

MATERIALS SCIENCE AND ENGINEERING: MATERIALS ENGINEERING, MS

This is a non-thesis named option within the Materials Science and Engineering MS (<https://guide.wisc.edu/graduate/materials-science-engineering/materials-science-engineering-ms/>).

IS THIS PROGRAM RIGHT FOR YOU?

As a student in the UW–Madison accelerated master’s in materials engineering, you can choose from four focus areas. Taking the Nanomaterials and Nanoengineering path, you can develop a unique understanding of innovative applications such as nanomaterial synthesis, thin film deposition, polymeric materials, and crystallography. The Engineering Materials and Processes path offers in-depth knowledge of phase transformation, deformation, corrosion, and heat treatment, among others. The Semiconductor Materials and Manufacturing for Microelectronics path offers in-depth education on the microstructure, fabrication, and properties of electronic, optical, and magnetic materials and semiconductors. It aims to prepare students to make an impact in the semiconductor sector as it develops new materials and fabrication methods needed to create future generations of advanced computation, communications, quantum, and sensing devices. The Computation and Artificial Intelligence in Materials Engineering path provides materials engineers with the skills to utilize the transformative power of modern computational methods in materials discovery, synthesis, processing, and optimization. This path covers deep materials fundamentals combined with quantum simulation, molecular dynamics, and mesoscale methods, as well as integrating materials with the exploding world of machine learning (Generative AI, Transformers, Large Language Models, and more). All focus areas include techniques for X-ray scattering, atomistic modeling, molecular dynamics, and more.

If you have questions, please contact Materials Science and Engineering Graduate Admissions at msegradadmission@engr.wisc.edu. Please see admission requirements on the Admissions tab.