

MATERIALS SCIENCE AND ENGINEERING MINOR

This minor introduces students to the fundamental principles that govern the structure, properties, processing, and performance of materials. The program includes a required foundational course in materials engineering that provides core concepts across metals, polymers, ceramics, and electronic materials. Students can then select electives that allow them to explore topics in materials science and properties, applications of materials in engineering systems, and materials processing and manufacturing. This flexible structure enables students from a variety of engineering and science disciplines to develop a deeper understanding of how materials enable modern technologies and engineered systems.

NOTE: Students may choose *either* the Materials Science and Engineering minor *or* the Semiconductor Materials and Devices minor.

Code	Title	Credit Hours
CHME-207	Materials Engineering	4
or MECH-207	Materials Engineering	
Select Two of the Following		8
MSCI-335	Computational Materials Science for Energy Applications	
MSCI-337	Material Synthesis	
MSCI-465	Materials Characterization	
CHME-460	Sustainable Engineering Design: Energy and Environment	
Select One of the Following		4
CHME-472	Fundamentals - Battery Systems	
EE-325	Principles of Microelectronics Processing	
EE-427	Semiconductor Device Fundamentals	
MSCI-200	Introduction to Semiconductors	
PHYS-376	Photonics and Optoelectronics: Fundamentals and Applications	
PHYS-366	Introduction to Quantum Physics and Applications	
Select One of the Following		4
CHME-302	Engineering Safety and Risk Management	
IME-476	Lean Six Sigma	
IME-471	Quality Control	
Total Credit Hours		20