Mechanical Engineering Graduate Programs Info Session

December 2021
Agenda

• Who we are, what we do
  • Departmental research centers
  • Our graduate students

• Our ME graduate students
  • MS program
  • PhD program

• FAQs
  • How to apply
  • Degree plan?
  • How to graduate
  • Fast Track
  • GRE
  • BS to PhD
  • ...

THE UNIVERSITY OF TEXAS AT EL PASO
AEROSPACE AND MECHANICAL ENGINEERING
Department of Aerospace and Mechanical Engineering

• We are Number 1 in Research Expenditure in College of Engineering, by a lot...
• With 21 T/TT faculty and total of 28 faculty
• Number 2 in UTEP after Biology, but with only 40% of the faculty

https://www.utep.edu/engineering/mechanical/people/faculty.html
Our programs enrollment

Mechanical Engineering Grad Enrollment

Degrees awarded

MS

PhD

THE UNIVERSITY OF TEXAS AT EL PASO
AEROSPACE AND MECHANICAL ENGINEERING
>20 Years of Growth and Success

Keys to Sustained Success

- Students – our key focus
- High expectations combined with growth mindset
- Strategic partnerships (government and industry)
- Build mainstream capacity and diversified portfolio
- Research excellence with broad impacts – advanced manufacturing, STEM pipeline, education programs, economic and workforce development

https://keck.utep.edu/

$70M New Building (currently in design)

2000
3,000 sq ft

2010
13,000 sq ft

2020
>100,000 sq ft (shared)

Drive for Research Excellence

Engage and Develop Students

Compelling Technology Arena
Impact x Intellectual Challenge x Passion

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AEROSPACE AND MECHANICAL ENGINEERING
A Giant Leap Forward

Sustainability

UT System Aerospace Capacity Development $70 million 2020

Industry and UTEP Aerospace Capacity Development $4.8 million 2015

UTEP Aerospace Center-cSETR
650 Students/yr.
300,000 sq. ft. Laboratories
8,000 acres Test Facilities

2025

NASA Partner

Planetary Society

NASA Centers

HBCU

EPSCoR Jurisdictions

Research Universities

Johnson Space Center

White Sands Test Facility

Marshall Space Flight Center

Glenn Research Center

Kennedy Space Center

Aerospace and Defense Industries

Federal Laboratory

2-year Institution

NASA.

Lockheed Martin

Aeronautics

Space

Missile and Fire Control

AFRL

Western Tech

NASA.

UTA

University of Texas at Arlington

ASU

Arizona State University

CAL POLY

California Polytechnic State University

Rice University

University of Oklahoma

Tuskegee University

UAB

University of Alabama at Birmingham

Georgia Tech

Georgia Institute of Technology

Standford University

University of Alabama

University of Southern Mississippi

University of North Texas

University of Arkansas

University of Nebraska

University of Mississippi

University of Arizona

University of Tennessee

University of Kansas

University of Kansas City

University of Southern California

University of New Mexico

University of Maryland

University of California

University of Nevada Las Vegas

University of California Berkeley

University of Texas at El Paso

THE UNIVERSITY OF TEXAS AT EL PASO
Student Enrollment Master’s
FY 2016 through 2020

Student Enrollment (MS)

Data Source: Data acquired from the Center for Institutional, Evaluation, Research & Planning (CIERP)
Student Enrollment Ph.D.
FY 2016 through 2020

Student Enrollment (Ph.D.)

- Civil Engineering
- Computer Science
- Electrical and Computer Engineering
- Mechanical Engineering
- Biomedical Engineering
- Materials Science and Engineering [MASE]

Data Source: Data acquired from the Center for Institutional, Evaluation, Research & Planning (CIERP)
PhD Program Status

• Best PhD program for time to degree at UTEP
  • 3.63 years, -1.67 years shorter than US average

• Degrees awarded – 4-year average
  • 7 PhD / year
  • Best in COEN

• Large number of PhD supported by external funding
  • 70.2%
  • Best in COEN
How to Apply

GRE is needed. But...
Also, graduate school is working on waiving it for UTEP UG

https://www.utep.edu/graduate/apply-now/apply-now-domestic.html
Degree Plan

College of Engineering

MS in Mechanical Engineering

Required Credits: 30

MS in Mechanical Engineering (All courses require a grade of C or better)

Major Electives:

Select eighteen hours of the following: 18

- ENCH 5307: Solid Mechanics I
- ENCH 5308: Heat Transfer I
- ENCH 5309: Fluid Dynamics
- ENCH 5310: Thermodynamics
- ENCH 5311: Solid Mechanics II
- ENCH 5314: Analytical Dynamics
- ENCH 5351: Introduction to 3-D Eng & Advanced Mech
- ENCH 5391: Special Topics in Mechanical Engg
- ENCH 5396: Individual Studies
- ENCH 5397: Graduate Projects

Thesis/Non-Thesis Option:

Select one sequence below:

Thesis Option: 6

- ENCH 5395: Thesis
- MECH 5395: Thesis

Professional Track Option: 9

Select nine additional hours of graduate courses in BIXL, CI, CHEM, CS, ECON, EE, GEOL, IE, MSE, PHYS, MECH, MATH, MGMT, ART, NURS, NURS, PSY, PSY, ST.

Other Electives:

Select six additional hours of graduate courses in BIO, BI, CHEM, CI, ECON, EE, GEO, IE, IME, MATH, MECH, MSE, NURS, NMG, SE, MATH, NURS, PHYS, PSY, ST.

Total Hours 30-33
FAQ

• PhD program
• Fast track
• Reservation for graduate credits
• Apply for graduation, where to find forms?
• Thesis vs Non thesis (30 vs 33 credits)
• Skipping masters directly to PhD
• GRE exam (155 and above in Quantitative)
• MS in Aerospace Engineering - Fall 2022
• Total amount of credits and what exactly to take
• ...

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Thank you!

Q&A