 1035 (3) General Chemistry ⁵	Chem 1045 (1) General Chemistry Lab ⁵	MATH 1225 (4) Calculus for Science ⁵	ENGE 1215 (2) Foundations of Engineering	ENGL 1105 (3) First-Year Writing ⁵	CLE (3)	
Spring 1st Year 17 cr.	CHEM 1036 (3) General Chem ⁵ Pre: CHEM 1035 Spring, Summer 1 & 2	ENGL 1106 (3) Freshman English ⁵ Pre: ENGL 1105	PHYS 2305 (4) Found of Physics ⁵ Pre: MATH 1225 Co: MATH 1226	MATH 1226 (4) Calculus for Science ⁵ Pre: MATH 1225	ENGE 1216 (2) Exploration of Engineering Design Pre: ENGE 1215	CLE (1)	
Fall 2nd Year 17 cr.	CHEM 2514 (3) Survey of Organic Chemistry ^{2,4} Pre: CHEM 1036 Fall, Summer 1	MATH 2114 (3) Intro to Linear Algebra	MATH 2204 or 2224 (3) Multivariable Calculus Pre: Math 1225 & 1226 (Old sequence: 1205 & 1206)	ESM 2104 (3) Statics Co: MATH 2114, MATH 2224	BIOL 1105 (3) Principles of Biology ⁵ Fall, Summer 1	BSE 2004 (2) Intro to BSE Pre: ENGE 1215 Fall, Spring	
Spring 2nd Year 18 cr.	MATH 2214 (3) Differential Equations Pre: MATH 2114 & 1226 (Old sequence: 1206)	ESM 2304 (3) Dynamics Pre: ESM 2104, MATH 2224 Co: MATH 2214	BIOL 1106 (3) Principles of Biology ⁵ Spring, Summer 2	BSE 3144 (2) Engineering Analysis for Biological Systems Co: MATH 2214 Spring Only	BMES 2104 (3) Intro to Biomed Eng ³ Pre: PHYS 2305, ENGE 1216 or 1114 Co: MATH 2214 Spring Only	PHYS 2306 (4) Foundations of Physics ⁵ Pre: MATH 1225, PHYS 2305	
Fall 3rd Year 16 cr.	ESM 3024 (3) Intro Fluid Mechanics Pre: ESM 2304, MATH 2224 Fall, Summer 2, Winter	STAT 4604/STAT 4705 (3) Stat. Methods for Engrs/ Prob&Stat for Engrs Pre: MATH 1226/ 2224	BSE 3134 (1) BSE Seminar Pre: BSE 2004 Fall Only	BSE 3154 (3) Thermodynamics of Biol. Systems Pre: MATH 2214/ Co: ESM 3024 Fall Only	BMES/BVMS 4064 (3) Medical Physiology ⁴ Fall Only Pre: Junior standing or professor permission	CLE (3)	
Spring 3rd Year 16 cr.	BIOL 2604 (3) General Microbiology Pre: BIOL 1105, 1106, CHEM 1035, 1036	BSE 3504 (3) Transport Processes in BSE Pre: BSE 3154, ESM 3024 Spring Only	BSE 3524 (3) Unit Operations ¹ Spring Only Co: BSE 3504	BIOL 2614 (1) General Microbiology Lab ⁴ Fall, Spring, Summer 1	BCHM 2024 (3) Concepts of Biochem ^{2,4} Pre: CHEM 2514 or CHEM 2535 Fall, Spring, Summer 1	BSE 3534 (3) Bioprocess Engineering ¹ Co: BSE 3504 & BIOL 2604 Spring Only	
Fall 4th Year 17 cr.	ISE 2014 (2) Engineering Economy Pre: ENGE 1215	BSE 4125 (2) Comprehensive Design Project Pre: BSE 3334 or 3524 Fall Only	BSE 4204 (3) Instrumentation for Biosystems Pre: PHYS 2306, ESM 3024 Fall Only	BSE 4544 (3) Protein Separation Engineering ¹ Pre: BSE 3504 or CHE 3144 Fall Only	BMES 4994 (1) BME Undergrad. Research (<i>required for BME minor</i>)	Technical Elective (3)	CLE (3)
Spring 4th Year 16 cr.	BSE 4126 (3) Comprehensive Design Project Pre: BSE 4125 Spring Only		BSE Elective (3)	Engineering Topics Elective (3)	Technical Elective (1)	CLE (6)	

¹ BSE Elective; ² Chemistry Elective; ³ Engineering Elective; ⁴ Technical Elective; ⁵ CLE