# BIOPHYSICS

COLLEGE OF ARTS & SCIENCES

## ABOUT THE MAJOR

Biophysics bridges the gap between physics and life sciences, unlocking the secrets of how living systems function.

You'll apply cutting-edge techniques to tackle urgent global challenges — climate change, water scarcity, and more — through innovative research, problem-solving and hands-on learning.

## CONTACT US

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## OUTCOMES & OPPORTUNITIES

- Our students collaborate closely with faculty on diverse research projects, gaining hands-on experience that prepares them for graduate studies and competitive research opportunities across the country.
- Many of our graduates go on to advanced study in biomedical engineering, medical physics, biostatistics, medicine, optometry, and atmospheric science at top institutions such as Columbia, Carnegie Mellon, Johns Hopkins and the University of Pennsylvania.
- Our graduates work at employers such as Geisinger Commonwealth School of Medicine, GESTAR, Penn Medicine Valley Forge, and Thorlabs, Inc.



THE UNIVERSITY *of* SCRANTON

# BIOPHYSICS

## 129 Credits

LEARN MORE!

### 1st Year: FALL

| COURSE# | COURSE TITLE | CREDITS |
|---|---|---|
| **PHYS 140/PHYS 140L** | Elements of Physics I | 4 |
| **BIOL 141/141L** | General Biology | 4.5 |
| **MATH 109** | Pre-Calculus Mathematics or **MATH 114** Calculus I | 4 |
| **PHYS 150** | Foundations of Physics & Engineering or **ENGR 150** Foundations of Physics & Engineering | 3 |
| **First Year Seminar** | | 0 |
| | Total Credits: **15.5** | |

### 1st Year: SPRING

| COURSE# | COURSE TITLE | CREDITS |
|---|---|---|
| **PHYS 141/PHYS 141L** | Elements of Physics II | 4 |
| **BIOL 142/BIOL142L** | General Biology | 4.5 |
| **MATH 114** | Calculus I or **MATH 221** Calculus II | 4 |
| **WRTG 107** | Composition | 3 |
| **First Year Seminar** | | 0 |
| | Total Credits: **15.5** | |

### 2nd Year: FALL

| COURSE# | COURSE TITLE | CREDITS |
|---|---|---|
| **PHYS 270/PHYS 270L** | Elements of Modern Physics | 4 |
| **CHEM 112/112L** | General Chemistry | 4.5 |
| **EE 250/EE250L** | Computational Tools for Physics and Engineering | 4 |
| **MATH 221** | Calculus II or **MATH 222** Calculus III or **MATH 222** Calculus III | 4 |
| **PHIL 120** | Introduction to Philosophy | 3 |
| | Total Credits: **19.5** | |

### 2nd Year: SPRING

| COURSE# | COURSE TITLE | CREDITS |
|---|---|---|
| **PHYS 352** | Statistical and Engineering Thermodynamics | 3 |
| **CHEM 113/113L** | Analytical Chemistry | 4.5 |
| **EE 241/EE 241L** | Circuit Analysis | 4 |
| **MATH 341** | Differential Equations | 4 |
| | Total Credits: **15.5** | |

### 3rd Year: FALL

| COURSE# | COURSE TITLE | CREDITS |
|---|---|---|
| **PHYS/BIOL/CHEM ELECT** | Physics, Biology or Chemistry Elective | 3 |
| **CHEM 232/232L** | Organic Chemistry | 4.5 |
| **T/RS 121** | Theology I: Introduction to the Bible | 3 |
| **PHIL 210** | Ethics | 3 |
| **S/BH ELECT** | Social/Behavioral Elective | 3 |
| | Total Credits: **16.5** | |

### 3rd Year: SPRING

| COURSE# | COURSE TITLE | CREDITS |
|---|---|---|
| **CHEM 233/233L** | Organic Chemistry | 4.5 |
| **T/RS 122** | Theology II: Introduction to Christian Theology | 3 |
| **PHIL ELECT** | Philosophy Elective or **T/RS ELECT** Theology Elective | 3 |
| **S/BH ELECT** | Social/Behavioral Elective | 3 |
| **HUMN ELECT** | Humanities Elective | 3 |
| | Total Credits: **16.5** | |

### 4th Year: FALL

| COURSE# | COURSE TITLE | CREDITS |
|---|---|---|
| **PHYS/BIOL/CHEM ELECT** | Physics, Biology or Chemistry Electives | 6 |
| **HUMN ELECT** | Humanities Electives | 6 |
| **FREE ELECT** | Free Elective | 3 |
| | Total Credits: **15** | |

### 4th Year: SPRING

| COURSE# | COURSE TITLE | CREDITS |
|---|---|---|
| **PHYS/BIOL/CHEM ELECT** | Physics, Biology or Chemistry Electives | 6 |
| **HUMN ELECT** | Humanities Electives | 6 |
| **FREE ELECT** | Free Elective | 3 |
| | Total Credits: **15** | |

This is a sample curriculum. Please refer to the Undergraduate Catalog at **scranton.edu/catalog**.

09/2026