

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 and Polymer Science**, 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		Hours
3150:151	Principles of Chemistry I ¹	3
3150:152	Principles of Chemistry I Laboratory	1
3300:111	English Composition I ^{1,2}	3
3450:221	Analytic Geometry-Calculus I ¹	4
4800:101	Tools for Biomedical Engineering	3
Hours		14
Spring Semester		Hours
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	3
	Second Writing Course ^{1,3}	3
Hours		17

2nd Year

Fall Semester		Hours
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
Hours		16
Spring Semester		Hours
3100:202	Human Anatomy & Physiology II	3
3100:203	Human Anatomy & Physiology Laboratory II	1

3150:154	Qualitative Analysis	2
3450:335	Introduction to Ordinary Differential Equations	3
4300:202	Introduction to Mechanics of Solids	3
4600:203	Dynamics ¹	3
Hours		15

Summer Semester

4100:300	Cooperative Education Work Period (Possible)	
Hours		0

3rd Year

Fall Semester

3150:263	Organic Chemistry Lecture I	3
3150:265	Organic Chemistry Laboratory I	2
3600:120	Introduction to Ethics	3
4800:362	Transport Fundamentals for Biomedical Engineering	3
4800:365	Mechanics of Biological Tissues	3
Hours		14

Spring Semester

4100:301	Cooperative Education Work Period	0
Hours		0

Summer Semester

3470:461	Applied Statistics	4
	General Education or Honors Distribution ⁴	3
Hours		7

4th Year

Fall Semester

4100:302	Cooperative Education Work Period	0
Hours		0

Spring Semester

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	0
Hours		0

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		15

Spring Semester

4800:492	Biomedical Engineering Design II	2
	Biomedical Engineering Elective ⁵	3

2 Biomedical Engineering (Biomaterials and Tissue Track), Co-op Option, BS

Biomedical Engineering Elective ⁵	3
General Education or Honors Distribution ⁴	3
General Education or Honors Distribution ⁴	3
General Electives	4
Hours	18
Total Hours	134

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.