

MASTER OF ENGINEERING IN MECHANICAL AND AEROSPACE 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
Required Courses		(6-7)
MMAE 501	Engineering Analysis I	3
Select one core course in major area of study (see below)		3-4
Select a minimum of one numerical course from the following:		3
MMAE 450	Computational Mechanics II	3
MMAE 500	Data Driven Modeling	3
MMAE 502	Engineering Analysis II	3
MMAE 517	Computational Fluid Dynamics	3
MMAE 532	Advanced Finite Element Methods	3
MMAE 544	Design Optimization	3
MMAE 570	Computational Methods in Materials Science and Engineering	3
Elective Courses		(20-21)
Select 20-21 credit hours		20-21

Minimum degree credits required: 30

Core Courses as Determined by Major Area of Study

Code	Title	Credit Hours
Fluid Dynamics		(4)
MMAE 510	Fundamentals of Fluid Mechanics	4
Thermal Sciences		(3)
MMAE 520 or MMAE 525	Advanced Thermodynamics Fundamentals of Heat Transfer	3
Solids and Structures		(3)
MMAE 530	Advanced Mechanics of Solids	3
Dynamics and Controls		(3)
MMAE 541	Advanced Dynamics	3
Computer Aided Design and Manufacturing		(3)
MMAE 545	Advanced CAD/CAM	3

Students may choose from a list of courses specific to their area of interest to complete degree requirements. Up to nine credit hours at the 400-level are allowed, assuming the courses were not required for an undergraduate degree. Up to six credit hours of accelerated (700-level) courses are allowed. Students may include up to six credit hours of MMAE 594 or MMAE 597. (MMAE 594 graded as pass/fail only and MMAE 597 is graded with a letter grade.)