

Mechanical Engineering

College of
Engineering

The mechanical engineer's training is the broadest among the several fields of engineering. The mechanical engineer uses the techniques of mathematics combined with a specialized knowledge of the thermal and energy sciences, solid and fluid mechanics, and the properties of materials. This information is supplemented by an understanding of manufacturing processes, the design and control of systems, and the economics of the technological community.

Admission to the program is selective. Students should refer to the UK *Bulletin* for general information concerning admission and graduation requirements.

Degree Requirements

The following curriculum meets the requirements for a Bachelor of Science in Mechanical Engineering, provided the student satisfies the graduation requirements of the College of Engineering.

Freshman Year

First Semester	Hours
EGR 101 Engineering Exploration I § Δ	1
EGR 102 Fundamentals of Engineering Computing	2
PHY 231 General University Physics	
or	
CHE 105 General College Chemistry I °	4
PHY 241 General University Physics Laboratory ‡	1
CIS/WRD 110 Composition and Communication I	3
MA 113 Calculus I	4
Second Semester	
EGR 103 Engineering Exploration II Δ	2
CHE 105 General College Chemistry I	
or	
PHY 231 General University Physics °	4
CIS/WRD 111 Composition and Communication II	3
MA 114 Calculus II	4
UK Core* – Social Sciences	3

Sophomore Year

First Semester	Hours
PHY 232 General University Physics	4
PHY 242 General University Physics Laboratory	1
MA 213 Calculus III	4
CHE 107 General College Chemistry II	
or	
UK Core* – Humanities	3
ME 205 Computer Aided Engineering Graphics	3
EM 221 Statics	3
Second Semester	
ME 220 Engineering Thermodynamics I	3
ME 251 Introduction to Materials and Manufacturing Processes	3
MA 214 Calculus IV	3
EM 313 Dynamics	3
UK Core* – Humanities	
or	

CHE 107 General College Chemistry II	3
UK Core* – Statistical Inferential Reasoning	3

Junior Year

First Semester	Hours
EM 302 Mechanics of Deformable Solids	3
EE 305 Electrical Circuits and Electronics	3
ME 330 Fluid Mechanics	3
ME 340 Introduction to Mechanical Systems	3
WRD 204 Technical Writing**	3

Second Semester	Hours
ME 310 Engineering Experimentation I	3
ME 321 Engineering Thermodynamics II	3
ME 325 Elements of Heat Transfer	3
ME 344 Mechanical Design	3
Mathematics Elective***	3

Senior Year

First Semester	Hours
ME 411 ME Capstone Design I	3
ME 311 Engineering Experimentation II	3
ME 440 Design of Control Systems	3
ME 501 Mechanical Design with Finite Element Methods	3
Technical Elective†	3

Second Semester	Hours
ME 412 ME Capstone Design II	3
Technical Elective†	6
Technical Elective†	6
Supportive Elective	3
UK Core* – Citizenship - US	3
UK Core* – Global Dynamics	3

§ Transfer students who declare a major will take EGR 112, Engineering Exploration for Transfer Students, in place of EGR 101.

Δ Students must complete both EGR 101 and EGR 103 to fulfill the UK Core Arts and Creativity requirement.

° Based on advisor consult.

‡ Only if enrolled in PHY 231.

*To be selected from UK Core courses in consultation with the academic advisor.

**Graduation Composition and Communication Requirement (GCCR) course.

***Mathematics Elective – choose one course from approved list in the UK Bulletin.

† Technical Electives – choose 9 hours from approved list in the UK Bulletin.

University of Kentucky is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate, baccalaureate, masters, and doctorate degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call 404-679-4500, or online at www.sacscoc.org for questions about the accreditation of University of Kentucky.