Master of Science in Mechanical Engineering program outline
The Mechanical Engineering program requires 30 credits of graduate-level coursework. All courses are 3 credits unless otherwise noted.

Core courses
Required for all students (15 credits)
ME 401 Applied Engineering Analysis
ME 411 Product Development and Entrepreneurship
ME 427 Transport Phenomena
ME 436 Solid Mechanics
ME 442 Material Science

Elective Courses
Five required (15 credits)
The MSME students may select elective courses in their field of concentration which includes: mechanics, thermal sciences, robotics, manufacturing, mechanical system, hydraulics, structural analysis, MEMS, and machine design. Typical elective courses are:

ME 402 Engineering Computational Analysis
ME 418 Quality Control Engineering
ME 425 Energy Systems
ME 432 Vibration of Dynamic Systems
ME 438 Machine Design
ME 439 Classical Mechanics
ME 442 Material Science
ME 451 Mechatronics
ME 452 Nanotechnology
ME 454 Control Systems
ME 498 Advanced Topics in Mechanical Engineering (1 to 3 credits)

Thesis/Project
Option: (3 or 6 credits)
ME 501 Graduate Education Continuum
ME 599 Thesis/Project
Graduate students are strongly recommended to select the thesis option to complete their graduate course work. However, they may choose a three-credit hour project option.

Suggested Course Sequence
First Semester
ME 401 – Applied Engineering Analysis
ME 411 – Product Development
ME 427 – Transport Phenomena

Second Semester
ME 436 – Solid Mechanics
ME 442 – Materials Science
Technical Elective

Third Semester
ME 501 – Graduate Education Continuum
Technical Elective

Fourth Semester
ME 599 – Thesis / OR Project +
Technical Elective
Technical Elective