# MS BIOMEDICAL ENGINEERING

## Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMED 460</td>
<td>Engineering Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BMED 530</td>
<td>Biomaterials</td>
<td>4</td>
</tr>
<tr>
<td>BMED 550</td>
<td>Current and Evolving Topics in Biomedical Engineering</td>
<td>4</td>
</tr>
<tr>
<td>BMED 563</td>
<td>Biomedical Engineering Graduate Seminar</td>
<td>2</td>
</tr>
<tr>
<td>BMED 599</td>
<td>Design Project (Thesis)</td>
<td>2</td>
</tr>
</tbody>
</table>

## Approved Engineering, Science and Mathematics Electives

A minimum of 8 units from an advisor approved list of mathematics, statistics, biology, or analytic engineering courses, with at least 4 units at the 500 level. Typical courses could be, but are not limited to:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>BMED 404</td>
<td>Applied Finite Element Analysis</td>
</tr>
<tr>
<td>CSC 448</td>
<td>Bioinformatics Algorithms</td>
</tr>
<tr>
<td>IME 503</td>
<td>Applied Statistical Methods in Engineering</td>
</tr>
<tr>
<td>MATH 418</td>
<td>Partial Differential Equations</td>
</tr>
<tr>
<td>MATH 501</td>
<td>Analytic Methods in Applied Mathematics</td>
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<tr>
<td>MATH 502</td>
<td>Numerical Methods in Applied Mathematics</td>
</tr>
<tr>
<td>STAT 513</td>
<td>Applied Experimental Design and Regression Models</td>
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</tbody>
</table>

Remaining elective units are advisor approved.  

## Total units

| Total units | 45 |

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1. BMED 460 is not required for BMED undergraduates as it is a core course in the major.
2. BMED 591 and/or BMED 592 can substitute for up to 4 units of thesis. Recommended for BMED BS 4+1 students.
3. BMED 520 is required for non-BMED undergraduate majors.