DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

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

Benzeraga, Amine A, Professor
Materials Science & Engr

Bullard, Jeffrey, Professor
Materials Science & Engr
PHD, University of California at Berkeley, 1993

Butler, Brady, Visiting Assistant Professor
Materials Science & Engr
PHD, Johns Hopkins University, 2017

Cagin, Tahir, Professor
Materials Science & Engr
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
Materials Science & Engr
PHD, Penn State University, 2001

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

Demkowicz, Michal J, Associate Professor
Materials Science & Engr
PHD, Massachusetts Institute of Technology, 2005

Elabd, Yossef A, Professor
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PHD, Johns Hopkins University, 2001

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

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PHD, Georgia Institute of Technology, 1986

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PHD, Kent State University, 2009

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PHD, Purdue University, 2011

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PHD, University of Minnesota, 2001

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PHD, University of Southern California, 2004

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PHD, Tsinghua University, China, 1998

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PHD, Texas Tech University, 2003

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PHD, Boston University, 2001

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PHD, University of Minnesota, 2004

Kameoka, Jun, Professor
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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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PHD, University of California, 1984

Kolluru, Pavan, Assistant Professor
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PHD, University of Illinois at Urbana-Champaign, 2014

Kuo, Yue, Professor
Materials Science & Engr
PHD, Columbia University, 1980

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Materials Science & Engr
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

Liang, Hong, Professor
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PHD, Stevens Institute of Technology, 1992

Lin, Paotai, Associate Professor
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PHD, Purdue University, 1992

McShane II, Michael J, Professor
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Materials Science & Engr
PHD, Texas A&M University, 1965

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PHD, Harvard University, 1971

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PHD, University of Utah, 2015

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PHD, Stanford University, 1979

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Qian, Xiaofeng, Associate Professor
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Radovic, Miladin, Professor
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PHD, University of Michigan, 2016

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PHD, University of Alabama at Huntsville, 1974

Ross Jr, Joseph H, Professor
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PHD, University of Illinois at Urbana-Champaign, 1986

Sagapuram, Dinakar, Assistant Professor
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Seminario, Jorge M, Professor
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PHD, Southern Illinois University Carbondale, 1987

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Shao, Lin, Professor
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Sheldon, Matthew T, Assistant Professor
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PHD, University of California at Berkeley, 2010

Srivastava, Ankit, Associate Professor
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PHD, University of North Texas, 2013

Su, Hung-Jue, Professor
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PHD, University of Michigan at Ann Arbor, 1988

Sukhishvili, Svetlana A, Professor
Materials Science & Engr
PHD, Lomonosov Moscow State University, 1989

Talreja, Ramesh R, Professor
Materials Science & Engr
PHD, The Technical University of Denmark, 1974

Tamamis, Phanourios, Assistant Professor
Materials Science & Engr
PHD, University of Cyprus, 2010

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

Thomas, Edwin L, Visiting Professor
Materials Science & Engr
PHD, Cornell University, 1974
Tu, Qing, Assistant Professor
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PHD, Duke University, 2017

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PHD, University of Louisville, 2006

Wang, Jyhwen, Professor
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Wang, Shiren, Associate Professor
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Ware, Taylor, Associate Professor
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PHD, University of Texas at Dallas, 2013

Whitcomb, John D, Professor
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PHD, Virginia Tech, 1988

Wilkerson, Justin, Assistant Professor
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PHD, Johns Hopkins University, 2014

Williams, Richard, Professor
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PHD, University of California at Berkeley, 1978

Wong, Zi Jing, Assistant Professor
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Wooley, Karen L, University Distinguished Professor
Materials Science & Engr
PHD, Cornell University, 1993

Wu, Wenhao, Associate Professor
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PHD, University of Chicago, 1992

Xie, Yu Xuan, Assistant Professor
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PHD, University of Sydney, 2013

Yu, Choongho, Professor
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PHD, The University of Texas at Austin, 2004

Zhou, Hongcai J, Professor
Materials Science & Engr
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/)