

# MECHANICAL ENGINEERING, M.S.

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The Graduate School has general requirements for M.E., M.S., and Ph.D. students that must be met by all degree candidates (including earning at least 30 credit hours beyond the bachelor's degree for master's degrees and at least 60 credit hours beyond the bachelor's degree for doctoral degrees). The Department of Mechanical Engineering has added requirements (some of which are described below) that must be met before students can complete their degrees. Consult the department for complete, current requirements.

## Learning Outcomes

1. The students will demonstrate the ability to:
2. Apply energy, momentum, continuity, state and constitutive equations to thermal, fluids and mechanical systems in a logical and discerning manner. The core classes offered in the program address one to several of these areas individually, and the aggregate as a whole. By measuring average aggregate grade performance in the core classes, this goal can be monitored and assessed.
3. Identify, formulate, and solve thermal, fluid and mechanical engineering problems by applying first principles, including open-ended problems.
4. Use modern modeling and simulation techniques, and computing tools.

## Degree Requirements (30 Hours)

**For master's degrees in mechanical engineering:** An M.S. student must take a minimum of 24 hours of graded graduate courses and 6 hours of thesis credits leading to a thesis. An M.E. student must take a minimum of 30 hours of graded graduate courses. For both the M.S. and M.E. degrees, the student must take four required courses. All remaining course work must be taken from an approved list of courses, which includes engineering and mathematics courses numbered 500 or above. Other courses must be approved by the student's advisor and the graduate studies committee. All candidates for both the M.S. and M.E. degrees must complete a comprehensive assessment that is distinct from program course requirements.