Log in to a Distinguished Tradition.
Since 1819.

MASTER OF
Civil Engineering
Online
Program Overview

Program Outcomes

**Students will demonstrate:**

- The ability to solve real-world problems through application of engineering fundamentals, mathematics, natural and social sciences, humanities, and technology.

- The ability to work professionally in team environments to design and construct both structural and environmental systems.

- The ability to effectively communicate, both verbally and in written form.

- An understanding of professional life and will recognize the need for professionals and citizens in an evolving global society to pursue a course of lifelong learning.

Leadership in the Field

The knowledge and skills needed by engineers in the 21st century are far greater than those of the 20th century, and yet time devoted to developing them in undergraduate engineering programs has decreased in the last 30 to 40 years. Given our history as the first private college in the U.S. to teach civil engineering, it is not surprising that we continue to set a new standard in civil engineering education. In addition to teaching the requisite technical skills, our online Master of Civil Engineering program also focuses on the “softer” skills that allow engineers to communicate more effectively with non-technical audiences, manage procurement to personnel in complex projects, and garner support for new ideas or initiatives.

Program Mission

The Master of Civil Engineering (MCE) program prepares students to excel and makes it clear that above all else, the civil engineering profession is committed to bettering the world. The program provides modern, fundamental, practice-oriented education and fosters creativity and critical thinking in problem solving. It motivates students to consider the societal consequences of their work and enables them to be leaders in their profession, community, and the nation.

The program is structured as follows:

- Two start dates per year: March and September.
- Six credits for each of the six, eleven-week courses.
- Concentrations of technical tracks in Structural Engineering, Geotechnical Engineering, Environmental/Water Resources Engineering, and Construction Management.
- Complete coursework in as few as 18 months.
- For students requiring any Fundamentals, the coursework will take 21-24 months to complete.
- Capstone residency experience.
Tom Lawless, Master of Civil Engineering Alumnus

“I noticed I was immediately putting my knowledge from the program into my work. The program also helped me to begin looking at the environment as a finite resource. Overall, my Norwich experience was filled with great times and great people.”

The Norwich Advantage

In Your Corner. A Motivating Force.

If you can dream it, you can accomplish it – thanks to Norwich University’s expert faculty and dedicated student support advisors. Your team works together to keep you motivated and build the skills needed for a rewarding career. From program start to finish, you’ll never be alone. Our dedicated faculty and program staff are genuinely invested in your success and will go out of their way to provide the mentorship and support you need. Norwich provides 24/7 access and technical support to an online learning platform, enabling you to contribute to class discussions and complete your coursework at any time from any location.

Access to Extensive Resources

The Kreitzberg Library serves all online students and faculty. You will have access to our library’s 100 online databases, 54,000 full-text electronic journals, and hundreds of thousands of e-books.

To help you succeed as an online learner, our dedicated distance learning librarian and reference staff members provide research assistance via email, phone, and chat. Our staff can also ship you books anywhere in the world from our circulating collection of over 140,000 titles, and provide journal articles not available online through our material request services.
Curriculum

Overview

The civil engineering program is made up of six, six-credit courses for a total of 36 credits. Each course is approximately 11 weeks in length. The program is designed so you can complete the coursework in as few as 18 months (21-24 months for students requiring any Fundamentals) and graduate in as few as 21 months from the time you first enroll. Fundamental courses are offered for those not meeting full admission requirements. Assessments are conducted on a case-by-case basis. The program ends with a one-week residency and graduation ceremony at Norwich University in June. The Master of Civil Engineering program offers two start dates per year: March and September.

Students tailor their online civil engineering degree by choosing one of four technical tracks in structural engineering, environmental/water resources engineering, geotechnical engineering, or construction management. By the program’s conclusion, students will have compiled a portfolio of design and management projects that they present to program faculty during their residency week as the final step in their degree completion. This impressive body of work also serves as a valuable resource for graduates as they pursue career opportunities within their current organizations or with prospective employers. The program culminates in a capstone paper — as the engineer in a leadership position you will direct the project from conception to completion. This includes the preparation of a comprehensive project business plan that will include project goals, political hurdles, anticipated revenues and expenses, marketing, facility design, etc.; all pertaining to the design of a major civil engineering project.

