

AEROSPACE ENGINEERING



 College of
Engineering

Aerospace engineers design or build aircraft, spacecraft, satellites, missiles and supporting aerospace systems. Employed by industry, academia and government labs, aerospace engineers enable future space exploration, advanced propulsion, aerial mobility and so much more!

FOR MORE INFORMATION, VISIT:

www.engr.uky.edu/explore/aerospace-engineering



AEROSPACE ENGINEERING CURRICULUM SAMPLE

This is a sample list of classes a student will take to pursue a degree in aerospace engineering. As part of the aerospace 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 an aerospace engineering degree. Consult the departmental website for details on specific paths.

Freshman Year

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

Sophomore Year

Calculus III and IV	7
Dynamics	3
Engineering Statistics	3
Introduction to Aerospace Engineering	3
Intro to Materials and Manufacturing Processes	3
Mechanics of Deformable Solids	3
Physics II and Lab	5
Statics	3
Thermodynamics I	3
UK Core Courses	3
Total hours	36

Junior Year

Aerospace Structures	3
Aerodynamics	3
Engineering Analysis	3
Electrical Circuits and Electronics	3
Elements of Heat Transfer	3
Engineering Experimentation I	3
Flight Dynamics	3
Fluid Mechanics	3
Propulsion	3
Technical Writing	3
Total hours	30

Senior Year

Aerospace Engineering Lab	3
Aircraft Performance	3
Capstone Design I and II	6
Design of Control Systems	3
Technical Electives	9
UK Core Courses	6
Total hours	30

PURSUING AEROSPACE ENGINEERING AT UK

The University of Kentucky is proud to offer the only undergraduate degree in Aerospace Engineering in the state of Kentucky. The Aerospace Engineering program is housed in the Department of Mechanical Engineering and is led by numerous faculty members with highly reputable research and expertise in a broad range of aerospace applications including controls, propulsion and hypersonics.

CAREER PROSPECTS IN AEROSPACE ENGINEERING

Aerospace is one of the healthiest industrial segments of the US economy. The US accounts for approximately half of the world's global aerospace production. Employment of aerospace engineers in the US is projected to grow 6% from 2018 to 2028, according to the US Bureau of Labor Statistics. Within the state, Kentucky is home to 79 aerospace-related facilities that employ over 19,000 people, including General Electric, Lockheed Martin, Belcan Corp., Raytheon, General Dynamics Group, and Sikorsky Aircraft Corp.

UNDERGRADUATE RESEARCH IN AEROSPACE ENGINEERING

UK provides ample opportunities for undergraduate students to participate in research with our award-winning faculty. Undergraduate students can participate in research as part of an elective course or as a research assistant in the many world-class laboratories. Projects funded by NASA Kentucky provide opportunities for space systems research. We welcome you to explore the faculty research pages on our website to discover the wide range of opportunities.

CO-OPS

UK provides numerous opportunities to co-op with aerospace companies. Students can co-op during the fall, spring or summer semesters. Those who complete three co-op rotations will receive formal recognition on their transcript and a special cord at graduation. Students work with the Co-op Director and their academic advisor to determine the best timing for their co-op experience.

As a new academic offering, the Aerospace program will be eligible to apply for ABET following the first graduates of the program. Once accreditation is received, it will apply to any student who has gone through the program.

Information subject to change. For the most up-to-date information on the UK College of Engineering, visit www.engr.uky.edu.