UC IRVINE SAMUELI SCHOOL OF ENGINEERING GRADUATE PROGRAM

Materials Science and Engineering

The field of materials science and engineering sits at the intersection of chemistry, physics and engineering, with increasing expansion into mathematics, computing, machine learning, manufacturing and imaging, plus economics, sustainability and public policy. MSE is the field that enables all other areas of engineering by understanding – and therefore creating – new and exciting materials that enable faster computers, cleaner energy, more efficient automobiles and airplanes, and so much more!

DEGREES OFFERED

M.S. & Ph.D.

HIGHLIGHTS

- Internationally renowned faculty and researchers, academy members and professional society fellows
- Equitable learning environment, with a focus on novel and inclusive teaching practices
- Highly collaborative and cross-disciplinary research environment
- Strong engagement with industrial, governmental and national laboratory communities

RESEARCH FOCUS AREAS

- Advanced Microscopy, Spectroscopy and Materials Characterization
- Advanced, Agile and Additive Manufacturing
- Biomaterials, and Bioinspired and Self-Assembled Materials
- Compositionally Complex Materials
- Green Engineering and Sustainable Materials
- Macromolecular and Soft Materials Systems
- Materials for Energy Conversion and Storage
- Materials for Structural Applications and Extreme Environments
- Micro/Nano-Architected Materials
- Modeling, Theory and Computational Approaches to Materials Science and Engineering
- Nanoscale, Nanostructured and Functional Materials
- Modeling, Theory and Computational Approaches to Materials Science and Engineering

DIVERSITY IN MSE@UCI

The Department of Materials Science and Engineering values different experiences, perspectives and cultures. It strives to create a welcoming and respectful environment for all, while supporting diversity and inclusive excellence, opportunities for first-generation students and veterans, mentoring and outreach, and work-life balance.

AFFILIATED CENTERS

- Advanced Casting Research Facility (ACRC)
- Advanced Power and Energy Program (APEP)
- Institute for Design and Manufacturing Innovation (IDMI)
- Integrated Nanosystems Research Facility (INRF)
- Irvine Materials Research Facility (IMRI)
- Laboratory for Fluorescence Dynamics
- Laser Spectroscopy Facility
- Mass Spectrometry Facility
- National Fuel Cell Research Facility (NFCRC)
- NSF Materials Research Science and Engineering Center (MRSEC)
- Nuclear Reactor Facility
- World Institute for Sustainable Development of Materials (WISDOM)

LEARN MORE!

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