**MS- Bioengineering**

**General Requirements**
- 30 credits total (including thesis credits)
- 10 credits (minimum) of EBIO 590 Master’s Thesis
- 21 or more credits required for degree must be at 5xx level
- 3xx level courses are not allowed
- 4xx level courses may be used (maximum of 9)
- Courses with grades below C- cannot be used to satisfy degree requirements
- Three credits (min.) registration required during term of:
  - Comprehensive Examination and Thesis defense
  - Graduation (1 credit with in absentee graduation request on file)

A Bioengineering MS program of study should include the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGEN 505</td>
<td>Advanced Engineering Analysis</td>
<td>3</td>
</tr>
<tr>
<td>or EGEN 506</td>
<td>Numerical Sol to Engr Problems</td>
<td></td>
</tr>
<tr>
<td>EBIO 594</td>
<td>Seminar (Can be taken twice)</td>
<td>1</td>
</tr>
<tr>
<td>EBIO 590</td>
<td>Master’s Thesis</td>
<td>10</td>
</tr>
<tr>
<td><strong>Engineering Courses</strong></td>
<td></td>
<td><strong>6</strong></td>
</tr>
<tr>
<td>EBIO 461</td>
<td>Principles of Biomedical Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EBIO 566</td>
<td>Fundamentals of Biofilm Engr</td>
<td>3</td>
</tr>
<tr>
<td>ELEG 509</td>
<td>The Art of Biochips - Solving Healthcare</td>
<td>3</td>
</tr>
<tr>
<td>EENV 561</td>
<td>Environ Eng Reactor Theory</td>
<td>3</td>
</tr>
<tr>
<td>EENV 562</td>
<td>Water Treatment Process/Design</td>
<td>3</td>
</tr>
<tr>
<td>EENV 563</td>
<td>Wastewater Treat Proc/Design</td>
<td>3</td>
</tr>
<tr>
<td>EIND 413</td>
<td>Ergonomics &amp; Human Factors Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EIND 511</td>
<td>Design for Quality of Life</td>
<td>3</td>
</tr>
<tr>
<td>EIND 514</td>
<td>Occupational Biomechanics</td>
<td>3</td>
</tr>
<tr>
<td>EMAT 464</td>
<td>Biomedical Materials Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EM 525</td>
<td>Continuum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>EMEC 465</td>
<td>Bio-inspired Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EMEC 524</td>
<td>Cellular Mechanotransduction</td>
<td>3</td>
</tr>
<tr>
<td>EMEC 540</td>
<td>Biomechanics of Human Movement</td>
<td>3</td>
</tr>
<tr>
<td><strong>Other Graded Courses</strong></td>
<td></td>
<td><strong>9-10</strong></td>
</tr>
<tr>
<td>BCH 524</td>
<td>Mass Spectrometry</td>
<td>3</td>
</tr>
<tr>
<td>BCH 544</td>
<td>Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOH 528</td>
<td>Molecular Basis of Neurological Diseases</td>
<td>3</td>
</tr>
<tr>
<td>BIOH 520</td>
<td>Molecular Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOH 528</td>
<td>Molecular Basis of Neurological Diseases</td>
<td>3</td>
</tr>
<tr>
<td>BIOH 542</td>
<td>Survey of Current Cell Signaling</td>
<td>2</td>
</tr>
<tr>
<td>BIOH 565</td>
<td>Gene Expression Lab: From Genes to Proteins to Cells</td>
<td>3</td>
</tr>
<tr>
<td>BIOM 430</td>
<td>Applied and Environmental Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>MB 520</td>
<td>Microbial Physiology</td>
<td>3</td>
</tr>
<tr>
<td>MB 540</td>
<td>Environmental Microbiology</td>
<td>3</td>
</tr>
</tbody>
</table>

1 Curriculum requirements for the M. S. degree in Bioengineering are highly individualized and established in consultation with and approved by the student’s graduate committee. The courses listed are often considered when establishing the program of study for a particular student. Exceptions from the Engineering course requirements (6 credits) will be considered by the Bioengineering MS oversight committee.

Total number of credits must be 30 credits or greater.