Minor in Biology

Program Offered

- Minor in Biology

Program Description

The biology minor is designed for students outside of the Quantitative Biosciences and Engineering (QBE) major who would like to complement their degree specific learning with knowledge of fundamental biology concepts as well as modern technical applications of biological knowledge. Our understanding of biology is growing exponentially, allowing us to begin engineering biological systems to improve the environment and human health. This minor is open to students from any program outside of QBE and is specifically valuable to students interested in the interdisciplinary applications of their degree with biological systems to address issues impacting earth, energy, and the environment.

Primary Contact

Quantitative Biosciences and Engineering (QBE) Program
https://qbe.mines.edu/

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The minor requires 18 credits, which includes 8 credits of required courses and at least 10 credits of elective courses. At least 9 credits must not double count with the major, other than free electives.

Students pursuing the bachelor of science degree in quantitative biosciences and engineering (QBE) are not eligible to pursue the minor in biology as the course requirements and content do not significantly differ.

Special topics courses related to biology may be approved on a case-by-case basis. Additional classes with biological content may be approved by the minor director.

Required courses:

CBEN110	FUNDAMENTALS OF BIOLOGY I	4.0
CBEN120	FUNDAMENTALS OF BIOLOGY II	4.0
BIOL ELECT	Biology Elective Courses	10.0
Total Semester Hrs		**18.0**

ELECTIVE COURSES

BIOL300	INTRODUCTION TO QUANTITATIVE BIOLOGY I	3.0
BIOL301	INTRODUCTION TO QUANTITATIVE BIOLOGY II	3.0
BIOL 499	RESEARCH PROJECT OR INTERNSHIP	3.0
CBEN304	ANATOMY AND PHYSIOLOGY	3.0
CBEN311	INTRODUCTION TO NEUROSCIENCE	3.0
CBEN320	CELL BIOLOGY AND PHYSIOLOGY	3.0
CBEN321	INTRO TO GENETICS	4.0
CBEN322	BIOLOGICAL PSYCHOLOGY	3.0
CBEN324	INTRODUCTION TO BREWING SCIENCE	3.0
CBEN411	NEUROSCIENCE, MEMORY, AND LEARNING	3.0
CBEN412	INTRODUCTION TO PHARMACOLOGY	3.0
CBEN413	QUANTITATIVE HUMAN BIOLOGY	3.0
CBEN431	IMMUNOLOGY FOR ENGINEERS AND SCIENTISTS	3.0
CEEN460	MOLECULAR MICROBIAL ECOLOGY AND THE ENVIRONMENT	3.0
CEEN461	FUNDAMENTALS OF ECOLOGY	3.0
CHGN409	BIOLOGICAL INORGANIC CHEMISTRY	3.0
CHGN428	BIOCHEMISTRY	3.0
CHGN429	BIOCHEMISTRY II	3.0
CHGN441	THE CHEMISTRY AND BIOCHEMISTRY OF PHARMACEUTICALS	3.0
CHGN462	MICROBIOLOGY	3.0
CSCI303	INTRODUCTION TO DATA SCIENCE	3.0
MATH431	MATHEMATICAL BIOLOGY	3.0
MEGN330	INTRODUCTION TO BIOMECHANICAL ENGINEERING	3.0
MTGN472	BIOMATERIALS I	3.0