

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
ME 101 Introduction to Mechanical Engineering	3
CHE 105 General College Chemistry I	4
MA 113 Calculus I	4
CIS/WRD 110 Composition and Communication I	3
UK Core*	3
Second Semester	
ME 151 Manufacturing Engineering	3
CHE 107 General College Chemistry II	3
MA 114 Calculus II	4
CIS/WRD 111 Composition and Communication II	3
UK Core*	3

Sophomore Year

First Semester	Hours
PHY 231 General University Physics	4
PHY 241 General University Physics Laboratory	1
MA 213 Calculus III	4
CS 221 First Course in Computer Science for Engineers	2
ME 205 Computer Aided Engineering Graphics	3
UK Core*	3
Second Semester	
ME 220 Engineering Thermodynamics I	3
PHY 232 General University Physics	4
PHY 242 General University Physics Laboratory	1
MA 214 Calculus IV	3
EM 221 Statics	3
Graduation Writing Requirement	3

Junior Year

First Semester	Hours
ME 321 Engineering Thermodynamics II	3
ME 330 Fluid Mechanics	3
EM 302 Mechanics of Deformable Solids	3
ME 313 Dynamics	3
EE 305 Electrical Circuits and Electronics	3
Second Semester	
ME 310 Engineering Experimentation I	3
ME 344 Mechanical Design	3
ME 325 Elements of Heat Transfer	3
ME 340 Introduction to Mechanical Systems	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	
ME 412 ME Capstone Design II	3
Technical Electives†	6
Supportive Elective	3
UK Core*	3
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*To be selected from UK Core courses in consultation with the academic advisor.

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