# Materials Science and **Engineering**

Master of Science in Engineering Doctor of Philosophy

#### For More Information

Campus address: Engineering Education and Research Center (EER) 6.614A, phone (512) 471-1504, fax (512) 475-8482; campus mail code: C2201

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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, Timeof-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 Saniav K Baneriee 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 I i 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 Yaquo 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.