

BIOMEDICAL ENGINEERING UNDERGRADUATE ACADEMIC CERTIFICATE

All required coursework must be completed with a grade of C or better (O-10-a (<https://catalog.uidaho.edu/general-requirements-academic-procedures/o-miscellaneous/>)).

Code	Title	Hours
BE 421	Image Processing and Computer Vision	3
BE 422	Tissue Biomechanics	3
BE 423	Tissue Engineering and Regenerative Medicine	3
Select one of the following:		3-4
BIOL 227	Anatomy and Physiology I	
BIOL 310	Genetics	
BIOL 312	Molecular and Cellular Biology	
BIOL 428	Microscopic Anatomy	
BIOL 432	Immunology	
BIOL 433	Pathogenic Microbiology	
BIOL 444	Genomics	
BIOL 447	Virology	
BIOL 454	Biochemistry II	
BIOL 461	Neurobiology	
BIOL 474	Developmental Biology	
CHEM 372 & CHEM 374	Organic Chemistry II and Organic Chemistry II: Lab	
CHEM 472	Medicinal Chemistry	
CS 415	Computational Biology: Sequence Analysis	
GENE 440	Advanced Laboratory Techniques	
GENE 488	Genetic Engineering	
MATH 437	Mathematical Biology	
ME 454	Assistive Technologies for Physical Impairment	
ESHS 300	Applied Human Anatomy and Biomechanics	
ESHS 360	Motor Behavior	
PSYC 372	Physiological Psychology	
PSYC 425	Psychology of Action	
PSYC 444	Sensation and Perception	
PSYC 446	Engineering Psychology	
Total Hours		12-13

Courses to total 12 credits for this certificate

The following student outcomes will be applied specifically to assess the biomedical engineering certificate:

1. an ability to identify, formulate, and solve complex biomedical engineering problems by applying principles of engineering, science, and mathematics.
2. an ability to communicate effectively with a range of audiences.
3. an ability to recognize ethical and professional responsibilities in biomedical engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.

4. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

By meeting these student outcomes, students who complete the biomedical engineering certificate will have a fundamental knowledge in biomedical engineering and be prepared to contribute to the field.