The overall objective of the Master of Science in Biomedical Engineering degree is to provide training relevant to professional employment in a BME-related field. A minimum total of 32 credit hours is required for this degree, of which at least 24 credit hours must come from coursework; six to eight credit hours of research are required. This degree requires completion of a written dissertation and a subsequent oral defense of it before an approved master’s thesis examination committee.

Admission Criteria
Because the M.S. degree requires the time and frequently the resources of a faculty mentor to be available in order to adequately execute the research component of the degree, the BME department will admit candidates who not only have the credentials suitable for this degree but for which a department faculty member consents to serve as the candidate’s research mentor.

### Courses

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Minimum Degree Credits</td>
<td>32</td>
</tr>
<tr>
<td>Maximum 400-Level Credit</td>
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#### Required Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>BME 500</td>
<td>Introduction to Biomedical Engineering</td>
<td>2</td>
</tr>
<tr>
<td>BME 533</td>
<td>Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>or BME 433</td>
<td>Biomedical Engineering Applications of Statistics</td>
<td></td>
</tr>
<tr>
<td>or CHE 426</td>
<td>Statistical Tools for Engineers</td>
<td></td>
</tr>
<tr>
<td>or MATH 425</td>
<td>Statistical Methods</td>
<td></td>
</tr>
<tr>
<td>BME 553</td>
<td>Advanced Quantitative Physiology</td>
<td>3</td>
</tr>
<tr>
<td>or BME 453</td>
<td>Quantitative Physiology</td>
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</tr>
</tbody>
</table>

Choose either a non-thesis (course-based) or thesis option

#### NON-THESIS OPTION

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose 4 courses (12 credit hours) of 400- or 500-level BME ¹</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Choose 4 courses (12 credit hours) of 400- or 500-level Engineering, Math, Computer Science, or Life Sciences with Advisor Approval ¹</td>
<td>12</td>
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</table>

#### THESIS OPTION

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>BME 501</td>
<td>Communication Skills in BME</td>
<td>1</td>
</tr>
<tr>
<td>BME 591</td>
<td>Research and Thesis for Master of Science Degree</td>
<td>8</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose 3 courses (9 credit hours) of 400- or 500-level Engineering, Math, Computer Science, or Life Sciences with Advisor Approval ¹</td>
<td>9</td>
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</tr>
<tr>
<td>Choose 2 courses (6 credit hours) of 400- or 500-level BME ²</td>
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