



Graduate Research @ ME

Faculty Research Areas



Dr. Ron Bagley
Material characterization
Engineering mathematics



Dr. F. Frank Chen
Lean manufacturing
Flexible manufacturing
Supply chain management



Dr. Keith Clutter
Explosive modeling
Chemical dispersion
Fire modeling



Dr. Thomas Connolly
Actuator design & control
Bond graph modeling/simulation
Brain injury modeling/simulation



Dr. Jahan Eftekhari
Biodynamics
Vehicle component design



Dr. Yusheng Feng
Computational and applied math
Statistical mechanics & biophysics
Cancer treatment simulation



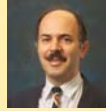
Dr. Hai-Chao Han
Cardiovascular biomechanics
Mechanical modeling & analysis
Tissue remodeling



Dr. Amir Karimi
Metastable thermodynamics
Phase change heat transfer
System thermal management



Dr. Randall Manteufel
Reliability analysis
Performance assessment
Thermal-fluid systems



Dr. Stathis Michaelides
Energy systems
Multiphase flow
Environmental fluid dynamics



Dr. Harry Millwater
Risk assessment
Probabilistic life prediction
Engine health monitoring



Dr. Cliff Moses
Deposition in heated fuel flows
Synthetic fuels for aviation
Gas turbine fuels and combustion



Dr. Brent Nowak
Robotics and intelligent machines
Sensors and sensing systems
Electromechanical systems



Dr. Nestor Sanchez
Nonlinear systems
Dynamics of multibody systems
Nonlinear stability & bifurcation theory



Dr. Can Saygin
Manufacturing engineering
Shop floor control and automation
Distributed decision-making



Dr. John Simonis
Machine design
Diagnostic and prognostic systems
Instrumentation and measurement



Dr. Yesh Singh
Design of large gears
Customized higher-pair linkages
FE applications in mechanical design



Dr. HungDa Wan
Lean manufacturing
Enterprise engineering
Flexible manufacturing systems



Dr. Xiaodu Wang
Tissue biomechanics
Bone remodeling and tissue quality
Micro/Nanomechanics of materials

Mechanical Engineering Graduate Program



The University of Texas at San Antonio

Department of Mechanical Engineering

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<http://engineering.utsa.edu/MEindex.html>

Graduate Program in Mechanical Engineering



Concentration Areas

- Thermal and Fluid Systems
- Mechanical Systems and Design
- Mechanics and Materials
- Manufacturing and Enterprise Engineering
- Biomechanics

Facilities & Labs

- Bone Biomechanics
- Computational Bioengineering and Nanotechnology
- Computational Mechanics
- Cardiovascular Biomechanics
- Energy Conversion and Conservation
- Flexible Manufacturing and Lean Systems
- Manufacturing Systems and Automation
- Robotics and Intelligent Machines
- Structural Dynamics

Expertise

- Advanced Robotics and Manipulators
- Bone and Vascular Biomechanics
- Biometric Triage Monitoring
- Computational Structural Reliability
- Dynamic Systems and Controls
- Explosive Device Detection and Blast Injury Effects
- Flexible Automation and RFID Applications
- Lean Manufacturing Assessment and Measurement
- Network-Centric Manufacturing
- Renewable Energy

Overview

The **Master of Science in Mechanical Engineering (MSME)** is designed to prepare students with an advanced understanding of both the theories and applications of traditional mechanical engineering fields including thermal, fluid, mechanics, materials, design, and manufacturing. Students also have opportunities to learn about contemporary topics such as robotics, biomechanics, security issues, high-speed computing, lean manufacturing and 6-Sigma improvement processes.

Graduates of this program have taken positions with prominent careers at industry and government agencies, such as NASA, Boeing, and Southwest Research Institute. A thesis option is offered for research-oriented students. A non-thesis option is available for students who prefer a practice-oriented degree in engineering.

Requirements

Thesis Option (30 cr hr): Two core courses (6 cr hr), 18 cr hr of electives, and 6 cr hr of research/thesis.

Non-Thesis Option (33 cr hr): Two core courses (6 cr hr), 24 cr hr of electives, and 3 cr hr of special project.

Financial Assistance

Various forms of financial support and fellowships, including Graduate Teaching and Research Assistantships (GTA & GRA) and tuition scholarships, are available for qualified applicants.

Coming Soon...

Approval of the **Doctor of Philosophy in Mechanical Engineering (PhD)** program is in progress. Please refer to our department website for program availability and update.

For More Info...

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