

Materials Science and Engineering

*Master of Science in Engineering
Doctor of Philosophy*

For More Information

Campus address: Engineering Education and Research Center (EER)
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Objectives

This program is designed to educate materials scientists and engineers, to develop new knowledge, and to solve problems related to the synthesis, processing, characterization, and application of materials.

Facilities for Graduate Work

Extensive facilities, including laboratories for materials research and instruction and offices for faculty members and students, are located in several buildings on the main campus and at the J. J. Pickle Research Campus. The offices for the Texas Materials Institute (TMI) the materials science and engineering graduate program are located in the Engineering Education and Research Center (EER) building. Core central facilities for research include the Electron Microscopy, X-Ray Scattering, Surface Analysis, Nanofabrication and Testing, Electronic and Vibrational Scattering, Microelectronic Materials Processing, Organic Electronic Fabrication, Scanning Probe, X-ray Photoelectron Spectroscopy, Time-of-Flight Mass Spectrometry, and Polymer Characterization Facilities, each of which employs a manager to assist users. Other laboratories provide materials synthesis, powder processing, mechanical testing, and property measurements facilities for use by students and faculty members.

Areas of Study

Graduate study is focused on a range of materials, including metals and alloys, ceramics, polymers, composites, nanomaterials, structural materials, electronic and photonic materials, energy materials, and computational materials.

Graduate Studies Committee

The following faculty members served on the Graduate Studies Committee (GSC) in the spring 2023 semester.

Deji Akinwande
Narayana R Aluru
Sanjay K Banerjee
Michael Franklin Becker
Jonathan Yan Chen
Ray T Chen
Michael Arthur Cullinan
Alejandro L De Lozanne
Ananth Dodabalapur
John G Ekerdt
Donglei Emma Fan
John B Goodenough
Graeme Andrew Henkelman
Rui Huang
Tanya Hutter
Gyeong S Hwang
Keith P Johnston
Brian A Korgel
Desiderio Kovar
Wei Li
Kenneth M Liechti
Jung-Fu Lin
Yuanyue Liu

Nanshu Lu
Filippo Mangolini
Arumugam Manthiram
Alexander Marras
David Mitlin
Charles B Mullins
Li Shi
Chih-Kang Shih
Donald Jason Siegel
Wen Song
S V Sreenivasan
Venkat Subramanian
Eric M Taleff
Wennie Wang
Yaguo Wang
Jamie Warner
Jin Yang
Edward T Yu
Guihua Yu
Yunlan Zhang
Yuebing Zheng
Jianshi Zhou

Admission Requirements

Students with a bachelor's degree in engineering or in one of the physical sciences may be admitted to the materials science and engineering degree program upon the recommendation of the Graduate Studies Committee. Students who do not have a background that the committee considers satisfactory for the study of advanced materials science and engineering will be required to take preparatory coursework, some of which may be at the undergraduate level. Completion of some coursework may be required before the student begins the work for the graduate degree.