

# Electrical and Computer Engineering, MS

courses; see the list of approved courses in the Department of Electrical and Computer Engineering Graduate Handbook on the department's Graduate Program Information website.

## Requirements

The Master of Science program in electrical and computer engineering requires 30 s.h. of graduate credit with or without thesis. Either option may precede PhD study. MS students must maintain a UI cumulative grade-point average of at least 3.00.

Thesis students must complete at least 12 s.h. from an approved list of electrical and computer engineering courses and 6 s.h. in ECE:5999 Research: Electrical and Computer Engineering MS Thesis. Nonthesis students must complete at least 18 s.h. from an approved list of electrical and computer engineering courses; they may count no more than 3 s.h. of independent study toward the degree. For a list of approved courses, see the Department of Electrical and Computer Engineering Graduate Handbook on the department's website. Courses required for the BSE in electrical engineering do not count toward the MS requirements.

Students who plan to satisfy thesis requirements must successfully complete a final examination, which is conducted by a committee of at least three faculty members. The final examination consists of an oral defense of the thesis.

## Software Engineering Subprogram

A software engineering subprogram is available to both thesis and nonthesis students. Both thesis and nonthesis options require a minimum of 30 s.h. of graduate credit. All rules for additional credit and the MS final examination are the same as for the MS without the subprogram. Successful completion of the subprogram results in a degree designation that specifies the software engineering subprogram on a student's transcript.

The MS in electrical and computer engineering with a software engineering subprogram requires the following coursework.

Course #	Title	Hours
ECE:5320	High Performance Computer Architecture	3
ECE:5330	Graph Algorithms and Combinatorial Optimization	3
ECE:5800	Fundamentals of Software Engineering	3
ECE:5810	Formal Methods in Software Engineering	3
ECE:5820	Software Engineering Languages and Tools	3
ECE:5830	Software Engineering Project	3

In addition to the listed courses, thesis students complete another 3 s.h. of approved coursework and 6 s.h. in ECE:5999 Research: Electrical and Computer Engineering MS Thesis; nonthesis students complete another 9 s.h. of approved coursework. Students who complete one or more required courses as undergraduates can substitute courses from the list of approved electrical and computer engineering