

## **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

### **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