DEPARTMENT OF MATERIALS
SCIENCE AND ENGINEERING

http://engineering.tamu.edu/materials/)

Head: I. Karaman
Director, Graduate Program: M. Demkowicz

Materials Science and Engineering (MSEN) at Texas A&M University is jointly operated by the College of Engineering and College of Arts and Sciences. The Department works collaboratively with several universities nationally and internationally as well as with institutions including several NASA Research Centers, Army Research Laboratory, Air Force Research Laboratory, U.S. Naval Research Laboratory, and many of the Department of Energy National Laboratories, in addition to dozens of fortune 500 companies.

Graduate Study in the MSEN department provides the fundamental knowledge, practical skills, and professional experience necessary to enter a successful career involving advanced materials. Many of today's most pressing scientific problems stem from the limitations of materials currently available, and this department is at the forefront of new knowledge and discovery. Materials science and engineering involves the characterization of the physical and chemical properties of solid materials—metals and alloys, ceramics, magnetic materials, polymers, optical materials, semiconductors, superconductors, and composites—for the purpose of using, changing, or enhancing inherent properties to create or improve end products.


Modern facilities and equipment are available to enhance study and instruction in Materials Science and Engineering. These facilities include the following: Corrosion and Materials Reliability Laboratory, Microstructural Engineering of Structural and Active Materials (MESAM), Mass Spectroscopy Application and Collaboration Facility, Materials Characterization Facility (MCF), Interdisciplinary Soft Matter Facility (SoMF), Center for Infrastructure Renewal (CIR), Center for Research Excellence on Dynamically Deformed Solids (CREDDS), Materials Development and Characterization Center, Microscopy and Imaging Center (MIC), Nuclear Science Center, and Polymer Technology Consortium (PTC).

Degree Programs

The Department offers graduate studies leading to the degrees of: Master of Engineering (non-thesis), Master of Science (thesis and non-thesis), and Doctor of Philosophy in Materials Science and Engineering. This multidisciplinary department includes faculty members from several disciplines, including aerospace engineering, biomedical engineering, chemical engineering, chemistry, electrical engineering, mechanical engineering, nuclear engineering and physics.

Certificate Programs

Two certificate programs are offered to enable individuals the opportunity to gain specific knowledge and skill-sets: Corrosion Science and Engineering, and Materials, Informatics and Design. All departmental certificates are stand-alone programs, enrollment in a degree program is not required. Certificates may be awarded upon completion of requirements.

Contact

For more information on obtaining any of the degrees and/or certificates, please contact the graduate advising office at msen-advising@tamu.edu.

Faculty

Abdel-Wahab, Ahmed, Professor  
Materials Science & Engr  
PhD, Texas A&M University, 2003

Aguilar-Mendoza, Guillermo, Professor  
Materials Science & Engr  
PhD, University of California - Santa Barbara, 1999

Ahmed, Karim, Assistant Professor  
Materials Science & Engr  
PhD, Purdue University, 2015

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Materials Science & Engr  
PhD, University of California at Santa Barbara, 2007

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Arroyave, Raymundo, Professor  
Materials Science & Engr  
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PhD, University of Manitoba, 2013

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PhD, Texas A&M University, 2011

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PHD, McGill University, 2003

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PHD, University of Manchester Institute of Science and Technology, 2002

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**Masters**
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- Master of Science in Materials Science and Engineering (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/materials-science/ms/)

**Doctoral**
- Doctor of Philosophy in Materials Science and Engineering (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/materials-science/phd/)
Certificates

- Corrosion Science and Engineering Certificate (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/materials-science/corrosion-science-engineering-certificate/)
- Materials, Informatics and Design Certificate (http://catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/engineering/materials-science/materials-informatics-design-certificate/)