

Recommended course pathway for BSE students interested in careers in
ECOLOGICAL ENGINEERING
 (128 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 ⁵	ENGL 1105 (3) First-Year Writing ⁵	Pathways (3)
Spring 1st Year 16 cr.	CHEM 1036 (3) General Chemistry ⁵ Pre: CHEM 1035 Spring, Summer 1 & 2	ENGL 1106 (3) Freshman English ⁵ Pre: ENGL 1105	PHYS 2305 (4) Foundations 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	
Fall 2nd Year 18 cr.	CHEM 2514 (3) Survey of Org Chem ² Pre: CHEM 1035, 1036, 1045 Fall, Spring, Summer	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	BSE 2004 (3) Intro to BSE Pre: ENGE 1215 Fall Only
Spring 2nd Year 15 cr.	MATH 2214 (3) Differential Equations ⁵ Pre: MATH 2114 & 1226	BSE 2304 (3) Landscape Measurement & Modeling ¹ Spring Only	BIOL 1106 (3) Principles of Biology Spring, Summer, Winter	BSE 3144 (2) Engineering Analysis for Biological Systems Spring Only		PHYS 2306 (4) Foundations of Physics Pre: MATH 1226, PHYS 2305
Fall 3rd Year 14 cr.	ESM 3024 (3) Intro Fluid Mechanics Pre: ESM 2104, PHYS 2305 Fall Only	BSE 3154 (3) Thermodynamics of Biological Systems Pre: CHEM 1036, PHYS 2305, MATH 2204 Fall Only	BSE 3324 (3) Small Watershed Hydrology ¹ Pre: PHYS 2305 Fall Only		STAT 3704 (2) Statistics for Engineering Applications Pre: MATH 2204	Pathways (3)
Spring 3rd Year 18 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 3334 (3) NPS Assessment & Control ¹ Pre: BSE 3324 Spring Only	Pathways (3)	ISE 3034 (3) Technical Communication for Engineers ⁵ Spring & Summer	BSE 4344 (3) GIS for Engineers ¹ Pre: BSE 3324 Spring Only
Fall 4th Year 16 cr.	ISE 2014 (2) Engineering Economy	BSE 4125 (2) Comprehensive Design Project Pre: BSE 3324 & 3334 Fall Only	BSE 4324 (3) Applied Fluvial Geomorphology ³ Pre: BSE 3324 Fall Only	BSE 4224 (3) Field Methods in Hydrology ¹ Pre: BSE 3324 Fall Only	Pathways (3)	Pathways (3)
Spring 4th Year 15 cr.	BSE 4126 (3) Comprehensive Design Project Pre: BSE 4125 Spring Only	CEE 3104 (3) Intro to Environmental Engineering ³ Pre: PHYS 2305, MATH 1226, CHEM 1035 & 1045 Fall, Spring, Summer	BSE Elective (3)	ENSC 4314 (3) Water Quality ⁴ Pre: MATH 1226, BIOL 1105, CHEM 1035 Spring Only		Technical Elective (3)

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