Bioengineering (BIOE)

Courses

BIOE 196. Field Studies: [Topic]. 1-12 Credits.
A series of practical experiences on or off campus to understand principles or develop skills in performing selected tasks.
Repeatable 99 times

BIOE 198. Laboratory Projects: [Topic]. 1-12 Credits.
An experience in a lab setting in which a group of students focus on skills development rather than content master.
Repeatable 99 times

BIOE 199. Special Studies: [Topic]. 1-5 Credits.
Experimental course - topic varies.
Repeatable 99 times

BIOE 251. Fundamentals of Bioengineering I. 4 Credits.
This course introduces students to foundational principles in bioengineering. Topics include units, dimensional analysis, energy balances, conservation of mass, energy, and momentum, and introductory biomechanics.
Requisites: Prereq: MATH 247 or MATH 252Z. Recommend co-req: PHYS 201 or PHYS 251.

BIOE 252. Fundamentals of Bioengineering II. 4 Credits.
This course introduces students to foundational principles in bioengineering. Topics include linear circuits, Fourier transforms, fluid pressure, the Bernoulli Equation, conservation principles in fluid control volumes, and laminar fluid flow.
Requisites: Prereq: MATH 247 or MATH 252Z; recommend co-req: PHYS 202 or PHYS 252.

BIOE 253. Fundamentals of Bioengineering III. 4 Credits.
This course introduces students to foundational principles in bioengineering. Students will learn basic concepts and experimental approaches across a variety of bioengineering topics and applications, including mass and energy balances, biomass conversion, fluid flow, spectrophotometry, and diffusion.
Requisites: Prereq: MATH 247 or MATH 252Z; PHYS 202 or PHYS 252 recommended.

BIOE 299. Special Studies: [Topic]. 1-5 Credits.
Experimental course - topic varies.
Repeatable 99 times

BIOE 399. Special Studies: [Topic]. 1-5 Credits.
Experimental course - topic varies.
Repeatable 99 times

BIOE 401. Research: [Topic]. 1-12 Credits.
Disciplined inquiry of a topic with varying techniques and assignments suited to the nature and conditions of the problem being investigated. Often pursued in relation to a dissertation or thesis.
Repeatable 99 times

BIOE 402. Supervised College Teaching. 1-5 Credits.
A student, under faculty supervision and sponsorship, accepts responsibility for teaching a university course.
Repeatable 99 times

BIOE 403. Thesis. 1-12 Credits.
A written document resulting from study or research and submitted as a major requirement for a degree.
Repeatable 99 times

BIOE 404. Internship: [Topic]. 1-12 Credits.
Professional practice in an organization that integrates concepts studied at the university with career-related work experience.
Repeatable 99 times

BIOE 405. Reading and Conference: [Topic]. 1-5 Credits.
A particular selection of material read by a student and discussed in conference with a faculty member.
Repeatable 99 times

BIOE 406. Field Studies: [Topic]. 1-12 Credits.
A series of practical experiences on or off campus to understand principles or develop skills in performing selected tasks.
Repeatable 99 times

BIOE 407. Seminar: [Topic]. 1-5 Credits.
A small group of students studying a subject with a faculty member. Although practices vary, students may do original research and exchange results through informal lectures, reports, and discussions.
Repeatable 99 times

BIOE 408. Laboratory Projects: [Topic]. 1-12 Credits.
An experience in a lab setting in which a group of students focus on skills development rather than content master.
Repeatable 99 times

BIOE 409. Terminal Project. 1-12 Credits.
A presentation incorporating the knowledge and skills acquired from course work completed for a degree.
Repeatable 99 times

BIOE 410. Experimental Course: [Topic]. 1-5 Credits.
Experimental course - topic varies.
Repeatable 99 times

BIOE 410L. Experimental Course: [Topic]. 4 Credits.
Experimental course - topic varies.
Repeatable 99 times

BIOE 510. Experimental Course: [Topic]. 1-5 Credits.
Experimental course - topic varies.
Repeatable 99 times

BIOE 510L. Experimental Course: [Topic]. 4 Credits.
Experimental course - topic varies.
Repeatable 99 times

BIOE 601. Research: (Topic). 1-16 Credits.
Disciplined inquiry of a topic with varying techniques and assignments suited to the nature and conditions of the problem being investigated. Often pursued in relation to a dissertation or thesis.
Repeatable 99 times

BIOE 603. Dissertation. 1-16 Credits.
A written document resulting from study or research and submitted as a major requirement for a degree.
Repeatable 99 times

BIOE 607. Seminar: [Topic]. 1-5 Credits.
A small group of students studying a subject with a faculty member. Although practices vary, students may do original research and exchange results through informal lectures, reports, and discussions.
Repeatable 99 times

BIOE 610. Experimental Course: [Topic]. 1-5 Credits.
Experimental course - topic varies.
Repeatable 99 times

BIOE 610L. Experimental Course: [Topic]. 4 Credits.
Experimental course - topic varies.
Repeatable 99 times