CIVIL ENGINEERING, MS

Department Chair

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Program Director

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Faculty

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Program Description

The Master of Science in Civil Engineering (MSCE) program in the Department of Civil and Environmental Engineering at Syracuse University has earned a reputation for superior quality and placing students at the center of attention. Degree recipients have embarked on Ph.D. study, or worked in the public sector and private industry, making important contributions to the profession. The MSCE program provides coursework and research opportunities to students in the areas of construction engineering and management, geomechanics and geotechnical engineering, and structural and materials engineering.

In addition to these three core areas, students and faculty in the MSCE program engage in interdisciplinary teaching and research, expanding the opportunities available to graduate students. The department is home to The Geofoam Research Center, and administers the following facilities for teaching and research: Bio-inspired Design and Multiscale Computational Modeling Lab, Construction Engineering Lab, Geofoam Lab, Geosynthetics and Imaging Lab, and Structures and Materials Lab. Students enrolled in the MSCE program have the opportunity to take courses offered in other departments in the College of Engineering and Computer Science, as well as from the College of Arts and Sciences, School of Architecture, Whitman School of Management and SUNY-ESF. Students can also earn a Certificate of Advanced Study in Enterprise Technology Leadership, Public Infrastructure Management and Leadership, Public Administration, or Sustainable Enterprise.

The MSCE degree requires students to complete 30 credit hours of study. The program is flexible and individually structured with either a thesis or non-thesis option. Students anticipating further graduate study at the doctoral level should pursue the thesis option. Applicants have the option of selecting one of three available focus areas: Construction Engineering and Management, Geomechanics and Geotechnical Engineering, or Structural and Materials Engineering. Students often complete the MSCE degree from one to two years.

Admission Requirements

1. B.S. in Civil Engineering or the equivalent from an accredited institution. Candidates with undergraduate degrees in another field must have their programs evaluated to determine if additional undergraduate courses are to be included in their program of study.
2. At least a 3.0 in a 4.0 rating system or equivalent in the B.S. program coursework.
3. Satisfactory scores on all required graduate entrance examinations. A TOEFL score of 80 or higher is required for international students.
4. Departmental approval.

Student Learning Outcomes

1. Formulate and solve problems in the fundamentals of their specialty track
2. Formulate and solve specialized problems in advanced fundamentals
3. Use computer programs and productivity tools to solve engineering problems
4. Use codes and standards to do analysis and design
5. Solve engineering problems in evolving complementary specialties
6. Do independent research and communicate findings

Program Requirements

Programs are planned by the students in consultation with their advisors. At least half of the coursework must be at or above the 600 level. Students who have taken the lower level of a double-numbered course (e.g., a course offered at the 400 and 600 levels) may not take the higher level of the same course for credit.

M.S. candidates may transfer a maximum of six credits from other institutions and are expected to complete their entire program within five calendar years of admission.

Thesis and non-thesis options are available. Students anticipating further graduate study at the doctoral level should pursue the thesis option.

Requirements With Thesis (30 Credits)

1. Completion of 9 credits of core courses in any one of the following areas: construction engineering and management, geomechanical and geotechnical engineering, or structural and materials engineering. These required courses are specified in the Graduate Program Profile.
2. Completion of 15 credits of elective coursework satisfying the distributional requirements, as specified in the Graduate Program Profile.
3. Completion of 6 credits of CEE 997 Masters Thesis
4. Defense of thesis
5. Participation in the zero credit faculty/student seminar program (CEE 660 Seminar Civil Engineering)

Requirements Without Thesis (30 Credits)

1. Completion of 9 credits of core courses in any one of the following areas: construction engineering and management, geomechanical and geotechnical engineering, or structural and materials engineering. These required courses are specified in the Graduate Program Profile.
2. Completion of 21 credits of elective coursework satisfying the distributional requirements, as specified in the Graduate Program Profile.
3. Completion of CEE 995 Master's Exit Paper (zero credits)
4. Participation in the zero credit faculty/student seminar program (CEE 660 Seminar Civil Engineering)