AGRICULTURAL & BIOLOGICAL ENGINEERING: BIOLOGICAL ENGINEERING, BS

for the degree of Bachelor of Science in Agricultural & Biological Engineering, Biological Engineering Concentration

Agricultural and Biological Engineering Website
Agricultural & Biological Engineering Faculty (https://abe.illinois.edu/directory/faculty/)

College of Agricultural, Consumer & Environmental Sciences
Grainger College of Engineering (https://grainger.illinois.edu/)

Agricultural and biological engineering is the application of mathematics, physical and biological science, and engineering to agriculture, food systems, energy, natural resources, the environment, and related biological systems. This ABET-accredited program has special emphasis on environmental protection and the biological interface of plants, animals, soils, and microorganisms with the design and performance of environments, machines, mechanisms, processes, and structures.

The Department of Agricultural and Biological Engineering offers programs through the College of ACES and The Grainger College of Engineering.

Students pursuing the B.S. Degree in Agricultural and Biological Engineering choose from one of two concentrations, one of which is the concentration in Biological Engineering. This concentration integrates biology and engineering to provide solutions to problems related to living systems (plants, animals, and microorganisms). Engineered biological systems vary widely in scale. At the molecular level, nanometer-scale devices consist of a few biomolecules inside individual cells. At the other extreme, regionally-scaled complex ecosystems depend upon multiple species of interacting living organisms. Such systems are becoming increasingly important in areas such as bioenergy, bioprocessing, nanotechnology, biosensing, bioinformatics, and bioenvironment. Within this concentration, students are strongly encouraged to select a set of coherent courses that constitutes a specialization in their area of career interest either from the following list or a customized area chosen in consultation with an advisor:

- Bioenvironmental Engineering
- Ecological Engineering
- Food and Bioprocess Engineering
- Nanoscale Biological Engineering

Information listed in this catalog is current as of 06/2022