

*Recommended course plan for BSE students graduating in 2019 and interested in careers in*  
**WATERSHED SCIENCE AND ENGINEERING**  
 (132 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  | <b>ENGL 1105 (3)</b><br>First-Year Writing <sup>5</sup>                                     | <b>CLE (3)</b>  |
| <b>Spring<br/>1st Year<br/>17 cr.</b> | <b>CHEM 1036 (3)</b><br>General Chem <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>Found 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<br>Pre: ENGE 1215                 | <b>CLE (1)</b>  |
| <b>Fall<br/>2nd Year<br/>17 cr.</b>   | <b>CHEM 2514 (3)</b><br>Survey of Org Chem <sup>2,4</sup><br>Pre: CHEM 1036<br>Fall, Summer 1      | <b>MATH 2114 (3)</b><br>Intro to Linear<br>Algebra  | <b>MATH 2204 or 2224 (3)</b><br>Multivariable Calculus<br>Pre: Math 1225 & 1226<br>(Old sequence: 1205 & 1206) | <b>ESM 2104 (3)</b><br>Statics<br>Co: MATH 2114,<br>MATH 2224   | <b>BIOL 1105 (3)</b><br>Principles of Biology <sup>5</sup><br>Fall, Summer 1                | <b>BSE 2004 (2)</b><br>Intro to BSE<br>Pre: ENGE 1215<br>Fall, Spring   |
| <b>Spring<br/>2nd Year<br/>18 cr.</b> | <b>MATH 2214 (3)</b><br>Differential Equations<br>Pre: MATH 2114 & 1226<br>(Old sequence: 1206)    | <b>ESM 2304 (3)</b><br>Dynamics<br>Pre: ESM 2104, MATH 2224<br>Co: MATH 2214  | <b>BIOL 1106 (3)</b><br>Principles of Biology <sup>5</sup><br>Spring, Summer 2                                 | <b>BSE 3144 (2)</b><br>Engr Analysis for Bio Systems<br>Co: MATH 2214<br>Spring Only                        | <b>PHYS 2306 (4)</b><br>Foundations of Physics <sup>5</sup><br>Pre: MATH 1225,<br>PHYS 2305 | <b>BSE 2304 (3)</b><br>Landscape Measurement<br>& Modeling <sup>1</sup><br>Spring Only                              |
| <b>Fall<br/>3rd Year<br/>15 cr.</b>   | <b>ESM 3024 (3)</b><br>Intro Fluid Mechanics<br>Pre: ESM 2304, MATH 2224<br>Fall, Summer 2, Winter | <b>BSE 3154 (3)</b><br>Thermo of Bio Systems<br>Pre: MATH 2204/2224,<br>ESM 2304<br>Fall Only   | <b>BSE 3134 (1)</b><br>BSE Seminar<br>Pre: BSE 2004<br>Fall Only   | <b>BSE 3324 (3)</b><br>Small Watershed Hydrology <sup>1</sup><br>Co: ESM 3024<br>Fall Only                  | <b>STAT 3704 (2)</b><br>Statistics for Engineering<br>Applications<br>Pre: MATH 2224/2204   | <b>CLE (3)</b>  |
| <b>Spring<br/>3rd Year<br/>16 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>BSE 4344 (3)</b><br>GIS for Engineers <sup>1</sup><br>Spring Only  | <b>BIOL 2614 (1)</b><br>General<br>Microbiology Lab <sup>4</sup><br>Fall, Spring, Summer 1  | <b>CSES/ENSC 4314 (3) <sup>2,4</sup></b><br>Water Quality<br>Pre: MATH 1226, BIOL 1105,<br>CHEM 1035<br>Spring Only |
| <b>Fall<br/>4th Year<br/>16 cr.</b>   | <b>ISE 2014 (2)</b><br>Engineering<br>Economy<br>Pre: ENGE 1215                                    | <b>BSE 4125 (2)</b><br>Comprehensive Design Project<br>Pre: BSE 3334 or 3524<br>Fall Only   | <b>BSE 4204 (3)</b><br>Instrumentation for<br>Biosystems<br>Pre: PHYS 2306, ESM 3024<br>Fall Only              | <b>BSE 4224 (3)</b><br>Field Methods in Hydrology <sup>1,3,4</sup><br>Co: BSE 3324 or CEE 3314<br>Fall Only | <b>Technical Elective (3)</b>   | <b>CLE (3)</b>  |
| <b>Spring<br/>4th Year<br/>17 cr.</b> | <b>BSE 4126 (3)</b><br>Comprehensive Design Project<br>Pre: BSE 4125<br>Spring Only                | <b>CEE 3104 (3)</b><br>Intro to Environmental Engineering <sup>3,5</sup><br>Pre: PHYS 2305, MATH 1226, CHEM 1035 & 1045<br>Fall, Spring | <b>BSE 4304 (3)</b><br>NPS Modeling & Mgmt <sup>1,3,4</sup><br>Pre: BSE 3334<br>Spring Only                    | <b>Technical<br/>Elective (2)</b>   | <b>CLE (3)</b>  | <b>CLE (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> CLE