

## Biological Engineering

Technical Electives

February 2017

Courses in **bold** offered in Summer/Fall 2017

Highly recommended for all emphasis areas: **Engr2100 Circuit Theory** (to prepare for BE4380)

### **Bioenvironmental** Emphasis

<b>BE 4150</b>	<b>Soil and Water Conservation Engineering</b>
BE 4250	Irrigation and Drainage Engineering
<b>BE 4350</b>	<b>Watershed Modeling Using GIS</b>
<b>ChE4285</b>	<b>Pollution Prevention (online)</b>
ChE 4312	Air Pollution Control
<b>CvE 3050</b>	<b>Introduction to Geographic Information Systems GIS</b>
<b>CvE 3200</b>	<b>Fundamentals of Environmental Engineering (4)</b>
<b>CvE 3400</b>	<b>Fundamentals of Geotechnical Engineering (4)</b>
<b>CvE 3702</b>	<b>Hydrology</b>
<b>CvE 4230</b>	<b>Introduction to Water Quality</b>
CvE 4240	Water Quality Analysis
CvE 4250	Environmental Regulatory Compliance
Geog4940	Advanced Geographic Information Systems (GIS2)
IMSE 4001	Life Cycle Analysis

### **Bioprocessing** Emphasis

<b>BE 3075</b>	<b>Introduction to Materials Engineering (Summer online)</b>
<b>BE 3170</b>	<b>Biomaterials</b>
BE 4480	Physics and Chemistry of Materials
BE/ChE 4315	Introduction to Bioprocess Engineering
<b>BE/ChE 4316</b>	<b>Biomass Refinery Operations</b>
<b>ChE 3235</b>	<b>Principles of Chemical Engineering II</b>
<b>ChE 4319</b>	<b>Introduction Polymer Materials</b>
<b>ChE 3262</b>	<b>Chemical Engineering Thermodynamics II</b>
<b>ChE 4363</b>	<b>Chemical Reaction Engineering and Technology</b>
IMSE 4001	Life Cycle Analysis

### **Biomedical** Emphasis

<b>BE 3075</b>	<b>Introduction to Materials Engineering (Summer online)</b>
<b>BE 3170</b>	<b>Biomaterials</b>
<b>BE 4070</b>	<b>Bioelectricity</b>
<b>BE 4001</b>	<b>Vascular Biomechanics</b>
BE 4170	Biomaterials Interfaces for Implantable Devices
<b>BE 4370</b>	<b>Orthopaedic Biomechanics</b>
<b>BE 4420</b>	<b>Introduction to Biomedical Imaging (Summer online)</b>
BE 4470	Biomolecular Engineering & Nanobiotechnology
BE 4480	Physics and Chemistry of Materials
<b>BE 4570</b>	<b>Fluorescent Imaging</b>
<b>BE 4575</b>	<b>Computational Neuroscience (4)</b>
BE 4770	Biomedical Optics