

Courses in italics are prerequisites

Courses in bold are co-requisites

*A grade of C or better is required before registration is permitted in upper-division courses.

See course catalog for complete degree requirements and additional information at uidaho.edu/registrar/classes/catalogs.

Last updated 7/22/20

FRESHMAN			SPRING		
FALL			SPRING		
BE 142	Introduction to Biological Engineering, Fall only	2	BIOL 115/ 115L	Cells & the Evolution of Life with Lab <i>CHEM 111</i>	4
*CHEM 111/ 111L	General Chemistry I <i>C or better in CHEM 101, MATH 143, MATH 160 or MATH 170; sufficient test scores; or permission</i>	4	CHEM 112/ 112L	General Chemistry II with Lab <i>CHEM 111</i>	5
ENGL 102	College Writing and Rhetoric <i>English 101 or sufficient test scores</i>	3	*MATH 175	Calculus II <i>MATH 170</i>	4
ELECTIVE	Humanities/Social Science Elective	3	ELECTIVE	Humanities/Social Science Elective	3
*MATH 170	Calculus I <i>C or better in MATH 143 and 144 or sufficient test scores</i>	4			
	Total Credits	16		Total Credits	16

SOPHOMORE			SPRING		
FALL			SPRING		
*BE 242	Biological Engineering Analysis and Design <i>MATH 170, MATH 175, Fall only</i>	3	CHEM 277/278	Organic Chemistry with Lab <i>CHEM 112</i>	4
BIOL 250/255	General Microbiology with Lab <i>BIOL 115/115L, CHEM 101 or 111</i>	5	*ENGR 210	Engineering Statics <i>MATH 170</i>	3
*PHYS 211/ 211Lab	Engineering Physics with Lab <i>MATH 170 or MATH 170</i>	4	ENGR 240	Introduction to Electrical Circuits <i>PHYS 211, MATH 175</i>	3
MATH 275	Calculus III <i>MATH 175</i>	3	MATH 310	Ordinary Differential Equations <i>MATH 175 (MATH 275 recommended)</i>	3
			PHYS 212	Engineering Physics II (no lab) <i>PHYS 211, MATH 175</i>	3
	Total Credits	15		Total Credits	16

JUNIOR			SPRING		
FALL			SPRING		
STAT 301	Probability & Statistics <i>MATH 175</i>	3	BE 462	Electric Power and Controls <i>ENGR 240, MATH 310</i>	3
BIOL 380	Biochemistry I (no lab) <i>CHEM 112, CHEM 277</i>	4	ENGR 350	Engineering Mechanics of Materials <i>ENGR 210, MATH 175, MATH 310</i>	3
ENGR 320	Engineering Thermodynamics & Heat Transfer <i>MATH 310, ENGR 210 recommended</i>	3	ELECTIVE	Communications Elective <i>Fulfills U of I General Degree Requirements (J-3)</i>	2/3
ENGR 335	Engineering Fluid Mechanics <i>MATH 275, ENGR 210</i>	3	ELECTIVE	Humanities/Social Science Elective	3
ENGR 360	Engineering Economy <i>Junior standing</i>	2	ELECTIVE	Engineering Elective	3
ENGR 105 or GEOG 385	Engineering Graphics OR GIS Primer	2 or 3	ELECTIVE	Technical Elective	2
	Total Credits	16/17		Total Credits	16/17

SENIOR			SPRING		
FALL			SPRING		
BE 478	Engineering Design I <i>BE 242, ENGR 320, 335 & 350</i>	3	BE 479	Engineering Design II <i>BE 478</i>	3
BE 491	Senior Seminar <i>Senior standing</i>	1	BE 461	Bioprocess Engineering <i>MATH 310, ENGR 320 & 335</i>	3
BE 441	Instrumentation and Measurements <i>ENGR 240, STAT 301</i>	3	ELECTIVE	Humanities/Social Science Elective	3
ELECTIVE	Technical Elective	3	ELECTIVE	Technical Elective	3
ELECTIVE	Engineering Elective	3	ELECTIVE	Engineering Elective	3
ELECTIVE	Humanities/Social Science Elective	3			
	Total Credits	16		Total Credits	15



University of Idaho

College of Engineering



BIOLOGICAL ENGINEERING

Creatively solve problems involving plants, animals, microorganisms and biological materials. Integrate engineering principals into biological systems to improve environmental quality, produce a value-added product, harvest and process food, or manufacture medical devices.

ABOUT YOUR DEGREE PATH

Biological Engineering majors take courses in biology, chemistry, mathematics, and physics to prepare for more advanced courses in transport processes, bio-based products, bioenergy, biomedical engineering, bioprocessing and sustainability.

Much of your education takes place in labs. Explore water flow, quality and use in the water resources lab and in the field, make discoveries about renewable energy in the advanced biofuel lab, design controls and instruments in the power lab, analyze medical images in the neurophysiology lab, and operate bioreactors in our cell and tissue engineering lab.

Graduates apply their technical expertise to solve problems by designing components, processes and systems. Graduates communicate and work effectively in teams and have adequate knowledge in inorganic/organic chemistry, biochemistry, biological/biomedical science and environmental science.

MATCH YOUR INTERESTS

- Biomedical
- Cell and Tissue Engineering
- Drug and Gene Delivery
- Neural Imaging and Modeling
- Medicine and Pharmaceuticals
- Bioenergy and Biofuels
- Precision Agriculture
- Environmental Impact Assessment
- Waste Treatment Technology
- Water Resources and Sustainability
- Biomaterials
- Bionanotechnology
- Bioprocessing
- Food Science
- Synthetic Biology

YOUR DEGREE IS ACCREDITED

Our undergraduate Biological Engineering program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

DEPARTMENT OF CHEMICAL & BIOLOGICAL ENGINEERING

208-885-6182 or 88-88-UIDAHO ext. 6182

Engineering Physics Bldg. 419

chembioeng@uidaho.edu

uidaho.edu/engr/be