# Bioengineering Minor

**Jenni Van Wyk, Student Recruiter & Advisor**
Knight Campus, room 261
541-346-2120
bioengineering@uoregon.edu

To complete the bioengineering minor, you must complete 12 elective credits. At least 4 must be from the BIOE subject-code and up to 8 credits from this list may be applied towards the upper-division bioengineering minor requirement. Courses used to complete a student's major core requirements may not be applied towards the bioengineering minor elective requirement.

Bioengineering resides at the interface of engineering and the natural sciences, and a thorough knowledge of both is essential for innovation and problem solving in the discipline. The courses below provide an opportunity for students to strengthen their knowledge within their primary discipline in several areas particularly relevant to bioengineering, including: genetics, microbiology, physiology, chemistry, neuroscience, physics and electronics.

## Minor in Bioengineering

| Code | Title | Credits |
|---|---|---|
| **Core Courses** | | |
| BIOE 251<br>& BIOE 252<br>& BIOE 253 | Fundamentals of Bioengineering I<br>and Fundamentals of Bioengineering II<br>and Fundamentals of Bioengineering III | 12 |
| **Upper-Division Courses** | | |
| 300-/400-level BIOE Course | | 4 |
| 300-/400-level BIOE or Approved Courses | | 8 |
| **Total Credits** | | **24** |

**BIOE minor interdisciplinary electives**

*Up to eight credits from this list may be applied towards the upper-division bioengineering minor requirement. Courses used to complete a student's major core requirements may not be applied towards the bioengineering minor elective requirement.*

Bioengineering resides at the interface of engineering and the natural sciences, and a thorough knowledge of both is essential for innovation and problem solving in the discipline. The courses below provide an opportunity for students to strengthen their knowledge within their primary discipline in several areas particularly relevant to bioengineering, including: genetics, microbiology, physiology, chemistry, neuroscience, physics and electronics.

## Approved Courses

| Code | Title | Credits |
|---|---|---|
| **Biology** | | |
| BI 320 | Molecular Genetics | 4 |
| BI 322 | Cell Biology | 4 |
| BI 326 | Immunology and Infectious Disease | 4 |
| BI 328 | Developmental Biology | 4 |
| BI 330 | Microbiology | 3 |
| BI 331 | Microbiology Laboratory | 3 |
| BI 353 | Sensory Physiology | 4 |
| BI 358 | Investigations in Medical Physiology | 4 |
| BI 360 | Neurobiology | 4 |
| BI 423 | Human Molecular Genetics | 4 |
| BI 424 | | 4 |
| BI 426 | Genetics of Cancer | 4 |
| BI 427 | Molecular Genetics of Human Disease | 4 |
| BI 428 | Developmental Genetics | 4 |
| BI 461 | Systems Neuroscience | 4 |
| BI 466 | Developmental Neurobiology | 4 |
| BI 485 | | 4 |
| **Chemistry and Biochemistry** | | |
| CH 360 | Physiological Biochemistry | 4 |
| CH 461 | Biochemistry | 4 |
| CH 462 | Biochemistry | 4 |
| CH 463 | Biochemistry | 4 |
| CH 464 | RNA Biochemistry | 4 |
| CH 465 | Physical Biochemistry | 4 |
| CH 466 | Structural Biochemistry | 4 |
| CH 467 | Biochemistry Laboratory | 4 |
| **Physics** | | |
| PHYS 351 | Foundations of Physics II | 4 |
| PHYS 352 | Foundations of Physics II | 4 |
| PHYS 353 | Foundations of Physics II | 4 |
| PHYS 362 | | 4 |
| PHYS 411 | Mechanics, Electricity, and Magnetism | 4 |
| PHYS 412 | Mechanics, Electricity, and Magnetism | 4 |
| PHYS 413 | Mechanics, Electricity, and Magnetism | 4 |
| PHYS 421M | Partial Differential Equations: Fourier Analysis I | 4 |
| PHYS 431 | Analog Electronics | 4 |
| PHYS 432 | Digital Electronics | 4 |
| PHYS 481 | Design of Experiments | 4 |
| **Human Physiology** | | |
| HPHY 321 | Human Anatomy I | 5 |
| HPHY 322 | Human Physiology I | 5 |
| HPHY 323 | Human Anatomy II | 5 |
| HPHY 324 | Human Physiology II | 5 |
| HPHY 325 | Human Anatomy and Physiology III | 5 |
| HPHY 362 | Tissue Injury and Repair | 4 |
| HPHY 381 | Biomechanics | 4 |
| HPHY 432 | Neural Development | 4 |
| HPHY 436 | Clinical Neuroscience | 4 |

At least 12 upper-division credits must be completed in residence.