

## B.S. Engineering Science Plan of Study

|            | Fall 3 week                 | Fall 12 week                                                                                                                                                       | Spring 12 week                                                                                                                                | Spring 3 week                                |
|------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| First Year | CORE 110 Design Thinking    | ENGR 110 Introduction to Engineering w/lab<br>MATH 123 Calculus I<br>CHEM 131 General Chemistry I<br>CHEM 141 General Chemistry Lab<br>CORE 120 The Mindful Writer | ENGR 120 Engineering Analysis<br>ENGR 215 Materials Science & Engineering<br>MATH 124 Calculus II<br>PHYS 171 General Physics I w/lab<br>CORE | CORE                                         |
| Sophomore  | CORE                        | ENGR 205 Statics & Strength of Materials<br>MATH 223 Calculus III<br>PHYS 172 General Physics II w/lab<br>ENGR 125 Intro to Computer Science                       | ENGR 206 Dynamics and Kinematics<br>MATH 328 Ord. Differential Equations<br>ENGR 221 Electrical Circuits w/lab<br>CORE                        | ENGR 232 Engineering Design in the Community |
| Junior     | PHYS 233 Intmd. Physics Lab | ENGR 307 Thermal & Fluid Systems w/lab<br>MATH 205 Applied Statistics<br>PHYS 215 Matlab Programming<br>ENGR 324 Mechatronics w/lab                                | ENGR 341 Theory of Structures<br>BUSN XXX Business Elective<br>ENGR 378 Engineering Co-op (usually summer)<br>CORE                            | CORE                                         |
| Senior     |                             | ENGR 3XX Engineering Elective<br>ENGR 415 Systems Modeling & Controls<br>ENGR 451 Capstone Design I<br>CORE                                                        | ENGR 452 Capstone Design II<br>ENGR 3XX Engineering Elective<br>ENGR 300 FE Exam Review<br>Math/Sci elective<br>CORE                          | ENGR 453 Capstone Design III                 |

### Math/Science Requirement:

Including the required credits from CHEM, MATH, and PHYS above, majors must complete 32 credits selected from BIOL (excluding BIOL 103), CHEM (excluding CHEM 119, 120, and 125), MATH (excluding MATH 106, 113, 211, and 213), PHYS (excluding PHYS 113, 114, and 122), and ENVR 203, 235, 271, 325, 344, and/or 382.

### Business Elective:

Any BUSN course may be used to satisfy this requirement except for BUSN 127 or BUSN 227



The engineering science program at Sweet Briar College is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org)