BIOMEDICAL ENGINEERING (BIOMATERIALS AND TISSUE TRACK), CO-OP OPTION, BS

Bachelor of Science in Biomedical Engineering, Biomaterials and Tissues with Co-op (480007BS)

This option of the undergraduate program in Biomedical Engineering follows the biomaterials and tissues track and includes a cooperative education component.

The following information has official approval of the Department of Biomedical Engineering and The College of Engineering, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements.

Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others. The transfer process is completed through an appointment with your academic advisor.

1st Year
Fall Semester
- 3150:151 Principles of Chemistry I 1 3
- 3150:152 Principles of Chemistry I Laboratory 1 1
- 3300:111 English Composition I 1,2 3
- 3450:221 Analytic Geometry-Calculus I 1 4
- 4800:101 Tools for Biomedical Engineering 3

Spring Semester
- 3150:153 Principles of Chemistry II 1 3
- 3450:222 Analytic Geometry-Calculus II 1 4
- 3650:291 Elementary Classical Physics I 1 4
- 4800:111 Introduction to Biomedical Engineering Design
  Second Writing Course 1,3 3

Hours: 17

2nd Year
Fall Semester
- 3100:200 Human Anatomy & Physiology I 3
- 3100:201 Human Anatomy & Physiology Laboratory I 1
- 3450:223 Analytic Geometry-Calculus III 1 4
- 3650:292 Elementary Classical Physics II 1 4
- 4300:201 Statics 1 3
- 4800:201 Biomedical Engineering Sophomore Seminar 1

Spring Semester
- 3100:202 Human Anatomy & Physiology II 3
- 3100:203 Human Anatomy & Physiology Laboratory II 1
- 3150:154 Qualitative Analysis 2

3rd Year
Fall Semester
- 3450:335 Introduction to Ordinary Differential Equations 3
- 4300:202 Introduction to Mechanics of Solids 3
- 4600:203 Dynamics 1 3

Summer Semester
- 4100:300 Cooperative Education Work Period (Possible)

Hours: 15

Spring Semester
- 4100:301 Cooperative Education Work Period
- 3470:461 Applied Statistics 4
- General Education or Honors Distribution 4 3

Hours: 7

4th Year
Fall Semester
- 4100:302 Cooperative Education Work Period
- 4400:307 Basic Electrical Engineering 4
- 4600:300 Thermodynamics I 3
- 4800:220 Biomedical Computing 3
- 4800:300 Biomaterials 3
- 4800:401 Introduction to Biomaterials Laboratory 2
- General Education or Honors Distribution 4 3

Hours: 18

Summer Semester
- 4100:403 Cooperative Education Work Period
- 4800:305 Introduction to Biophysical Measurements 4
- 4800:440 Advanced Biomaterials 3
- 4800:491 Biomedical Engineering Design I 2
- Biomedical Engineering Elective 5 3
- General Education or Honors Distribution 4 3

Hours: 15

5th Year
Fall Semester
- 4800:305 Introduction to Biophysical Measurements 4
- 4800:440 Advanced Biomaterials 3
- 4800:491 Biomedical Engineering Design I 2
- Biomedical Engineering Elective 5 3
- General Education or Honors Distribution 4 3

Hours: 9

Spring Semester
- 4800:492 Biomedical Engineering Design II 2
- Biomedical Engineering Elective 5 3
- Biomedical Engineering Elective 5 3
<table>
<thead>
<tr>
<th>Course Type</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Education or Honors Distribution</td>
<td>4</td>
</tr>
<tr>
<td>General Education or Honors Distribution</td>
<td>4</td>
</tr>
<tr>
<td>General Electives</td>
<td>4</td>
</tr>
<tr>
<td><strong>Hours</strong></td>
<td><strong>18</strong></td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td><strong>134</strong></td>
</tr>
</tbody>
</table>

1. Honors sections may be available; check the schedule of classes.
2. The Biomedical Engineering Department recommends that English Composition I be used to satisfy writing course requirement but other choices are available. See the General Education Program for details.
3. Check General Education Program or Honors Distribution to find courses that satisfy the second writing course requirement.
4. Credit hours shown for General Education or Honors Distribution are general guidelines only. These courses should be chosen in accordance with the appropriate General Education curriculum guide (for non-honors students) or Honors Distribution (for honors students). Honors students must also ensure that their course selections meet additional requirements not shown on this curriculum guide.
5. Biomedical Engineering Electives must include a minimum of 3 credits from Biomedical Engineering (4800). All other electives may be chosen from a list of Approved Electives.