To obtain the B.S. in BME, a student must obtain 18 course credits in engineering topics. See the left-most column.

<table>
<thead>
<tr>
<th>Eng credit</th>
<th>Course</th>
<th>Course Name</th>
<th>Prerequisites</th>
<th>Add'l Info</th>
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<tbody>
<tr>
<td>0</td>
<td>Math 220-0</td>
<td>Differential Calculus of One Variable Functions</td>
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<tr>
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<td>Math 224-0</td>
<td>Integral Calculus of One Variable Functions</td>
<td>Math 220-0</td>
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<td>Math 230-0</td>
<td>Differential Calculus of Multivariable Functions</td>
<td>Math 224-0</td>
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<td>Math 234-0</td>
<td>Differential Calculus of Multivariable Functions</td>
<td>Math 230-0</td>
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<tr>
<td>.20</td>
<td>Gen Eng 205-1</td>
<td>EA1: Comput. Meth. and Linear Alg.</td>
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<td>.50</td>
<td>Gen Eng 205-2</td>
<td>EA2: Linear Alg, and Mechanics</td>
<td>Gen Eng 205-1; Math 220-0</td>
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<td>.20</td>
<td>Gen Eng 205-3</td>
<td>EA3: Dynamic System Modeling</td>
<td>Gen Eng 205-2</td>
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<td>Gen Eng 205-4</td>
<td>EA4: Diff. Equations</td>
<td>Gen Eng 205-3; Math 224-0</td>
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<tr>
<th>Basic Sciences (4 courses)</th>
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<tr>
<th>Design and Communication (3 courses)</th>
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<tr>
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<tr>
<th>Basic Engineering* (5 courses)</th>
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<p>| Social Sciences/Humanities (7 units) |</p>
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<th>Prerequisites</th>
<th>Add’l Info</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Unrestricted Electives (5 units)</td>
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<tr>
<td>Major Program</td>
<td>Core (10 courses + 1 zero credit seminar)</td>
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<tr>
<td>0</td>
<td>BME 101</td>
<td>Introduction to Biomedical Engg</td>
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<td>0</td>
<td>Chem 210-1</td>
<td>Organic Chemistry</td>
<td>Chem 103 or Chem 172</td>
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<tr>
<td>0</td>
<td>BiolSci 215 or 219</td>
<td>Genetics and Molecular Biology or Cell Biology</td>
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<td>1</td>
<td>BME 301</td>
<td>Systems Physiology I</td>
<td>Phys 135-2</td>
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<td>BME 302</td>
<td>Systems Physiology II</td>
<td>Math 230</td>
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<td>BME 303</td>
<td>Systems Physiology III</td>
<td>BiolSci 215 or 219</td>
<td>jr standing recommended</td>
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<tr>
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<td>BME 305*</td>
<td>Biomedical Signals Analysis</td>
<td>Phys 135-2</td>
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<tr>
<td>1</td>
<td>BME 306*</td>
<td>Biomedical Systems Analysis</td>
<td>Gen Eng 205-4, BME 305</td>
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<td>BME 307</td>
<td>Quant. Experimentation and Design</td>
<td>Stats, BME 305, BME 306</td>
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<td>BME 350</td>
<td>Transport Fundamentals</td>
<td>BME 270, Math 230</td>
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<td>BME 390-1</td>
<td>Biomedical Engineering Design</td>
<td>BME 307</td>
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**Biomedical Engineering Electives – Category A (2 courses)**

**Biomedical Engineering Electives – Category B (2 courses)**

**Technical Electives (2 units)** — may include BIOLSCI 215 or BIOLSCI 219 (the one not used to satisfy the core requirement), BIOLSCI 218, CHEM 101, CHEM 210-2 and 3, DSGN 240 (0.5 unit), DSGN 245 (0.5 unit), and DSGN 246 (0.5 unit), EECS 211, EECS 230, ME 240, and graded, 300-level or higher courses in engineering, science, or mathematics (395 courses must be approved; not all are acceptable).