Core Mechanical Engineering Courses

**Lower Division**
- ENGR 54: Principles of Materials Science and Engineering
- ENGRMAE 10: Introduction to Engineering Computation
- ENGRMAE 30: Statics
- ENGRMAE 52: Computer-Aided Design
- ENGRMAE 60: Electric Circuits
- ENGRMAE 80: Dynamics
- ENGRMAE 91: Introduction to Thermodynamics

**Upper Division**
- ENGRMAE 106: Mechanical Systems Lab
- ENGRMAE 107: Fluid Thermal Mechanics Lab
- ENGRMAE 115: Applied Engineering Thermodynamics
- ENGRMAE 120: Heat and Mass Transfer
- ENGRMAE 130A: Introduction to Fluid Mechanics
- ENGRMAE 130B: Introduction to Viscous and Compressible Flows
- ENGRMAE 145: Theory of Mechanics and Mechanisms
- ENGRMAE 147: Vibrations
- ENGRMAE 150: Mechanics of Structures
- ENGRMAE150L: Mechanics of Structures Lab
- ENGRMAE 151: Mechanical Engineering Design
- ENGRMAE 156: Mechanical Behavior and Design
- ENGRMAE 170: Introductions to Control Systems
- ENGRMAE 189: Senior Design Project
- ENGR 190W: Communications in the Professional World

Students must complete, with the approval of a faculty advisor, a minimum of sixteen units of technical electives. These are courses not used for the ME degree from an approved list.

For more details on major requirements go to: [http://catalogue.uci.edu/](http://catalogue.uci.edu/)

Sample Program of Study

**Freshmen Year**

**Fall**
- MATH 2A
- ENGR 1A

**Winter**
- MATH 2B
- CHEM 1LE

**Spring**
- MATH 2D
- PHYSICS 7E

**Sophomore Year**

**Fall**
- MATH 3A
- ENGRMAE 91
- ENGRMAE 10

**Winter**
- MATH 3D
- ENGRMAE 10
- ENGRMAE 52

**Spring**
- MATH 2E
- ENGRMAE 52
- ENGRMAE 145

**Junior Year**

**Fall**
- ENGRMAE 130A
- ENGRMAE 147
- ENGRMAE 156

**Winter**
- ENGRMAE 130B
- ENGRMAE 154
- ENGRMAE 151

**Spring**
- ENGRMAE 106
- ENGRMAE 154
- ENGRMAE 189

Engr 7A & 7B optional courses can count towards 1 Technical Elective.

**Senior Year**

**Fall**
- ENGRMAE 107
- ENGRMAE 189

**Winter**
- ENGRMAE 151
- ENGRMAE 170

**Spring**
- ENGRMAE 189
- ENGRMAE 189

Note: Course offerings subject to change. Courses subject to prerequisite requirements.

Undergraduate Research Opportunities

- Independent Study (199 course)
- Student Project Examples
  - Formula SAE Electric Racecar
  - HyperXite
  - Rocket Project
  - UAV
  - Fuel Cell Battery
- Additional student projects can be found on projects.eng.uci.edu
- Undergraduate Research Opportunities Program (UROP)

Potential Research Areas

- Propulsion & Dynamics
- Combustion & Thermo-physics
- Energy Systems and Environmental Engineering
- Fuel Cell Technologies
- Fluid Mechanics & Turbulence
- Micro/Nano Electro Mechanical Systems (MEMS/NEMS)
- Machine Design
- Robotics
- Structures & Solid Mechanics

Connect with Industry

- Handshake: Job & Internship Search Tool: career.uci.edu/students/zotlink.html
- Find Employers based on major: career.uci.edu/students/undergraduate/find-an-internship/buzzfile-company-search-tool/
- Career Fairs: career.uci.edu/students/career-fairs.html
- Fall STEM Career Fair
- Fall Career Fair
- Winter Internship & Career Fair
- Winter E-Week EngiTECH Career Fair
- Spring Career Fair

The Mechanical Engineering program at UCI delivers an educational program of study that prepares its graduates to become intellectual leaders in industry, government, and academia. Graduates of our programs are grounded in scientific, mathematical, and technical knowledge through coursework that keeps pace with current relevant technologies; they have developed the ability to analyze, synthesize, and design engineering systems through their immersion in the problem-based activities of this research university; and, by means of general education courses, they have enhanced their ability to communicate and have acquired an understanding and appreciation for other areas of human intellectual achievement.

Potential Careers

- Mechanical Design Engineer
- Manufacturing Engineer
- Medical Devices
- Sustainable Energy
- Pilots or Crew Members of Spacecraft
- Machinery Manufacturing

Student Involvement Opportunities

**Engineering Campus Resources**

- CAMP: California Alliance of Minority Participation
  - [https://camp.uci.edu/](https://camp.uci.edu/)
  - Mentorship Program
  - Scholarship Opportunities
- OAI: Office of Access and inclusion
  - Free Engineering Course Tutoring
  - Mentorship Program

**Engineering Student Organizations**

- ESC: Engineering Student Council
- For more info on Engineering Clubs and Orgs visit:

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