MISSION TO ACHIEVE SUSTAINABLE FOOD AND BIORESOURCES

Biological engineering (BE) applies engineering principles to the biological sciences to produce biofuels, food and fiber products and other agricultural products from renewable bio-resources. In addition, it evaluates packaging systems and designs, and introduces new technologies and methods to enhance agricultural production of crops and livestock. It also aims to protect the environment and conserve and replenish our natural resources.

About this Program

- College: Herbert Wertheim College of Engineering
- Degree: Bachelor of Science in Biological Engineering
- Credits for Degree: 128
- Specializations: Agricultural Production Engineering | Biosystems Engineering | Land and Water Resources Engineering | Packaging Engineering

Goals

To develop biological engineering professionals with technical proficiency and societal responsibility.

Educational Objectives

Graduates from the University of Florida’s undergraduate degree program in biological engineering will be prepared for at least one of the following:

- Successful careers in the profession of biological engineering or other related fields.
- Gaining admission to a graduate and/or professional degree program.

Related Biological Engineering Programs

- Combined Degree

Goals

To develop biological engineering professionals with technical proficiency and societal responsibility.

Mission

The department will develop professionals, create and disseminate knowledge, and promote the application of engineering and management principles to meet societal needs with respect to agriculture, packaging, land and water resources, and biological systems.

Related Biological Engineering Programs

- Combined Degree

Academic Learning Compact

The curriculum emphasizes engineering solutions to problems associated with biological and agricultural systems that often are related to renewable natural resources. Students gain knowledge through formal courses, laboratory experimentation and individual experience. Students will learn to utilize math, science and engineering principles to analyze and interpret data, to design and conduct experiments, systems and components and to effectively communicate results within an appropriate presentation style.

Before Graduating Students Must

- Pass assessment by two or more faculty and/or industry practitioners of student performance on a major design experience.
- Pass assessment in two courses of individual assignments targeted to each learning outcome.
- Complete an exit interview in your final semester.
- Complete requirements for the baccalaureate degree, as determined by faculty.

Students in the Major Will Learn to

Student Learning Outcomes (SLOs)

Content

1. Apply knowledge of mathematics, science and engineering principles to biological engineering problems. Students will be able to apply fundamental concepts, skills and processes in biological engineering.
2. Design and conduct biological and/or agricultural engineering experiments, analyzing and interpreting the data in biological engineering.

Critical Thinking

3. Design a biological and/or agricultural system, component or process to meet desired needs within realistic economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability constraints in biological engineering.

Communication

4. Communicate technical data and design information effectively in writing and in speech to other engineers in biological engineering.

Curriculum Map

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Assessment Types

- Assignments
- Exams
- Design projects and reports