Courses

Environmental/Water Resources

Fundamentals*
- Engineering Analysis Techniques
- Engineering Mechanics I
- Hydraulics for Environmental Engineers
- Fundamentals of Environmental/Water Resources Engineering

Core/Concentration
- Project Management Techniques, Tools, and Practices
- Engineering Mathematics
- Classical, Matrix, and Dynamic Analysis of Structures
- Design of Steel and Timber Structures
- Design of Reinforced and Prestressed/Precast Concrete Structures
- Capstone Design Project

Structural

Fundamentals*
- Engineering Analysis Techniques
- Engineering Mechanics I
- Fundamentals of Structural Engineering

Core/Concentration
- Project Management Techniques, Tools, and Practices
- Engineering Mathematics
- Classical, Matrix, and Dynamic Analysis of Structures
- Design of Steel and Timber Structures
- Design of Reinforced and Prestressed/Precast Concrete Structures
- Capstone Design Project

Geotechnical

Fundamentals*
- Engineering Analysis Techniques
- Engineering Mechanics I
- Introduction to Soil Mechanics and Fundamental Engineering
- Elementary Geotechnical Tools Lab (3 Day On-Campus Lab)

Core/Concentration
- Project Management Techniques, Tools, and Practices
- Engineering Mathematics
- Intermediate Soil Mechanics and Fundamental Engineering
- Earthquake Engineering and Soil Stabilization
- Numerical Methods in Geotechnical Engineering
- Capstone Design Project
- Intermediate Geotechnical Tools Lab (3 Day On-Campus Lab)

Construction Management

Fundamentals*
- Engineering Analysis Techniques
- Business Management Fundamentals
- Quantitative Methods and Financial Analysis for Managers

Core/Concentration
- Project Management Techniques, Tools, and Practices
- Engineering Mathematics
- Information Technology
- Contracts and Insurance
- Project Finance and Accounting
- Capstone Design Project

*Fundamental courses determined individually
Combining the technical and business dimensions of civil engineering careers, our rigorous curriculum teaches students not only to analyze and design a breadth of structural and environmental systems but also to successfully navigate the management-related issues that arise during a project. With four technical concentrations to choose from, you can focus your studies on the area that interests you most and develop specialized skills that will set you apart in the job market. The Norwich Master of Civil Engineering program helps equip working adults in civil engineering or related fields with the technical and management skills needed to advance into leadership roles or to run their own companies.

Mohammed Nusair, Master of Civil Engineering Alumnus

“I feel that with the knowledge gained from this degree, I can easily handle another position. The degree has already helped me in my current position. We are developing a new master plan, and the plant decision-makers have decided to pursue implementing some of the upgrades I’ve proposed in conjunction with the engineering firm working with us. Because of the Norwich program I have gained confidence, knowledge, self-discipline, and time management skills.”

The Norwich Advantage

Unique Blend of Theory and Practicality

Combining the technical and business dimensions of civil engineering careers, our rigorous curriculum teaches students not only to analyze and design a breadth of structural and environmental systems but also to successfully navigate the management-related issues that arise during a project. With four technical concentrations to choose from, you can focus your studies on the area that interests you most and develop specialized skills that will set you apart in the job market. The Norwich Master of Civil Engineering program helps equip working adults in civil engineering or related fields with the technical and management skills needed to advance into leadership roles or to run their own companies.

Superb Teacher-Practitioners

Our faculty members have broad industry and research experience that informs and enriches their teaching, providing students with real-world insight and a context for applying their expanded skills and knowledge. Our faculty includes leaders and innovators from every sector of civil engineering; most have professional engineering licenses, and many hold terminal degrees.

Faculty members strive to create one of the best civil engineering colleges online, and bring vast field and research experience into the virtual classroom, illustrating concepts with real-world examples and engaging students in discussions about the challenges and opportunities facing today’s civil engineers.
You want a reputable degree you can earn online and apply instantly to your job. Norwich University provides the credentials to help you grow and advance in your career — just as more than 27,000 Norwich alumni are doing all around the world.

The Norwich Advantage

The pace for each course is designed with busy schedules in mind

Through our flexible online platform, you can access program content and contribute to class discussions on your own schedule and at your own pace each week. This format gives you extra time to contemplate questions and compose well-thought-out responses. Small classes and students from diverse professional and cultural backgrounds foster in-depth discussions and unique perspectives.

