COLLEGE OF ENGINEERING AND COMPUTER SCIENCE (GRADUATE)

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Graduate Programs

The Master of Science in Engineering is a set of professional master's programs that build on an undergraduate engineering program by offering additional depth and greater mastery in a number of technical areas.

- The MS in Applied Data Science and Data Analytics is an interdisciplinary program that is a fusion of statistical and computing technologies with business and engineering applications. Technology courses include Data Mining, Machine Learning, Cloud Computing, and Data Visualization. Application courses include Managerial Sciences, Supply Chain Management, and Enterprise Resource Planning with future applications-related courses in the future. Students will have the option to work with faculty on a research project, on an internship with one of our co-op partners, or a capstone project in Applied Data Science and Data Analytics.
- The MSE in Mobility Systems (formerly Automotive Systems) is intended for individuals who desire a deeper understanding and knowledge of mechanical, electrical, computer, industrial, and manufacturing systems used in mobility. Courses cover subjects such as conventional and electric propulsion systems, safety systems, including connected and autonomous systems, and modern manufacturing systems. Students select courses from a structured framework in order to customize a program that best meets their individual and career needs.
- The MSE in Computer Engineering is an on-campus program designed to deepen students' understanding of computer engineering principles and applications and to develop their skills in independent research. Courses within the MSE Computer Engineering program include digital systems design, real-time embedded systems, artificial intelligence and computer vision for autonomous vehicles, mobile robotics, IoT, and virtual reality systems. The program requires a minimum of 40 credit hours of graduate work. There are two options available; 1) Thesis option (consists of coursework, research, and a thesis), and 2) Non-thesis Option (consists of only coursework).
- The MSE in Electrical & Computer Engineering - Advanced Mobility is designed for individuals who wish to acquire a deeper understanding and applied knowledge of the engineering principles of autonomous and electric mobility. The 30-credit MS Engineering-ECE-Advanced Mobility curriculum includes 10 courses consisting of 9 core courses and an integrative capstone project. Students in the program study dynamic systems modeling, introduction to autonomous driving, automotive control systems, mobile robotics, AI for Autonomous Driving, DSP, power electronics for vehicle electrification, machine drives for electric vehicles, and business communication and presentation. This program is available online only through Kettering University Online.
- The MSE in Electrical Engineering is an on-campus program designed for individuals who wish to deepen their understanding of electrical engineering principles and applications and to develop their skills in independent research. Students study topics such as dynamic systems modeling, digital signal processing and digital control, vector control of AC electric machines, energy storage systems, modeling and control of e-mobility systems, and robot dynamics and control. The program requires a minimum of 40 credit hours of graduate work. There are two options available; 1) Thesis option (consists of coursework, research, and a thesis), and 2) Non-thesis Option (consists of only coursework).
- The MSE in Mechanical Engineering program is designed for individuals who wish to deepen their understanding of mechanical engineering principles and applications and to develop their skills in independent research. Students can study a variety of topics including fuel cells, new energy, decarbonization, additive manufacturing, machine learning, and thermal management.