From aerospace to manufacturing and aviation to acoustics, a degree in Mechanical Engineering can prepare you for an exciting career in a variety of industries. Examples of products and processes developed by mechanical engineers include engines and control systems for automobiles and aircraft, electric power generation, lifesaving medical devices, robots, and high-tech consumer products such as low-energy lighting, HVAC, refrigeration, and household appliances. Mechanical engineers use mathematics, computers, sophisticated modeling and analysis to solve problems associated with energy usage, propulsion, power generation, sound and vibration, machinery design, and manufacturing. In short, mechanical engineers play a part in designing and building the mechanical devices and systems that are essential to our everyday lives.

Freshman Year

**FALL SEMESTER**
- EGR 101 - ENGINEERING EXPLORATION I - 1
- EGR 102 - FUNDAMENTALS OF ENGINEERING COMPUTING - 2
- Choose CHE 105 or PHY 231 - 4
- PHY 241 - GENERAL UNIVERSITY PHYSICS LABORATORY - 1
- Composition and Communication I - 3
- MA 113 - CALCULUS I - 4

**TOTAL HOURS: 15**

Total Freshman Hours: 31

**SPRING SEMESTER**
- EGR 103 - ENGINEERING EXPLORATION II - 2
- UK Core - Comp. & Comm. II - 3
- MA 114 - CALCULUS II - 4
- Choose CHE 105 or PHY 231 - 4
- Intellectual Inquiry in the Social Sciences - 3

**TOTAL HOURS: 16**

Sophomore Year

**FALL SEMESTER**
- PHY 232 - GENERAL UNIVERSITY PHYSICS - 4
- PHY 242 - GENERAL UNIVERSITY PHYSICS LABORATORY - 1
- MA 213 - CALCULUS III - 4
- Choose CHE 107 or UK Core - Humanities - 3
- ME 205 - COMPUTER AIDED ENGINEERING GRAPHICS - 3
- EM 221 - STATICS - 3

**TOTAL HOURS: 18**

Total Sophomore Hours: 36

**SPRING 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
- Choose CHE 107 or UK Core - Humanities - 3
- Statistical Inferential Reasoning - 3

**TOTAL HOURS: 18**

Junior Year

**FALL SEMESTER**
- EM 302 - MECHANICS OF DEFORMABLE SOLIDS - 3
- EE 305 - ELECTRICAL CIRCUITS AND ELECTRONICS - 3

**SPRING SEMESTER**
- ME 310 - ENGINEERING EXPERIMENTATION I - 3
- ME 321 - ENGINEERING THERMODYNAMICS II - 3
ME 330 - FLUID MECHANICS - 3  
ME 340 - INTRODUCTION TO MECHANICAL SYSTEMS - 3  
WRD 204 - TECHNICAL WRITING - 3  

**TOTAL HOURS: 15**

Total Junior Hours: 30

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ME 325 - ELEMENTS OF HEAT TRANSFER - 3  
ME 344 - MECHANICAL DESIGN - 3  
Math Elective - 3  

**TOTAL HOURS: 15**

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**Senior Year**

**FALL SEMESTER**

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 Electives - 3  

**TOTAL HOURS: 15**

**SPRING SEMESTER**

ME 412 - ME CAPSTONE DESIGN II - 3  
Technical Electives - 3  
Technical Electives - 3  
Supportive Elective - 3  
Global Dynamics - 3  
Community, Culture and Citizenship in the USA - 3  

**TOTAL HOURS: 18**

Total Senior Hours: 33

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**Total Minimum hours Required for Degree: 130 hours**

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