

List of Intermediate and Advanced Elective Courses for Biophysics Concentration

Students must take four electives, two of which must be above the introductory level (i.e., intermediate or advanced). Students can choose from biology, physics, math/applied math, chemistry, neuroscience, engineering or computer science. The list of example courses below is not comprehensive and students should work closely with their concentration advisor to determine the combination of courses that is most appropriate for their overall goals and trajectory.

Biology

BIOL 1100: Cell Physiology and Biophysics
BIOL 1140: Tissue Engineering
BIOL 1150: Stem Cell Engineering
BIOL 1300: Biomolecular Interactions: Health, Disease and Drug Design
BIOL 1800: Animal Locomotion
BIOL 1885: Human Anatomy and Biomechanics

Physics

PHYS 0500: Advanced Classical Mechanics
PHYS 0560: Experiments in Modern Physics
PHYS 1410: Quantum Mechanics A
PHYS 1610: Biological Physics

Mathematics/Applied Mathematics

MATH 0520: Linear Algebra
APMA 0330: Methods of Applied Mathematics
APMA 0350: Applied Ordinary Differential Equations

Chemistry

CHEM 0400: Biophysical and Bioinorganic Chemistry
CHEM 0500: Inorganic Chemistry
CHEM 1060: Advanced Inorganic Chemistry
CHEM 1230: Chemical Biology
CHEM 1240: Biochemistry

Neuroscience

NEUR 1020: Principles of Neurobiology
NEUR 1030: Neural Systems

Engineering

ENGN 0810: Fluid Mechanics
ENGN 1110: Transport and Biotransport Processes
ENGN 1220: Neuroengineering
ENGN 1490: Biomaterials
ENGN 1931S: Medical Physics

Computer Science

CSCI 0150: Introduction to Object-Oriented Programming and Computer Science
CSCI 0170: Computer Science: An Integrated Introduction
CSCI 0190: Accelerated Introduction to Computer Science