

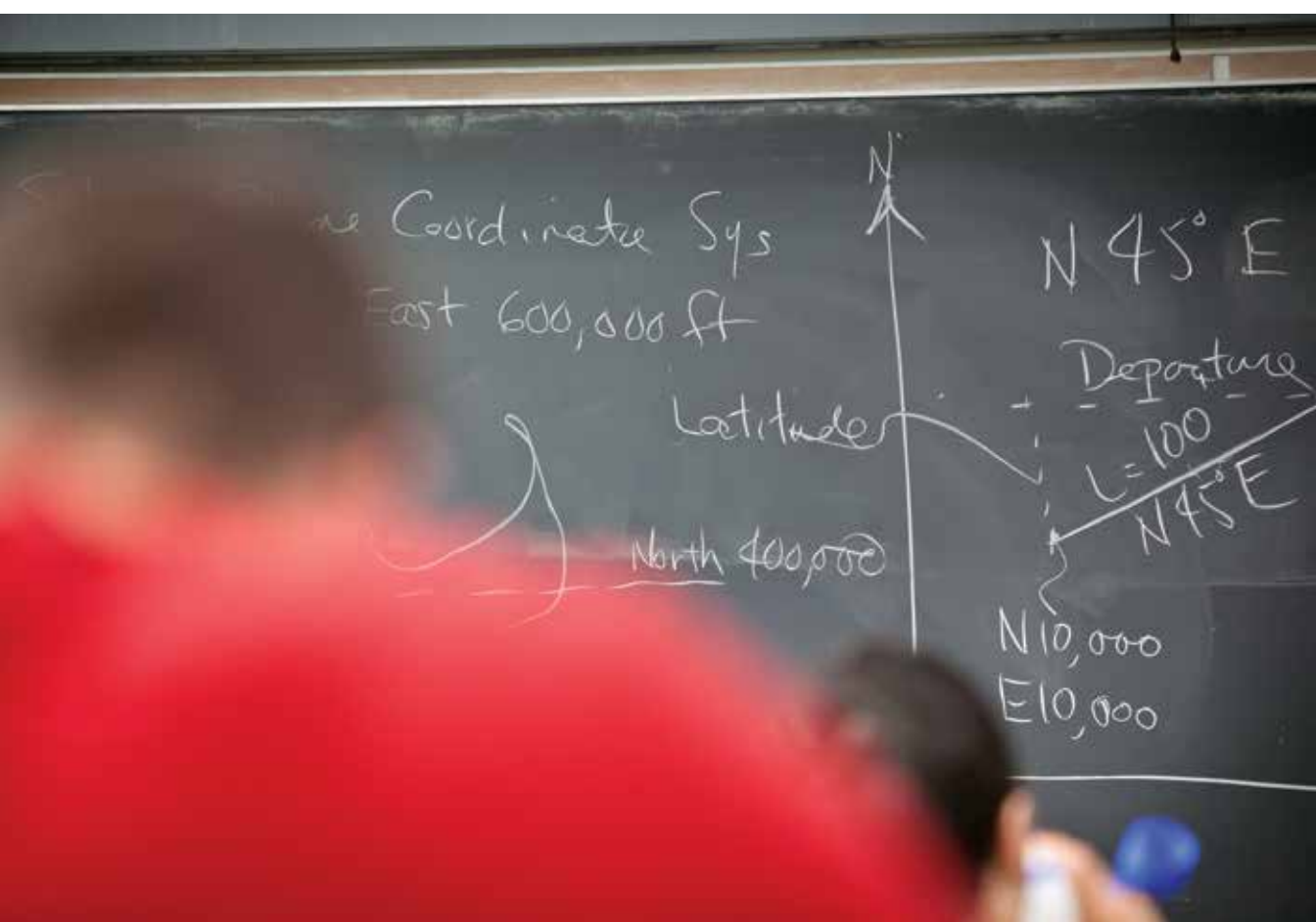


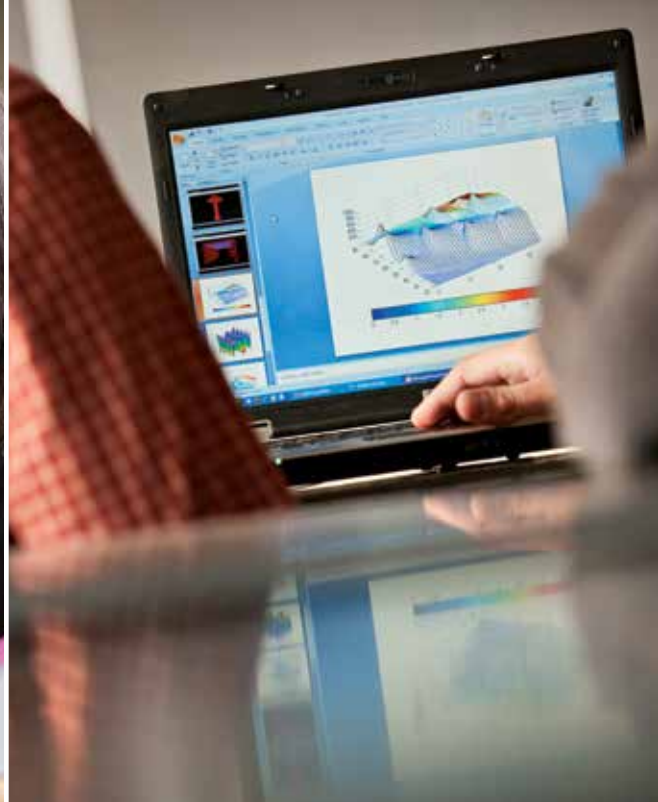
SCHOOL OF **SCIENCE & ENGINEERING**

MASTER OF SCIENCE IN
**CIVIL
ENGINEERING**

Across nearly every industry, companies are in need of flexible, forward-thinking engineers whose knowledge spans many disciplines.

