Welcome to our graduate program!

Congratulations on your acceptance to Northeastern University’s Department of Civil and Environmental Engineering (CEE). We are delighted you have decided to join our program.

Please find below some important information to help you with the admissions process and facilitate your transition to our program. This information mostly pertains to MS students. PhD students admitted to the Civil and Environmental Engineering or Interdisciplinary programs may find additional information here.

Assignment of Faculty Advisor

If your admission letter does not specify a faculty advisor, you will be assigned an initial faculty advisor during Orientation based on your concentration area. Your initial advisor will assist you in entering the program, choosing courses, and more. The faculty advisors for the different areas and programs are listed below.

Associate Chair for Graduate Studies: Professor Andrew Myers

MS in Civil Engineering
Construction Management: Professor Qi "Ryan" Wang
Data and Systems: Professor Amy Mueller
Geotechnical/Geoenvironmental Engineering: Professor Craig Shillaber
Structures: Professor Michael Kane
Transportation: Professor Peter Furth
Water, Environmental, and Coastal Systems: Professor Ed Beighley

MS in Environmental Engineering: Professor Matthew Eckelman

MS in Engineering & Public Policy: Professor Matthew Eckelman

MS in Sustainable Building Systems: Professor David Fannon

The above also serve as Graduate Advisors for the corresponding areas of study in the CEE Ph.D. program. Professor Jim Chen is the Graduate Advisor for the Interdisciplinary Ph.D. program.
Curriculum and Class Registration

To be able to register for classes, admitted students need to first confirm their enrollment and pay their enrollment deposit. Students may do so by logging into their application portal.

All students are strongly urged to register for courses at this time to enable us to ascertain the likely enrollments in each course. Once you arrive on campus and consult with your academic advisor, you can change your course selections as needed, including adding and dropping courses until the end of the second week of the term.

For a detailed list of graduate courses (core, electives, etc.), please refer to the CEE Graduate Catalog, available on-line here. For course descriptions, please check here.

For the complete and updated calendar of Spring 2024 courses, please visit the “Banner Dynamic Class Schedule”, maintained online by the Office of the Registrar. Please select Fall 2023 for the term, then “Civil and Environmental Engineering” for Subject and “Graduate” for Course Level. For courses offered by other departments, please refer to the corresponding webpage or email CEE Program Coordinator, Rebecca Ricard, at r.ricard@northeastern.edu.

For completion of the MS program, please read the degree course requirements described in the CEE Graduate Catalog as listed above. There are different MS degree options. Consult with your academic advisor regarding the degree options and course requirements. Typical recommendations for initial courses for MS students by discipline concentrations are provided later in this letter.

For completion of the PhD program, please read the degree course requirements described in the CEE Graduate Catalog. Consult with you advisor regarding the core and elective course requirements.

Sample Course Selections
The following section provides examples of typical course selections for each concentration area. It is recommended to take two to four courses in a semester, with two to three courses being common for first semester students. Note that this is for your reference only; we recommend you consult with your advisor and look at the course catalog for more in-depth information, particularly to ensure you have the appropriate prerequisites.

MASTER’S IN CIVIL ENGINEERING

Construction Management Concentration

Required Core Courses

CIVE 5221 – Construction Project Control and Organization
CIVE 7230 – Legal Aspects of Civil Engineering
EMGT 6305 – Financial Management for Engineers
IE 6200 – Engineering Probability and Statistics

Electives

ACCT 6200 – Financial Reporting and Managerial Decision Making 1
ACCT 6201 – Financial Reporting and Managerial Decision Making 2
DAMG 6210 – Data Management and Database Design
CIVE 7151 - Urban Informatics and Processing
CIVE 7240 - Construction Equipment and Modeling
EMGT 5300 - Engineering/Organizational Psychology
GE 5010 - Customer-Driven Technical Innovation for Engineers
GE 5100 - Product Development for Engineers
IE 5617 - Lean Concepts and Applications
IE 5640 - Data Mining for Engineering Applications
IE 7215 - Simulation Analysis
IE 7290 - Reliability Analysis and Risk Assessment
INFO 6215- Business Analysis and Information Engineering
INFO 6245 - Planning and Managing Information Systems Development
OR 6205 - Deterministic Operations Research
SBSY 5200 – Sustainable Engineering Systems for Buildings
SBSY 5300 - Information Systems for Integrated Project Delivery
The full list of Required and Restrictive Electives for *Construction Management* is found here.

**Data and Systems Concentration**

*Data and Computing*

CIVE 5280 – Remote Sensing of the Environment  
CIVE 7150 – Data-Driven Decision Support for Civil and Environmental Engineering  
CIVE 7151 – Urban Informatics and Processing  
ENVR 6500 – Biostatistics  
  or IE 6200 – Engineering Probability and Statistics  
  or IE 7280 – Statistical Methods in Engineering  
  or INSH 5301 – Introduction to Computational Statistics  
IE 7275 – Data Mining in Engineering  
PPUA 5262 – Big Data for Cities  
DAMG 6105 - Data Science Engineering with Python  
DAMG 6210 - Data Management and Database Design  
ENVR 5260 - Geographical Information Systems  
IE 5640 - Data Mining for Engineering Applications  
  or IE 7275 - Data Mining in Engineering

*Systems and Sensors*

CIVE 5275 – Life Cycle Assessment of Materials, Products and Infrastructure  
EECE 5155 - Wireless Sensor Networks and the Internet of Things  
OR 6205 – Deterministic Operations Research  
OR 7245 – Network Analysis and Advanced Optimization  
PHYS 5116 – Network Science 1  
PPUA 6502 – Economic Analysis for Policy and Planning

*Civil and Environmental Systems*

CIVE 5363 – Climate Science, Engineering Adaptation, and Policy  
CIVE 5373 – Transportation Systems: Analysis and Planning  
CIVE – Hydrologic and Hydraulic Design  
CIVE 7380 – Performance Models and Simulation of Transportation Networks  
IE 7200 – Supply Chain Engineering  
OR 7310 – Logistics, