

# MASTER OF ENGINEERING IN MATERIALS SCIENCE AND ENGINEERING

This program is aimed at broadening student potential beyond the B.S., enhancing technical versatility and, in some instances, providing the opportunity for changes in career path. The master of engineering program is a course-only degree program and requires a minimum of 30 credit hours. There is no thesis or comprehensive examination requirement. The student, in consultation with their adviser, prepares a program of study that reflects individual needs and interests. The adviser, as well as the department's graduate studies committee, and the department chair must approve this program. Students working toward this degree are not eligible for departmental financial support.

## Curriculum

Code	Title	Credit Hours
<b>Required Courses</b>		<b>(18)</b>
Select a minimum of six courses from the following:		18
MMAE 461	Failure Analysis	3
MMAE 470	Introduction to Polymer Science	3
MMAE 472	Advanced Aerospace Materials	3
MMAE 501	Engineering Analysis I	3
MMAE 520	Advanced Thermodynamics	3
MMAE 533	Fatigue and Fracture Mechanics	3
MMAE 554	Electrical, Magnetic and Optical Properties of Materials	3
MMAE 561	Solidification and Crystal Growth	3
MMAE 562	Design of Modern Alloys	3
MMAE 563	Advanced Mechanical Metallurgy	3
MMAE 564	Dislocations and Strengthening Mechanisms	3
MMAE 565	Materials Laboratory	3
MMAE 566	Problems in High-Temperature Materials	3
MMAE 567	Fracture Mechanisms	3
MMAE 568	Diffusion	2
MMAE 569	Advanced Physical Metallurgy	3
MMAE 570	Computational Methods in Materials Science and Engineering	3
MMAE 576	Materials and Process Selection	3
MMAE 578	Fiber Composites	3
MMAE 579	Advanced Materials Processing	3
MMAE 588	Additive Manufacturing	3
<b>Elective Courses</b>		<b>(12)</b>
Select 12 credit hours		12
<b>Total Credit Hours</b>		<b>30</b>

To complete the degree requirements, students may choose from a list of courses and may apply up to 12 credit hours of 400-level courses, as long as they were not used to satisfy requirements for an undergraduate degree. Up to six credit hours of accelerated (700-level) courses are allowed.