

Master of Science in Mechanical Engineering

Master of Science

The Master of Science in Mechanical Engineering (MSME) program provides students with advanced study in engineering with a specialization in Electro-Mechanical Systems. Students are prepared to design and implement electro-mechanical systems to fulfill the needs of a wide range of industries, including aerospace, aviation, automotive, and energy systems. Both thesis and non-thesis options are available, and each requires completion of 30 credits hours. In either option, the concentration area in Electro-Mechanical Systems requires students to complete 15 credit hours from a list of core courses. These core courses address both the theory and practical implementation of electro-mechanical systems. Students are permitted to choose general electives offered within the College of Engineering and the College of Arts and Sciences that support the educational and/or research goals of the student, pending approval from the ME graduate program coordinator.

Degree Requirements

The Master of Science degree in Mechanical Engineering (MSME) provides students with advanced study in the concentration of Electro-Mechanical Systems. Students may choose to participate in a thesis or non-thesis program, each requiring 30 total credit hours. Students are required to submit a plan of study during their first semester in the graduate program, and course selections and changes must be approved by the graduate program coordinator.

Thesis Option:

Course	Title	Credits
	Electro-Mechanical Systems Electives . . .	15
	General Electives.	3
	Mathematics Elective	3
ME 700	Graduate Thesis	9
Total Credits		30

Non-Thesis Option:

Course	Title	Credits
	Electro-Mechanical Systems Electives . . .	15
	General Electives.	12
	Mathematics Elective	3
Total Credits		30

ELECTRO-MECHANICAL SYSTEMS ELECTIVES

Course	Title	Credits
EE 500	Digital Control Systems	3
EE 505	Advanced Mechatronics	3
CEC 510	Digital Signal Processing	3
ME 500	Clean Energy Systems	3
ME 503	Unmanned and Autonomous Vehicle Systems.	3
ME 506	Design for Manufacturing and Assembly	3
ME 508	Hydrogen and Hybrid Vehicle Systems . .	3
ME 510	Micro-Electrical Mechanical Systems . . .	3
SYS 500	Systems Engineering	3
Total Credits		15

GENERAL ELECTIVES

General Electives can be courses chosen from the Electro-Mechanical Systems electives above, and from appropriate graduate courses offered by the College of Engineering and the College of Arts and Sciences with program coordinator approval. Students may also obtain general elective credit for completing the graduate internship, ME 696 (3 credits).

MATHEMATICS ELECTIVE

Course	Title	Credits
MA 500	Level or higher.	3
Total Credits		3