



M.S. AND PH.D. IN

MATERIALS ENGINEERING



MATERIALS.EGR.UH.EDU

ENGINEERING MATERIALS FOR ENERGY, HEALTHCARE AND TECHNOLOGY

ABOUT THE PROGRAM

The Materials Science and Engineering Program at the University of Houston is an interdisciplinary program with faculty from the Mechanical, Chemical and Electrical Engineering Departments. In addition, significant collaboration occurs with the materials faculty in the College of Natural Sciences and Mathematics. The principal objectives of the materials science and engineering program are to study the mechanical, optical, electrical and electronic behavior of engineering and engineered materials used in all engineering applications. The specific areas covered by this program range from metallic alloys, polymers, ceramics and composites for advanced mechanical/aerospace engineering applications to thin films and coatings for electronics and superconducting ceramics for energy-related applications.



Cullen College of Engineering
UNIVERSITY OF HOUSTON



WHY THE UNIVERSITY OF HOUSTON?

The materials engineering graduate program offers high quality training in fundamentals and applications of technologically-relevant materials to enable successful careers in the competitive and ever changing field. Students are offered a flexible yet demanding curriculum in materials engineering to address the needs of this highly interdisciplinary field. Graduate students are taught by a diverse, interdisciplinary team of faculty who run cutting-edge research programs in areas including bio- and nano-materials, energy storage and delivery, electronic and photonic materials, and advanced polymers. Materials engineering faculty members are developing materials for nanostructured energy storage architectures, molecular biosensors for medical diagnostics, high performance electronics and optoelectronics. Students are provided opportunities to work with modern research instrumentation in state-of-the-art facilities.

Due to the urgent need for new materials to use as energy sources and in other engineering applications, career opportunities in the materials engineering field are excellent. This is especially true in the city of Houston, the Energy Capital of the World.

WHAT TYPES OF GRADUATE DEGREES DO YOU OFFER IN MATERIALS ENGINEERING?

The UH Cullen College of Engineering offers M.S. non-thesis, M.S. thesis and Ph.D. degrees in materials engineering.



FACULTY EXPERTISE & RESEARCH ENTERPRISE

Following on a long and distinguished tradition of applying the principles of basic sciences and engineering, our faculty undertake research to understand the behavior of materials, develop new materials, and develop new applications for them. Their research is at the forefront of soft and hard materials, bio and nano materials, functional materials, computational materials science, and manufacturing and processing of materials.

Our award-winning faculty are constantly performing cutting-edge research, and are always seeking hard-working graduate researchers to join them in their labs. Available research areas include bio and nano materials, materials for energy and sustainability, electronics and photonic materials.

To view a full list of faculty by research area, please visit: materials.egr.uh.edu/research/faculty-expertise

FACILITIES & LABORATORIES

The materials program leverages numerous exceptional facilities within and outside engineering at UH, including partner institutions and collaborators. Noteworthy labs include:

- Nanofabrication Facility
- Biomedical Engineering Research Core Laboratory
- Materials Characterization Facility
- Center for Advance Materials Facilities

Learn more at: materials.egr.uh.edu/research/facilities

CENTERS & CONSORTIA

By virtue of its interdisciplinary nature, the Materials Science and Engineering Program at UH is part of collaborative centers and institutes at UH that are cross-departmental and inclusive of virtually every discipline in Science, Technology, Engineering and Math (STEM).



FOR MORE INFORMATION

For more information on eligibility and admissions requirements, please visit materials.egr.uh.edu/info/program-overview