DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

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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 Science. 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
Akbulut, Mustafa, Associate Professor
Materials Science & Engr
PHD, University of California at Santa Barbara, 2007

Alge, Daniel L, Associate Professor
Materials Science & Engr
PHD, Purdue University, 2010

Arroyave, Raymundo, Professor
Materials Science & Engr
PHD, Massachusetts Inst of Technology, 2004

Asadi, Amir, Assistant Professor
Materials Science & Engr
PHD, University of Manitoba, 2013

Balbuena, Perla B, Professor
Materials Science & Engr
PHD, The University of Texas at Austin, 1996

Banerjee, Sarbajit, Professor
Materials Science & Engr
PHD, State University of New York at Stony Brook, 2004

Batteas, James D, Professor
Materials Science & Engr
PHD, University of California at Berkeley, 1995

Bazzi, Hassan, Professor
Materials Science & Engr
PHD, McGill University, 2003

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Materials Science & Engr
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Materials Science & Engr
PHD, Johns Hopkins University, 2017

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PHD, Clemson University, 1988
Case, Raymundo P, Professor of the Practice  
Materials Science & Engr  
PHD, University of Manchester Institute of Science and Technology, 2002

Castaneda-Lopez, Homero, Professor  
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PHD, Penn State University, 2001

Creasy, Terry S, Associate Professor  
Materials Science & Engr  
PHD, University of Delaware, 1997

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Materials Science & Engr  
PHD, Massachusetts Institute of Technology, 2005

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Materials Science & Engr  
PHD, Johns Hopkins University, 2001

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Materials Science & Engr  
PHD, Georgia Institute of Technology, 2009

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Materials Science & Engr  
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PHD, Kent State University, 2009

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PHD, Massachusetts Institute of Technology, 2007

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PHD, University of Minnesota, 2004

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Materials Science & Engr  
PHD, Cornell University, 2002

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Materials Science & Engr  
PHD, Georgia Institute of Technology, 2007

Karaman, Ibrahim, Professor  
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PHD, University of Illinois at Urbana-Champaign, 2000

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Materials Science & Engr  
PHD, University of California, 1984

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Materials Science & Engr  
PHD, University of Illinois at Urbana-Champaign, 2014

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PHD, Columbia University, 1980

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PHD, Clemson University, 2012

Lagoudas, Dimitris C, University Distinguished Professor  
Materials Science & Engr  
PHD, Lehigh University, 1986

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PHD, Ecole Nationale de Mécanique et d’Aérotechnique, France, 2013

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Materials Science & Engr  
PHD, Texas A&M University, 1965

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Materials Science & Engr  
PHD, Harvard University, 1971

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Materials Science & Engr  
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PHD, Stanford University, 1979

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Shamberger, Patrick J, Associate Professor  
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Sheldon, Matthew T, Assistant Professor  
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Srivastava, Ankit, Associate Professor  
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PHD, University of North Texas, 2013

Su, Hung-Jue, Professor  
Materials Science & Engr  
PHD, University of Michigan at Ann Arbor, 1988

Sukhishvili, Svetlana A, Professor  
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PHD, Lomonosov Moscow State University, 1989

Talreja, Ramesh R, Professor  
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PHD, The Technical University of Denmark, 1974

Tamamis, Phanourios, Assistant Professor  
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PHD, University of Cyprus, 2010

Teizer, Winfried, Professor  
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PHD, University of Massachusetts - Amherst, 1998

Thomas, Edwin L, Visiting Professor  
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PHD, Cornell University, 1974
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PHD, Texas A&M University, 2000

Masters

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