## MECHANICAL ENGINEERING

**TEXAS TECH UNIVERSITY** 





### WHY MECHANICAL ENGINEERING

- ONE OF THE MOST VERSATILE ENGINEERING FIELDS
- CAREERS IN DESIGNING, ANALYZING AND MAINTAINING SYSTEMS IN A WIDE RANGE OF INDUSTRIES
- ASSIST IN FINDING SOLUTIONS TO PRESSING ISSUES IN ENERGY, ENVIRONMENT, DISEASE, ARTIFICIAL INTELLIGENCE AND DEFENSE

### **RESEARCH FOCUS AREAS**



Biomechanical Engineering



Dynamics, Controls, and Robotics



Fluid Mechanics and Aerodynamics



Mechanics of Solids, Structures, and Materials



Design for Manufacturing



Microsystems and Nanomaterials



**Energy and Environment** 



**Solid Fuel Combustion** 

#### **WHY TEXAS TECH**

**20:1 Student-Faculty Ratio** 

95% Job placement rate

**\$72,336 Average Annual Salary** 

**#8 Best Value Mechanical Engineering Program** 

**B.S., M.S., and PhD Programs accredited by ABET** 

Laboratories available for undergraduates and graduates

### **CAPSTONE DESIGN**

- CULMINATION OF EDUCATION AND HAND-ON LEARNING
- WORKING ON REAL-WORLD SITUATIONS THAT SOLVE REAL-WORLD PROBLEMS
- LEARN CONCEPTS IN BIOINSPIRATION, LEAN-UP MODEL, CUSTOMER DISCOVERY, REQUIREMENT ENGINEERING AND TRANSDISCIPLINARY DESIGN
- UTILIZE DEPARTMENT RESOURCES AND INDUSTRY SUPPORT



# 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 LABORATORIES**

**Thermal Fluids** 

**Materials Testing and Heat Testing** 

**McDermott Advanced Manufacturing and Prototyping Facility** 

**Finite Element Analysis** 

**Computational Fluid Dynamics** 

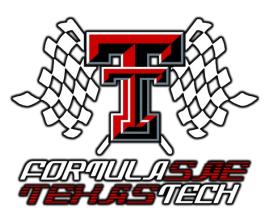
**Controls and Dynamics** 

**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









### **ACADEMIC SUCCESS**

### 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

