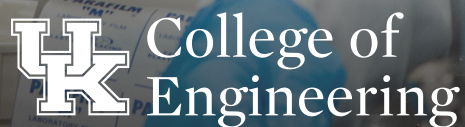


# BIOSYSTEMS ENGINEERING



Biosystems engineers are trained in biological, environmental and engineering sciences. They devise practical, efficient solutions for producing, storing, transporting, processing and packaging biological and agricultural products and solve problems related to systems, processes and machines that interact with humans, plants, animals, microorganisms and biological materials. They also develop solutions for responsible, alternative uses of biological products, byproducts and wastes and our natural resources—soil, water, air and energy.

## FOR MORE INFORMATION, VISIT THESE WEBSITES:

**Biosystems Engineering:** [www.engr.uky.edu/bae](http://www.engr.uky.edu/bae)

**College of Engineering:** [www.engr.uky.edu](http://www.engr.uky.edu)

**Visit Engineering:** [www.engr.uky.edu/visit](http://www.engr.uky.edu/visit)

**University of Kentucky:** [www.uky.edu](http://www.uky.edu)

**Admissions:** [www.uky.edu/admissions](http://www.uky.edu/admissions)

**Scholarships:** [www.uky.edu/scholarships](http://www.uky.edu/scholarships)

## Biosystems Engineering Curriculum Sample

This is a sample list of classes a student will take to pursue a degree in biosystems engineering. As part of the biosystems engineering curriculum, students must complete the pre-engineering requirements, major requirements and general education coursework, called UK Core.

Note: This sample represents one of several paths to a College of Engineering degree. Consult the departmental website for details on specific paths.

### Freshman Year

Engineering Exploration I and II	3
Fundamentals of Engineering Computing	2
Calculus I and II	8
Composition & Communication I and II	6
Chemistry I and Physics I and Lab	9
UK Core Course	3
<b>Total hours</b>	<b>31</b>

### Sophomore Year

Principles of Biosystems Engineering	3
Introductory Biology I	3
Calculus III and IV	7
Chemistry II	3
Physics II and Lab	5
Computer Graphics and Communications	3
Statistical Inferences	3
Thermodynamics	3
Statics	3
<b>Total hours</b>	<b>33</b>

### Junior Year

Economic Analysis for Biosystems	2
Fluid Mechanics	3
Electrical Circuits and Electronics	3
Mechanics of Deformable Solids	3
Principles of Biology II	3
Technical Writing	3
Heat and Mass Transfer	3
DC Circuits and Microelectronics	3
Dynamics	3
Biosystems Core elective	3
UK Core Courses	6
<b>Total hours</b>	<b>35</b>

### Senior Year

Biosystems Engineering Design I and II	4
Senior Seminar	1
Intro to Mechanical Systems	3
BAE Core or Technical Electives	15
Biological Science Elective	3
UK Core Course	3
<b>Total hours</b>	<b>29</b>

## Pursuing Biosystems Engineering at UK

The University of Kentucky is the only college in Kentucky that offers biosystems engineering. Biosystems engineering has historical roots in agricultural engineering, which is typically a part of each state's land grant university. Plus, the biosystems engineering program at UK includes more specialty areas than similar departments across the country. This flexibility in the curriculum allows for each student to customize their technical electives to their future career goals.

## Career Prospects in Biosystems Engineering

Each area of study within the biosystems engineering program prepares graduates to succeed in important and exciting career fields. Our areas of study include: bioenvironmental engineering, machine systems engineering, controlled environment systems, and food and bioprocess engineering

## Undergraduate Research in Biosystems Engineering

Nearly every professor who teaches biosystems engineering courses welcomes undergraduate students into their laboratories. Students have worked on "the farm of the future," drone use for atmospheric and agricultural purposes, hybrid and electric powertrains, watershed-scale water quality assessment of natural and managed ecosystems and much more. Because biosystems engineering has varied areas of study, you're sure to find a laboratory that combines your research interests and skill level.

The University of Kentucky's biosystems engineering program is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).

**Revised August 2018.** Information subject to change. For the most up-to-date information on the UK College of Engineering, visit [www.engr.uky.edu](http://www.engr.uky.edu).