

BIOMOLECULAR ENGINEERING, MINOR

Program Overview

Biomolecular engineering seeks to convert molecular-level knowledge of biological phenomena into potentially useful biochemical and chemical products and processes that are derived from living cells or their components. Biomolecular engineering expertise includes cell biology, biochemistry, cell engineering and biotechnology, and bioprocess engineering. Both industry and academia have high demand for graduates with biomolecular engineering expertise. Areas of application include drug research and development, biosensors, and biomaterials for regenerative medicine applications.

Undergraduate Policies

For undergraduate policies and procedures, please review the Undergraduate Academics section of the General Bulletin.

Program Requirements

Biomolecular engineering focuses on the molecular length scale and seeks to convert molecular-level knowledge of biological phenomena into useful biochemical and chemical products and processes that are derived from living cells or their components. Areas of application include: drug research and development, biosensors, and regenerative medicine applications. Students take five courses to complete the minor.

Code	Title	Credit Hours
Required Courses:		
ECHE 340	Biochemical Engineering	3
ECHE 355	Quantitative Molecular, Cellular and Tissue Bioengineering	3
ECHE 386	Protein Engineering	3
<i>Choose two of the following:</i>		6-8
BIOL 214	Genes, Evolution and Ecology	
BIOL 343	Microbiology	
BIOC 307	Introduction to Biochemistry: From Molecules To Medical Science	
ECHE 260	Introduction to Chemical Systems ^a	
ECHE 363	Thermodynamics of Chemical Systems ^a	
Total Credit Hours		15-17

^a Students majoring in chemical engineering may not count this course toward the biomolecular engineering minor.