Below is the *advised sequence* of courses for this degree program and prerequisites as of 5/13/21. The official degree requirements and prerequisites found in the University General Catalog and the prerequisites are subject to change.

<table>
<thead>
<tr>
<th>COURSE NUMBER AND TITLE</th>
<th>UNITS</th>
<th>PREREQUISITES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1ST SEMESTER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 122A/B or MATH 125 Calculus I with Applications</td>
<td>5/3</td>
<td>Appropriate Math Placement</td>
</tr>
<tr>
<td>CHEM 151 General Chemistry I or CHEM 161/163</td>
<td>4</td>
<td>Appropriate Math Placement</td>
</tr>
<tr>
<td>ENGL 101 or 107 or 109H First-Year Composition</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ENGR102A/B Introduction to Engineering or ENGR 102</td>
<td>3</td>
<td>ENGR102A: MATH 112; ENGR102B: Concurrently enrolled or completion of MATH 122B or 125; FR &amp; SOPH Status</td>
</tr>
<tr>
<td>Tier I General Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td>18/16</td>
<td></td>
</tr>
<tr>
<td><strong>2ND SEMESTER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 129 Calculus II</td>
<td>3</td>
<td>MATH 122B or 125 with C or better</td>
</tr>
<tr>
<td>SFWE 101 Introduction to Software Engineering</td>
<td>3</td>
<td>ENGR 102A/B</td>
</tr>
<tr>
<td>ECE 175 Computer Programming for Engineering Applications</td>
<td>3</td>
<td>Concurrent Enrollment or completion of MATH122B or 125</td>
</tr>
<tr>
<td>ENGL 102 or 108 First-Year Composition</td>
<td>3</td>
<td>ENGL 101 or ENGL 107</td>
</tr>
<tr>
<td>Tier I General Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td><strong>3RD SEMESTER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM 152 General Chemistry II or CHEM 162/164 or MSE 110 Solid State Chemistry or MCB 181R/L Intro Biology I</td>
<td>4</td>
<td>For CHEM 152 and MSE 110: CHEM 151 or 161/163; For MCB181R/L: Appropriate Math Placement Level</td>
</tr>
<tr>
<td>PHYS 141 Introductory to Mechanics or PHYS 161H</td>
<td>4</td>
<td>MATH 122B or 125 or appropriate Math Placement Level</td>
</tr>
<tr>
<td>SFWE 201 Sophomore Colloquium</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ECE 274A Digital Logic</td>
<td>4</td>
<td>ECE 175; Concurrent Enrollment or completion of MATH 129</td>
</tr>
<tr>
<td>ECE 275 Computer Programming for Engineering Applications II</td>
<td>3</td>
<td>ECE 175</td>
</tr>
<tr>
<td>Semester Total</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td><strong>4TH SEMESTER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIE 277 Object Oriented Modeling and Design</td>
<td>3</td>
<td>ECE 175 or 110</td>
</tr>
<tr>
<td>SFWE Tech Elective–Select course in consultation with faculty advisor</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 243 Discrete Mathematics in Computer Science</td>
<td>3</td>
<td>MATH 122B or 125 with C or better</td>
</tr>
<tr>
<td>PHYS 241 Introductory Electricity and Magnetism or PHYS 261H</td>
<td>4</td>
<td>For PHYS 241 or 261H: PHYS 141 or 161H; MATH 129 or Appropriate Math Placement Level</td>
</tr>
<tr>
<td>Tier I General Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>COURSE NUMBER AND TITLE</td>
<td>UNITS</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td><strong>5th SEMESTER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIE 305 Introduction to Engineering Probability and Statistics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SFWE 301 Software Requirements Analysis and Test</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ECE 311 Engineering Ethics</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ECE 369A (or 369) Computer Organization</td>
<td>3/4</td>
<td></td>
</tr>
<tr>
<td>SFWE Tech Elective – Select course in consultation with faculty advisor</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td>13/14</td>
<td></td>
</tr>
</tbody>
</table>

| **6th SEMESTER**                                      |       |
| SFWE 302 Software Design Process                      | 3     |
| CSC 345 Analysis of Discrete Structures and Algorithms | 3     |
| MATH/PHYS/STAT Elective – Select course in consultation with faculty advisor | 3     |
| Tier I General Education                               | 3     |
| Tier II General Education                              | 3     |
| Semester Total                                        | 15    |

| **7th SEMESTER**                                      |       |
| SFWE 401 Software Assurance and Security              | 3     |
| SFWE 403 Software Project Management                  | 3     |
| SIE 464 Cost Estimation                               | 3     |
| ENGR 498A Cross-disciplinary Design (Fall Only) – Senior Status | 3     |
| Tier II General Education                              | 3     |
| Semester Total                                        | 15    |

| **8th SEMESTER**                                      |       |
| SFWE 402 Software DevOps                              | 4     |
| SFWE Tech Elective – Select course in consultation with faculty advisor | 3     |
| SFWE Tech Elective – Select course in consultation with faculty advisor | 3     |
| SFWE 404 Software Preceptor                          | 1     |
| ENGR 498B Cross-disciplinary Design (Spring Only) – Senior Status | 3     |
| Semester Total                                        | 14    |

*Tier I and II General Education Courses must meet University general education requirements. One course must be recognized by the university as meeting the Diversity Requirement.