Merrimack College's Master of Science in Civil Engineering applies the latest in high-tech equipment and sophisticated procedures to address challenges concerning our environment and infrastructures, including environmental, water resources, geotechnical, structure, and transportation. The curriculum is designed to respond to the significant demands for advanced degrees in civil engineering.





Professional Experience

Our graduate programs are designed to help students reach their ultimate goal – whether it’s improving their professional status, obtaining a promotion, or shifting into a more enriching, high growth field. Merrimack’s graduate students can take advantage of a wide range of career planning resources and services to meet their needs. Students have the opportunity to participate in co-ops or internships which help them gain relevant work experience, apply their classroom skills in real-world settings, test drive different career options, and identify their own personal strengths and areas for career growth.

Graduate Assistantships

A limited number of Graduate Assistantships or Teaching Assistantships may be available on a competitive basis. Graduate students will be considered for teaching assistantships upon review of their application. Assistantships may take the form of paid hourly work and/or partial tuition scholarship.

Financial Aid

Merit based scholarships are available and will be awarded based on the overall strength of your application materials. Graduate students enrolled at least half-time (a minimum of four credits per semester) may qualify for financial aid in the form of Unsubsidized Federal Stafford Loans. For additional information, visit www.merrimack.edu/financialaid.

Career Opportunities

Civil engineering is a highly versatile degree allowing graduates to work in many different industries and professions. Many civil engineers hold supervisory or management positions, from supervisor of a construction site to city engineer. Others may work in design, project management, construction, research, and teaching.

Program Format

Applications are accepted for fall and spring terms. Students enrolled full time complete their degree work in one year. Students may also enroll part time and complete the degree in two years or at their own pace. Classes are held in the evening to maximize time at work or in a co-op or internship.

Admission Requirements

- Bachelor of Science in Civil Engineering or Civil Engineering Technology from an accredited college or university
- Bachelor of Science in another engineering field (i.e. environmental engineering, chemical engineering, mechanical engineering, electrical engineering, engineering management) with two required prerequisite civil engineering courses such as:
 - Structural Analysis or approved equivalent
 - Environmental Engineering or approved equivalent
 - Geotechnical Engineering or approved equivalent
 - Transportation Engineering or approved equivalent
- Bachelor's degree in a related field (i.e. math, physics, geology, chemistry, biology, environmental science) with required prerequisite course work or approved equivalent:
 - Calculus I - III
 - Chemistry I
 - Differential Equations
 - Mechanics I and II
 - Applied Statistics
 - Fluid Mechanics
 - Physics I and II
- Prerequisite coursework can be taken at any accredited college/university, including Merrimack College. Prerequisite coursework must be completed with a grade of B or better prior to enrolling in classes. For questions about prerequisite coursework, please contact graduate@merrimack.edu.
- Standardized test scores are not required to complete an application, though we encourage students to submit test scores if they have taken an exam.
- International applicants whose native language is not English are required to submit standardized test scores. Merrimack requires a TOEFL minimum score of 84 on the internet-based test (with a minimum score of 21 on the writing subset). For IELTS, Merrimack requires a minimum score of 6.5 (with no band below 6.0). For the Pearson Test of English Academic, Merrimack requires a minimum score of 56.

DEGREE REQUIREMENTS

The Master of Science in Civil Engineering combines foundational four-credit courses with electives for a total of 32 credits.

- Introduction to Systems Engineering
- Numerical Methods

and one from the following:

- Finite Elements
- Project Management
- Engineering Management
- Life Cycle Costing

ELECTIVES

A minimum of two electives must be taken from available graduate level electives offered (see sample list below). Students may take all five electives from this list if they choose. A maximum of three electives can be chosen from the business curriculum of the Girard School of Business. A maximum of two electives may be transferred in.

- Steel Analysis
- Concrete Analysis & Design
- Foundation Design
- Earth Slopes and Retaining Structures
- Environmental Design
- Applied Hydrology
- Geometric Design of Highways
- Traffic Engineering
- Transportation Systems Analysis
- Construction Planning & Management
- Finite Elements
- Project Management
- Earthquake Engineering
- Pre-stressed Concrete Structures
- Advanced Structural Analysis
- Principles & Applications of Geographic Information Systems
- Pavement Management Systems
- Building Information Models
- Urban Hydrology & Storm Water Management
- Sustainable Infrastructure Systems
- Life Cycle Costing

SPECIALIZATION OPTION — ENGINEERING MANAGEMENT

The Master of Science in Civil Engineering program offers the option of a specialization in Engineering Management which includes three elective courses in management.

Engineering management provides graduates with both technical and managerial skills, combining a typical engineering education (technical) with key elements of a typical management or business education (managerial).

**FOR QUESTIONS OR
ADDITIONAL INFORMATION,
PLEASE CONTACT**

Office of Graduate Admission
graduate@merrimack.edu
978-837-3563



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