Mechanical engineering touches nearly every aspect of our lives. Mechanical engineers apply their expertise to the design, development and production of everything from rocket propulsion systems to appliances. Some examples of products and processes developed by mechanical engineers include engines and control systems for automobiles and aircraft; electric power generation plants; lifesaving medical devices; robots and consumer products such as air conditioners; refrigerators and washing machines.

FOR MORE INFORMATION, VISIT:

www.engr.uky.edu/explore/mechanical-engineering
MECHANICAL ENGINEERING CURRICULUM SAMPLE
This is a sample list of classes a student will take to pursue a degree in mechanical engineering. As part of the mechanical 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 mechanical 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
Computer Aided Engineering Graphics 3
Chemistry II 3
Dynamics 3
Intro to Materials and Manufacturing Processes 3
Physics II and Lab 5
Statics 3
Thermodynamics I 3
UK Core Courses 6
Total hours 36

Junior Year
Electrical Circuits and Electronics 3
Elements of Heat Transfer 3
Engineering Experimentation I 3
Fluid Mechanics 3
Intro to Mechanical Systems 3
Math Elective 3
Mechanical Design 3
Mechanics of Deformable Solids 3
Technical Writing 3
Thermodynamics II 3
Total hours 30

Senior Year
Capstone Design I and II 6
Design of Control Systems 3
Design with Finite Element Methods 3
Engineering Experimentation II 3
Technical Electives 9
UK Core Courses 6
Total hours 30

PURSUING MECHANICAL ENGINEERING AT UK
The Department of Mechanical Engineering has a proud heritage at the University of Kentucky. The first dean of the College of Engineering, F. Paul Anderson, was an early pioneer in the field of air conditioning, and UK mechanical engineering graduate Margaret Ingels was the first woman to receive a graduate engineering degree in the United States. Our graduates include two former governors of Kentucky and three members of the National Academy of Engineering.

CAREER PROSPECTS IN MECHANICAL ENGINEERING
Mechanical engineers work in virtually every industry you can think of: aerospace, automobile, manufacturing, industrial equipment design, consulting firms and government agencies. Our graduates have secured employment with GE Appliances, GE Aviation, Cummins, Toyota, Lexmark, Trane, Link-Belt, Belcan, NASA, SpaceX and more.

UNDERGRADUATE RESEARCH IN MECHANICAL ENGINEERING
The department has research thrusts in autonomous systems, sustainable manufacturing, clean energy, bioengineering, aerospace engineering, and in industrial applications such as noise control. Students can participate in research as part of an elective course or as a research assistant in the many world-class laboratories. Undergraduate students can also participate in extra-curricular design projects including the Formula SAE race team or the Solar Car team, both of which design, build and race vehicles against other universities from around the world.

CO-OPS
UK provides numerous opportunities to co-op with many 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.

The University of Kentucky's mechanical engineering program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

Revised August 2021. Information subject to change. For the most up-to-date information on the UK College of Engineering, visit www.engr.uky.edu.