

Recommended course pathway for BSE students interested 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 ⁵	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	CHEM 1046 (1) General Chem Lab ⁴ Co: CHEM 1036 Spring, Summer	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 ⁵ Pre: ENGE 1215	ENGL 1106 (3) Freshman English ⁵ Pre: ENGL 1105	
Fall 2nd Year 19 cr.	MATH 2114 (3) Intro to Linear Algebra Pre: Math 1225 (min. grade B) or MATH 1226	MATH 2204 (3) Multivariable Calculus Pre: Math 1226	ESM 2104 (3) Statics Pre: MATH 1226	BIOL 1105 (3) Principles of Biology Fall, Summer, Winter	BIOL 1115 (1) Principles of Bio Lab ⁴ Fall, Summer	BSE 2004 (3) Intro to BSE Pre: ENGE 1215 Fall Only	SOC 1004 (3) Intro to Sociology ⁵
Spring 2nd Year 19 cr.	MATH 2214 (3) Differential Equations ⁵ Pre: MATH 2114 & 1226	Engineering Topics Elective (3)	BIOL 1106 (3) Principles Biology Spring, Summer, Winter	BIOL 1116 (1) Principles Bio Lab ⁴ Co: BIOL 1106 Spring, Summer	BSE 3144 (2) Engineering Analysis for Biological Systems Spring Only	PHYS 2306 (4) Foundations Physics Pre: MATH 1225, PHYS 2305	Pathways (3)
Fall 3rd Year 14-16 cr.	ESM 3024 (3) Intro Fluid Mechanics Pre: ESM 2104, PHYS 2305 Fall Only	STAT 3704 (2) Statistics for Engineering Applications Pre: MATH 2224/2204	**BSE 4984 (2) Engineering Biology CURE Lab ^{1,4}	BSE 3154 (3) Thermodynamics of Biological Systems Pre: CHEM 1036, PHYS 2305, MATH 2204 Fall Only	CHEM 2535 (3) Organic Chemistry ² Fall, Spring, Summer	CHEM 2545 (1) O-Chem Lab ⁴ Fall, Spring, Summer	ISE 2014 (2) Engineering Economy
Spring 3rd Year 19 cr.	BIOL 2604 (3) General Microbiology Pre: BIOL 1105, 1106, CHEM 1035, 1036 Fall, Spring, Summer, Winter	BSE 3504 (3) Transport Processes in BSE Pre: BSE 3154, ESM 3024 Spring Only	BSE 3524 (3) Unit Operations ¹ Spring Only Pre: BSE 3154	CHEM 2536 (3) Organic Chemistry ⁴ Fall, Spring, Summer	CHEM 2546 (1) Organic Chem Lab ⁴ Fall, Spring, Summer	BSE 3534 (3) Bioprocess Engineering ¹ Pre: BSE 3154 Co: BSE 3504 & BIOL 2604 Spring Only	ISE 3034 (3) Technical Communication for Engineers ⁵ Spring & Summer
Fall 4th Year 17-18 cr.	BSE 4125 (2) Comprehensive Design Project Pre: BSE 3524 & 3534 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 ^{1,4} Pre: BSE 3524, 3534	BCHM 3114 (3) Biochemistry for Biotech ⁴ Pre: CHEM 2536 Fall, Spring	Pathways (3) BIOL 2004 (3) Genetics ⁴ Fall, Spring, Summer	
Spring 4th Year 15-18 cr.	BSE 4126 (3) Comprehensive Design Project Pre: BSE 4125 Spring Only	Engineering Topics Elective (3)	Pathways (3)	Engineering Topics Elective (3)	BIOL 2134 (3) Cell Function Differentiation ⁴ Fall, Spring, Summer	BSE 4564 (3) Metabolic Engineering ¹ Pre: BSE 3534 Spring Only **will not need if take both BSE 4984 & 4534 labs	

¹ BSE Elective ² Chemistry Elective ³ Engineering Elective ⁴ Technical Elective ⁵ Pathways ****You must take EITHER BSE 4534 OR BSE 4984: CURE lab to fulfill degree requirements.**