

# COMPUTER ENGINEERING MASTER OF SCIENCE

\*\*\* This program is no longer accepting new applicants. It has been replaced by the Master of Science in Electrical and Computer Engineering (<https://catalog.wit.edu/engineering/electrical-engineering/electrical-computer-engineering-ms/>).\*\*\*

## Leading to a Master of Science Degree in Computer Engineering

The Master of Science in Computer Engineering (MSCE) program is designed to provide advanced experience with post-graduate computer engineering principles and skills. The program has a thesis option with 31 required credit hours, and a non-thesis option with 34 required credit hours. Either option has students undertake an individualized engineering development experience, either as a two-course Thesis, or a one-course Master Project. All students are required to complete a one-credit Professional Perspectives course to increase exposure to recent developments and to aspects of professionalism. All students are required to complete a three-course concentration, either one of the predefined concentrations or an individualized concentration. Students may be either full-time or part-time. Although some classes or parts of classes may be remote, the program is designed as an on-campus program. Some of laboratory exercises require use of physical apparatus in the labs, so students will need to be on-campus for those courses. The expected background of the students is a bachelor's degree in computer engineering or another engineering bachelor's degree that included a significant component of computer engineering (circuits, electronics, computer programming, operating systems, computer architecture). Certain of the concentration or elective courses may have additional expected background related to their field. The transcripts of incoming students will be reviewed to determine whether foundation or prerequisite courses are required or recommended. If a student has been required or recommended to take such a course, a maximum of two graduate-level foundation courses may be applied as elective courses toward the requirements for the MSCE degree. Full-time students may complete the program in two or three semesters (within one calendar year), depending on how many graduate-level engineering courses were transferred in (maximum of six credits) and whether the thesis or non-thesis option is chosen. Part-time students may complete the program in two to four years, depending on transfer credits, the choice of the thesis or non-thesis option, course load per semester, and whether courses are taken during the summer semester.

## Program Educational Outcomes

Program educational objectives (PEO) are the accomplishments graduates are expected to achieve during the first few years after graduation with the M.S. degree.

Graduates with an M.S. in Computer Engineering will have the following behavioral characteristics.

- Work toward alleviating problems, challenges or risks in application fields related to computer engineering.
- Apply engineering methodology with confidence and humility to develop innovative and effective solutions in a professional and ethical manner.

- Pursue professional development to meet and adapt to emerging and evolving engineering challenges.

## Student Outcomes

In order to fulfill its Mission, Wentworth has established the following Graduate Student Learning Outcomes. The Office of Institutional Effectiveness at WIT developed these Outcomes to be suitable for all graduate programs at WIT. These Outcomes were considered appropriate for the proposed program and were adopted.

Upon graduation, Wentworth Institute of Technology Graduate students will demonstrate:

- Core Knowledge: advanced knowledge in a specialized area consistent with the focus of their graduate program, including critical thinking and problem solving.
- Scholarly Communication: advanced proficiency in written and oral communication, appropriate to purpose and audience.
- Professionalism: advanced intellectual and organizational skills of professional practice, including ethical conduct.
- Research Methods and Analysis: quantitative and qualitative skills in the use of data gathering methods and analytical techniques used in typical research that is consistent with the focus of their graduate programs.