Your learning community will become an invaluable network

You will progress through the program in small classes called cohorts. Small classes of 16 or fewer students encourage frequent student-student and student-faculty interactions, while a team of dedicated program staff provides students with additional support and guidance as needed. When students enroll at Norwich, they not only gain access to a dynamic learning community but also to an extensive career network of successful alumni from around the globe.

Enroll Here. Go Anywhere.

Whether you want to advance into a leadership role within your current organization, transition to a new career, or run your own company, a Master of Civil Engineering degree from Norwich University is your professional launching pad. Recent program graduates have gone on to positions ranging from director of a community development NGO in Haiti, to environmental engineering consultant, to engineer officer for the U.S. Army.

Residency

The culmination of the 18 months of study is the one-week residency at the beautiful campus in the Green Mountains of Vermont. Residency is held in June of each year. During residency, students meet to cement their relationships with their cohort and faculty, exchange ideas, create and foster professional networks, and immerse themselves in Norwich campus and legacy.
Norwich seeks goal-oriented individuals who have high standards of personal ethics and have demonstrated excellence in their professional lives and academic studies.

Applicants should have a desire to make a positive contribution to their field. Selective admissions standards are intended to ensure that those admitted will have the greatest prospect of successfully completing the program and contributing to the field. Choosing a school to pursue your Master of Civil Engineering is a major decision. We invite you to contact our Admissions Advisors, who are available to guide you in your decision-making and provide as much information and assistance as you need.

Looking to change your career?
We welcome applications from anyone with an undergraduate degree, as we offer Fundamental courses to help those who need to fill in the gaps. If you require undergraduate Fundamental courses in math or science, Norwich University has teamed up with StraighterLine to offer several affordable online undergraduate courses that may help you qualify for the program.

Admission Criteria
- A bachelor’s degree from a regionally or nationally accredited institution or an equivalent degree from a foreign institution, as evaluated by WES, IERF, Span Tran, or CED.
- The GRE is not required to apply, but may be requested based upon an applicant’s undergraduate GPA.
- If English is not your first language, proof of English language proficiency is required. This can be demonstrated in one of two ways:
  - TOEFL - a minimum score of 550 (paper-based test) or 80 (internet-based test) is required.
  - IELTS - a minimum composite score of 6.5 is required.

Application Process
Call an Admissions Advisor to begin the application process and submit the following items:
- Application form
- Resume
- Official transcript from undergraduate degree-granting institution
- Letter of intent
- One letter of recommendation (professional or academic)
- Proof of English language proficiency TOEFL, if applicable

Applicants not meeting the criteria will be assessed on a case-by-case basis.

Financial Aid Information
Financing your graduate education can be a daunting task if you are unfamiliar with the process, timeline, expectations, and options. Norwich University wants to make this process a smooth journey for you.

To speak with one of our Admissions Advisors about financial aid:
Call 1-800-460-5597 ext. 3369 or Email mce@online.norwich.edu.

Visit https://online.norwich.edu for more information.
Master of Civil Engineering Online

About Norwich University

Founded in 1819, Norwich University is a small, private, not-for-profit university that offers professional and liberal arts programs to military and civilian students. The campus is located in Vermont. The College of Graduate and Continuing Studies builds upon nearly 200 years of Norwich University traditions while offering a variety of degree programs online in a rigorous academic environment. By enrolling in our Master of Civil Engineering program, you’ll become part of a long tradition of public service education and leadership at Norwich, which goes all the way back to our founding as the nation’s first private military college.

Norwich University is accredited by the New England Association of Schools and Colleges, Inc., through its Commission on Institutions of Higher Education.

Recognized for academic excellence, U.S. News & World Report ranks Norwich University in the top 100 for Regional Universities in the North. Rankings are based on undergraduate programs.

Recognized as offering the Best Value with respect to high academic quality and low net cost of attendance, U.S. News & World Report ranks Norwich University in the top Regional Universities in the North. Rankings are based on undergraduate programs and on students who received the average level of need-based financial aid.

College of Graduate and Continuing Studies

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Visit our online master’s programs at online.norwich.edu:

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- Master of Arts in International Relations
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- Master of Civil Engineering
- Master of Public Administration
- Master of Science in Criminal Justice
- Master of Science in Executive Leadership
- Master of Science in Information Security & Assurance
- Master of Science in Leadership
- Master of Science in Nursing