

# MS IN ENGINEERING (CONCENTRATION IN ELECTRICAL & COMPUTER ENGINEERING)

**Home Department:** Electrical and Computer Engineering (<https://my.kettering.edu/academics/departments/electrical-computer-engineering>)

**Available:** On Campus Only

**Program Advisor/Contact:**

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## Program Overview

The Master of Science in Engineering (<https://my.kettering.edu/academics/departments/graduate-programs/graduate-degrees/master-science-engineering>) is a professional master's program that builds on an undergraduate engineering program by offering additional depth and greater mastery in a number of technical areas.

## Program Objectives

All graduates of the Master of Science in Engineering program will:

- Deepen their knowledge and increase their mastery of technical areas that match their personal career goals.
- Be better prepared to advance in positions of technical and/or managerial leadership.
- Develop their ability to sustain a life-long career in engineering, through continuing self-directed learning and professional development activities.

The concentration in Electrical & Computer Engineering is designed for individuals who wish to acquire a deeper understanding and applied knowledge of engineering principles. This program affords a possibility for students to specialize in modern applications of electronics, electrical systems, and computer networking. In addition, the program provides an opportunity to learn business and financial management concepts which are valuable to practicing engineers. This program has a thesis option.

## Program Curriculum Requirements

Completion of 40 credits as follows:

|                              |   |   |
|------------------------------|---|---|
| ECE-610                      | Modeling of Dynamic Systems                     | 4 |
| ECE-630                      | Advanced Digital Signal Processing <sup>1</sup> | 4 |
| ECE-642                      | Electric Machine Drives <sup>1</sup>            | 4 |
| ECE-648                      | Electromagnetic Compatibility <sup>1</sup>      | 4 |
| EE-526                       | Advanced Power Electronics                      | 4 |
| EE-530                       | Digital Control Systems                         | 4 |
| EE-582                       | Robot Dynamics and Control                      | 4 |
| Select two of the following: |   | 8 |
| BUSN-659                     | International Business                          |   |

|                    |   |    |
|--------------------|---|----|
| ECON-513           | Microeconomic and Macroeconomic Concepts and Applications |    |
| FINC-619           | Financial Management                                      |    |
| Free Elective      |   | 4  |
| Total Credit Hours |   | 40 |

<sup>1</sup> A student may opt to do an MS thesis for four credits in lieu of a 600-level ECE elective.

Refer to the Graduate Course Offering Matrices Website (<https://my.kettering.edu/downloads/graduate-course-offering-matrices>) (Department of ECE section) for information as to which terms courses are offered. This will allow you to plan when you take each course and complete the program.