

Biological Engineering B.S.B.E. Eight-Semester Degree Program

The Bachelor of Science in Biological Engineering program is eligible for students who want to participate in an Eight Semester Degree Program. The plan below lists a semester-by-semester sequence of courses to finish the degree in eight semesters. University core courses for engineering are listed at the bottom of this page. Students may submit a maximum of four (4) hours of "D" in BENG Courses for their degree.

Some courses are not offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course pre-requisites.

Fall Semester Year 1

1 GNEG 1111 Introduction to Engineering I
3 ENGL 1013 Composition I
3 CHEM 1113 University Chemistry for Engineers I (or CHEM 1103)
4 MATH 2554 Calculus I
4 PHYS 2054 University Physics I
15 Semester hours

Spring Semester Year 1

1 GNEG 1121 Introduction to Engineering II
3 ENGL 1023 Technical Composition II
4 Freshman Engineering Science Elective*
4 MATH 2564 Calculus II
3 U.S. History Requirement
15 Semester hours

Fall Semester Year 2

2 BENG 2632 Biological Engr Design Studio
4 MATH 2574 Calculus III
4 Sophomore Science Elective **
4 BIOL 1543/1541L Principles of Biology and Lab
3 MEEG 2003 Statics
17 Semester hours

Spring Semester Year 2

3 BENG 2643 Biological Engineering Design Methods
4 MATH 2584 Differential Equations
4 BIOL 2013/2011L General Microbiology w/Lab
3 MEEG 2403 Thermodynamics (OR CHEG 2313)
3 Humanities/Social Science Electives
17 Semester hours

Fall Semester Year 3

3 BENG 3733 Transport Phenomena in Biological Systems
3 BENG 3653 Global Bio-Energy Engineering
4 CHEM 3603/3601L Organic Chemistry I w/Lab
3 CVEG 3213, Hydraulics (OR MEEG 3503 OR CHEG 2133)
3 ELEG 3903 Electric Circuits and Machines
16 Semester hours

Spring Semester Year 3

3 BENG 3723 Unit Operations in Biological Engr
3 BENG 3113 Measurements and Controls for Biological Systems
4 CHEM 3613/3611L Organic Chemistry II w/Lab
3 BIOL 3863 General Ecology
3 CVEG 3223 Hydrology
16 Semester hours

Fall Semester Year 4

3 BENG 4813 Senior Biological Engineering Design I
3 BENG 4743, Food and Bio-Product Systems Engineering
3 BENG 4933 Sustainable Watershed Engineering
3 Humanities/Social Science Electives
3 Humanities/Social Science Electives
15 Semester hours

Spring Semester Year 4

2 BENG 4822 Senior Biological Engineering Design II
3 BENG 4663 Sustainable Biosystems Design
3 Engineering Elective
3 Fine Arts Elective (from University/State core list)
3 Humanities/Social Science Electives
3 Technical Elective
17 Semester hours

128 Total hours

* The Freshman Engineering Science Elective must be chosen from either (CHEM 1133/1131L or CHEM 1123/1121L) or PHYS 2074.

** The Sophomore Science Elective must be: PHYS 2074 if (CHEM 1133/1131L or CHEM 1123/1121L) was chosen as the Freshman Engineering Elective; or (CHEM 1133/1131L or CHEM 1123/1121L) if PHYS 2074 was chosen as the Freshman Engineering Science Elective. That is, both courses are required for the degree.