

*Recommended course plan for BSE students interested in careers in*  
**ECOLOGICAL ENGINEERING**  
 (128 credits)

|                                       |                                                                                                               |                                                                                                                                                  |                                                                                                    |                                                                                                           |                                                                                                |                                                                                       |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Fall<br/>1st Year<br/>16 cr.</b>   | <b>Chem 1035 (3)</b><br>General Chemistry <sup>5</sup>                                                        | <b>Chem 1045 (1)</b><br>General Chemistry Lab <sup>5</sup>                                                                                       | <b>MATH 1225 (4)</b><br>Calculus for Science <sup>5</sup>                                          | <b>ENGE 1215 (2)</b><br>Foundations of Engineering <sup>5</sup>                                           | <b>ENGL 1105 (3)</b><br>First-Year Writing <sup>5</sup>                                        | <b>Pathways (3)</b>                                                                   |
| <b>Spring<br/>1st Year<br/>16 cr.</b> | <b>CHEM 1036 (3)</b><br>General Chemistry <sup>5</sup><br>Pre: CHEM 1035<br>Spring, Summer 1 & 2              | <b>ENGL 1106 (3)</b><br>Freshman English <sup>5</sup><br>Pre: ENGL 1105                                                                          | <b>PHYS 2305 (4)</b><br>Foundations of Physics <sup>5</sup><br>Pre: MATH 1225<br>Co: MATH 1226     | <b>MATH 1226 (4)</b><br>Calculus for Science <sup>5</sup><br>Pre: MATH 1225                               | <b>ENGE 1216 (2)</b><br>Exploration of Engineering Design <sup>5</sup><br>Pre: ENGE 1215       |                                                                                       |
| <b>Fall<br/>2nd Year<br/>18 cr.</b>   | <b>CHEM 2514 (3)</b><br>Survey of Org Chem <sup>2</sup><br>Pre: CHEM 1035, 1036, 1045<br>Fall, Spring, Summer | <b>MATH 2114 (3)</b><br>Intro to Linear Algebra<br>Pre: Math 1225 (min. grade B) or<br>MATH 1226                                                 | <b>MATH 2204 (3)</b><br>Multivariable Calculus<br>Pre: Math 1226                                   | <b>ESM 2104 (3)</b><br>Statics<br>Pre: MATH 1226                                                          | <b>BIOL 1105 (3)</b><br>Principles of Biology<br>Fall, Summer                                  | <b>BSE 2004 (3)</b><br>Intro to BSE<br>Pre: ENGE 1215<br>Fall Only                    |
| <b>Spring<br/>2nd Year<br/>15 cr.</b> | <b>MATH 2214 (3)</b><br>Differential Equations <sup>5</sup><br>Pre: MATH 2114 & 1226                          | <b>BSE 2304 (3)</b><br>Landscape Measurement &<br>Modeling <sup>1</sup><br>Spring Only                                                           | <b>BIOL 1106 (3)</b><br>Principles of Biology<br>Spring, Summer                                    | <b>BSE 3144 (2)</b><br>Engineering Analysis for Biological Systems<br>Co: MATH 2214<br>Spring Only        |                                                                                                | <b>PHYS 2306 (4)</b><br>Foundations of Physics<br>Pre: MATH 1226,<br>PHYS 2305        |
| <b>Fall<br/>3rd Year<br/>14 cr.</b>   | <b>ESM 3024 (3)</b><br>Intro Fluid Mechanics<br>Pre: ESM 2104, PHYS 2305<br>Fall Only                         | <b>BSE 3154 (3)</b><br>Thermo of Biological Systems<br>Pre: CHEM 1036, PHYS 2305<br>Fall Only                                                    | <b>BSE 3324 (3)</b><br>Small Watershed Hydrology <sup>1</sup><br>Pre: PHYS 2305<br>Fall Only       | <b>STAT 3704 (2)</b><br>Statistics for Engineering<br>Applications<br>Pre: MATH 2204                      | <b>Pathways (3)</b>                                                                            |                                                                                       |
| <b>Spring<br/>3rd Year<br/>18 cr.</b> | <b>BIOL 2604 (3)</b><br>General Microbiology<br>Pre: BIOL 1105, 1106,<br>CHEM 1035, 1036                      | <b>BSE 3504 (3)</b><br>Transport Processes in BSE<br>Pre: BSE 3154, ESM 3024<br>Spring Only                                                      | <b>BSE 3334 (3)</b><br>NPS Assessment & Control <sup>1</sup><br>Pre: BSE 3324<br>Spring Only       | <b>Pathways (3)</b>                                                                                       | <b>ISE 3034 (3)</b><br>Technical<br>Communication for<br>Engineers <sup>5</sup><br>Spring Only | <b>BSE 4344 (3)</b><br>GIS for Engineers <sup>1</sup><br>Pre: BSE 3324<br>Spring Only |
| <b>Fall<br/>4th Year<br/>16 cr.</b>   | <b>ISE 2014 (2)</b><br>Engineering<br>Economy                                                                 | <b>BSE 4125 (2)</b><br>Comprehensive Design Project<br>Pre: BSE 3334<br>Fall Only                                                                | <b>BSE 4324 (3)</b><br>Fluvial Geomorphology <sup>3</sup><br>Pre: BSE 3324<br>Fall Only            | <b>BSE 4224 (3)</b><br>Field Methods in Hydrology <sup>1</sup><br>Pre: BSE 3324<br>Fall Only              | <b>Pathways (3)</b>                                                                            | <b>Pathways (3)</b>                                                                   |
| <b>Spring<br/>4th Year<br/>15 cr.</b> | <b>BSE 4126 (3)</b><br>Comprehensive Design<br>Project<br>Pre: BSE 4125<br>Spring Only                        | <b>CEE 3104 (3)</b><br>Intro to Environmental Engineering <sup>3</sup><br>Pre: PHYS 2305, MATH 1226,<br>CHEM 1035 & 1045<br>Fall, Spring, Summer | <b>BSE 4304 (3)</b><br>Intro to Watershed<br>Modeling <sup>3</sup><br>Pre: BSE 3334<br>Spring Only | <b>ENSC 4314 (3)</b><br>Water Quality <sup>4</sup><br>Pre: MATH 1226, BIOL 1105, CHEM 1035<br>Spring Only |                                                                                                | <b>Technical Elective (3)</b>                                                         |

<sup>1</sup> BSE Elective; <sup>2</sup> Chemistry Elective; <sup>3</sup> Engineering Elective; <sup>4</sup> Technical Elective; <sup>5</sup> Pathways