



MATERIALS ENGINEERING

Technologies that transform society, healthcare and how we impact our environment are only possible when we have the right materials. Whether it's 3D printed metals that are stronger, lighter and more resistant to corrosion; batteries that hold more energy and charge faster; or bio-inspired polymers that are responsive and sustainable, materials engineers make new technologies possible by understanding and designing the processing, structure and properties of materials themselves.

PURSuing MATERIALS ENGINEERING AT UK

Materials engineering students at UK study with an energetic and accessible faculty, and are encouraged to grow personally and professionally through hands-on research projects, industrial cooperative education and service opportunities. Our alumni follow diverse paths; while many enter industrial positions, others pursue advanced engineering and professional degrees at institutions across the nation.

CAREER PROSPECTS IN MATERIALS ENGINEERING

Materials engineers work at the forefront of rapidly changing technological areas that directly impact society, focusing on problems where the application of novel, precisely engineered materials enables new solutions. Job placement rates and starting salaries are excellent for materials engineering graduates, and our alumni work in a wide range of industries, including aerospace and automotive; biomaterials, implants and medical devices; metals processing; and advanced electronics, polymers, and ceramics.

UNDERGRADUATE RESEARCH IN MATERIALS ENGINEERING

Materials engineering faculty members welcome undergraduate students into their laboratories as partners in the study of next-generation materials, processes and applications. Research strengths within the program include batteries and energy storage, computational materials science, metals and advanced alloys, nanomaterials, polymers, soft materials and interfaces, and thin films.

CO-OPS

UK provides opportunities to co-op with many companies. Students can co-op during the fall, spring or summer terms. Those who complete three co-op rotations will receive formal recognition upon graduation with a special cord (beginning with May '23 graduates). Students work with the co-op director and their academic advisor to determine the best timing for their co-op experiences.

PROGRAM FACTS

Enrollment: 66

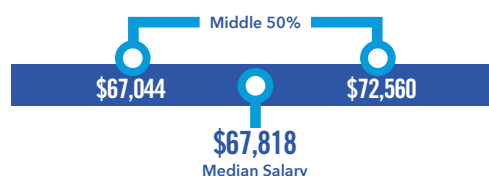
Common Minors: Mathematics and Physics

Student Organizations:

Materials Advantage, Alpha Sigma Mu and Electrochemical Society

GRADUATE STARTING SALARIES

Median full-time starting salary info for 2021 new college graduates
National Association of Colleges and Employers - Summer 2022



INDUSTRY SECTORS:

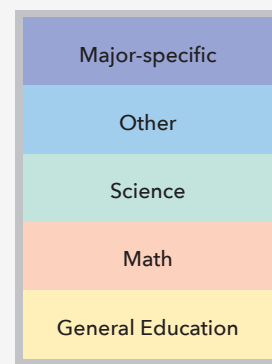
- Aerospace
- Semiconductors
- Manufacturing
- Automotive
- Medical Devices

MATERIALS ENGINEERING

Curriculum Synopsis

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

Note: This synopsis represents one of several paths to a materials engineering degree. Consult the departmental website for details on specific paths.



YEAR ONE	YEAR TWO	YEAR THREE	YEAR FOUR
Engineering Exploration I and II	Materials Science I and II and Lab	Ceramic Engineering and Processing	Application of Materials Engineering to Design Problems
Fundamentals of Engineering Computing	Materials Thermodynamics	Electronic Materials and Processing	Materials Characterization Techniques
Chemistry I and Lab	Statics	Metals & Alloys	Materials Design
Physics I and Lab	Survey of Organic Chemistry	Materials Lab I	Material Failure Analysis
Calculus I and II	Chemistry II and Lab	Mechanical Properties of Materials	Materials Lab II
Composition and Communication I and II	Physics II	Polymeric Materials	Metals Processing
UK Core Course	Calculus III and IV	Mechanics of Deformable Solids	Electrical Circuits & Electronics
		Process Principles	Two Technical Electives
		Principles of Modern Physics	UK Core Courses
		Engineering Statistics	
		UK Core Course	

TAKING CO-OPS?

When you participate in semester co-ops, the above schedule can adjust.

Detailed Curriculum Information: enr.uky.edu/explore/materials-engineering

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

Revised August 2022. Information subject to change. For the most up-to-date information on the UK College of Engineering, visit www.enr.uky.edu.