

# MINOR IN BIOMEDICAL ENGINEERING

Biomedical engineering is an emerging field that uses engineering concepts to develop solutions in biology and the medical field. It involves the application of engineering and technology to living systems. This minor is beneficial not only for engineering students, but also for other students in the College of Science, Engineering, and Technology.

## CURRICULUM

Code	Title	Credits
<b>Required Courses</b>		
BIO 110	General Biology	3
CHM 321	Organic Chemistry I	3
CHM 322	Organic Chemistry II	3
XXX XXX	Engineering Elective	3
EEN 211	Material Science & Engineering, Material Science	3
EEN 481 or EEN 482	Biomedical Engineering Micro-Devices & Systems Bioelectrics	3
<b>Total Credits</b>		<b>18</b>

Note: Students must fulfill the pre-requisite requirements prior to enrolling in the courses for the minor.

- BIO 110 General Biology (Pre-requisites required: none; Co-requisite: BIO 110L General Biology Laboratory or consent of Chair)
- CHM 321 Organic Chemistry I (Pre-requisites required: CHM 222 General Chemistry II or CHM 224 General Chemistry II)
- CHM 322 Organic Chemistry II (Pre-requisite required: CHM 321 Organic Chemistry I)
- EEN 211 Material Science & Engineering, Material Science: (Pre-requisite required: CHM 210 General Chemistry for Engineers or CHM 221 General Chemistry I)
- EEN 481 Biomedical Engineering Micro-Devices & Systems: (Pre-requisite or Co-requisite: University Physics I (PHY 160 University Physics I) and General Chemistry (CHM 210 General Chemistry for Engineers or CHM 221 General Chemistry I)
- EEN 482 Bioelectrics: (Same as EEN 481 Biomedical Engineering Micro-Devices & Systems)
- One of the following courses: EEN 305 Signals and Systems, EEN 481 Biomedical Engineering Micro-Devices & Systems, or EEN 482 Bioelectrics

## CURRICULUM 2

Code	Title	Credits
<b>Required Courses</b>		
BIO 110	General Biology	3
CHM 321	Organic Chemistry I	3
CHM 322	Organic Chemistry II	3
BIO 469	Biochemistry	3
EEN 211	Material Science & Engineering, Material Science	3
EEN 350	Scientific Instrumentation	3
<b>Total Credits</b>		<b>18</b>

## Note:

Students must fulfill the pre-requisite requirements prior to enrolling in the courses for the minor.

- BIO 110 General Biology (Pre-requisites required: none; Co-requisite: BIO 110L General Biology Laboratory or consent of Chair)
- CHM 321 Organic Chemistry I (Pre-requisites required: CHM 222 General Chemistry II or CHM 224 General Chemistry II)
- BIO 469 Biochemistry (Pre-requisite required: CHM 322 Organic Chemistry II) or CHM 431 Biochemistry I (Pre-requisites required: CHM 322 Organic Chemistry II, CHM 362 Physical Chemistry II)
- EEN 211 Material Science & Engineering, Material Science: Materials Science and Engineering (Pre-requisite required: CHM 210 General Chemistry for Engineers or CHM 221 General Chemistry I)
- EEN 350 Scientific Instrumentation (Pre-requisite required: EEN 102 Eng Use Computers or CSC 170 Computer Programming I; EEN 201 Electrical Network Theory I or equivalent)
- EEN 481 Biomedical Engineering Micro-Devices & Systems: Biomedical Engineering Microdevices and Systems (Pre-requisite or Co-requisite: University Physics I (PHY 160 University Physics I) and General Chemistry (CHM 210 General Chemistry for Engineers or CHM 221 General Chemistry I)