

Department of Mechanical Engineering

Texas Tech University | Edward E. Whitacre Jr. College of Engineering

About the Department of Mechanical Engineering

Mechanical Engineering is the broadest of the engineering disciplines. Graduates from the Department of Mechanical Engineering at Texas Tech University complete a curriculum that provides a strong foundation in mathematics and the physical sciences of chemistry and physics followed by an in-depth education in five of the principal mechanical engineering areas: thermal science, fluids engineering, mechanics and materials, dynamics and controls, and mechanical design.

Points of Pride

- #8 Best Value Mechanical Engineering Program by collegefactual.com
- B.S., M.S., & PhD Programs; BS program is accredited by ABET 131 Hours Minimum for B.S.

Research Focus Areas

- Biomechanical Engineering
- Design for Manufacturing
- Dynamics, Controls, and Robotics
- Solid Fuel Combustion
- Fluid Mechanics and Aerodynamics
- Energy and Environment
- Mechanics of Solids, Structures, and Materials
- Microsystems and Nanomaterials



Transforming lives; one student at a time

Preparing you for a Global Future

- One of the most versatile engineering fields
- Assist in finding solutions to pressing global issues in energy, environment, disease, artificial intelligence and defense

There are many free resources available to students to promote academic achievements:

- Supplemental Instruction
- University Tutoring Center
- Residence Hall Learning Communities
- Engineering Opportunities Center Tutoring Center
- Access to Professors for direct assistance

Capstone Design

Carried out during senior year, the capstone design project is aculmination of student's education and skills. Focused on innovation, students put their engineering skills to test by working on a novel design. During the year, they learn about new concepts in bioinspiration, lean startup model, customer discovery, requirement engineering, and transdisciplinary design. Students utilize departmental resources and often industrial support to design functional complete systems based on customer needs.

McDermott Advanced Manufacturing and Prototyping Facility Focused hands-on learning is achieved through the technology in the McDermott facility focusing on:

- Additive Manufacturing
- 3D Printing on Metals, Plastic and Other Materials
- Traditional Manufacturing Technologies
- Advanced CNC Capabilities Undergraduate students primarily use this lab for capstone design, manufacturing processes, and research.

Undergraduate Labortories

- Thermal Fluids
- MaterialsTesting and Heat Testing
- McDermott Advanced Manufacturing and Prototyping Facility
- Finite Element Analysis
- Computational Fluid Dynamics
- Controls and Dynamics
- Combustion



Student Organizations

- American Society of Mechanical Engineers (ASME)

 Junkyard Wars uniting industry leaders and students through design and competition
- Formula SAE

 Designs, manufactures, and races a formula one style race car
- Pi Tau Sigma Honor Society

 Combining academic achievements and community involvement
- Raider Aerospace Society
 Design and builds launch vehicles
- And Many More

Careers

Careers in designing, analyzing and maintaining systems in a wide range of industries

Fall 2019 Job Placement and Info:

- 20:1Student-Faculty Ratio
- 95% Job Placement Rate
- \$72,336 Average Annual Salary





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