

**Recommended course plan for BSE students graduating in 2022 and interested in careers in
HEALTH PROFESSIONS**

(140 credits to include MCAT reqs) – NOTE: You only need 128 credits for your BSE degree

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	PSYC 1004 (3) Intro to Psych ⁵	
Spring 1st Year 17 cr.	CHEM 1036 (3) General Chemistry ⁵ Pre: CHEM 1035 Spring, Summer 1 & 2	CHEM 1046 (1) General Chem Lab ⁴ Co: CHEM 1036 Spring, Summer 1 & 2	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	ENGL 1106 (3) Freshman English ⁵ Pre: ENGL 1105	
Fall 2nd Year 18 cr.	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 2224	BIOL 1105 (3) Principles of Biology Fall, Summer 1	BIOL 1115 (1) Principles of Bio Lab ⁴ Fall, Summer 1	BSE 2004 (2) Intro to BSE Pre: ENGE 1215 Fall, Spring	SOC 1004 (3) Intro to Sociology ⁵
Spring 2nd Year 19 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 Biology Spring, Summer 2	BIOL 1116 (1) Principles Bio Lab ⁴ Co: BIOL 1106 Spring, Summer 2	BSE 3144 (2) Eng Analysis for Biol Sys Co: MATH 2214 Spring Only	PHYS 2306 (4) Foundations Physics ⁵ Pre: MATH 1225, PHYS 2305	Pathways (3)
Fall 3rd Year 16 cr.	ESM 3024 (3) Intro Fluid Mechanics Pre: ESM 2304, MATH 2224 Fall, Summer 2, Winter	STAT 3704 (2) Statistics for Engineering Applications Pre: MATH 2224/2204	BSE 3134 (1) BSE Seminar Pre: BSE 2004 Fall Only	BSE 3154 (3) Thermodynamics of Biol. Systems Pre: MATH 2204/2224, ESM 2304 Co: ESM 3024 Fall Only	CHEM 2535 (3) Organic Chem ^{2,4} Fall, Spring, Summer 1	CHEM 2545 (1) O-Chem Lab ^{2,4} Fall, Spring, Summer 1	Pathways (3)
Spring 3rd Year 18 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 & BSE 3534	CHEM 2536 (3) Organic Chemistry ^{2,4} Fall, Spring, Summer 2	CHEM 2546 (1) Organic Chem Lab ^{2,4} Fall, Spring, Summer 2	BSE 3534 (3) Bioprocess Engineering ¹ Co: BSE 3504 & BIOL 2604 Pre: BSE 3154 Spring Only	ISE 2014 (2) Engineering Economy Pre: ENGE 1215
Fall 4th Year 18 cr.	BSE 4125 (2) Comprehensive Design Project ⁵ Pre: BSE 3524 Fall Only	BSE 4524 (3) Bioprocessing Plant Design ¹ Pre: BSE 3524 Fall Only	BSE 4544 (3) Protein Separation ¹ Pre: BSE 3504 Fall Only	BSE 4534 (1) Biological Processing Lab ⁴ Pre: BSE 3524	BCHM 3114 (3) Biochemistry for Biotech ^{2,4} Pre: CHEM 2536 Fall Only	Engineering Topics Elective (3)	Pathways (3)
Spring 4th Year 18 cr.	BSE 4126 (3) Comprehensive Design Project ⁵ Pre: BSE 4125 Spring Only	Engineering Topics Elective (3)	BIOL 2004 (3) Genetics ⁴ Fall, Spring, Summer 1	Engineering Topics Elective (3)	BIOL 2104 (3) Cell & Molecular Biology ⁴ Fall, Spring, Summer 2	Pathways (3)	

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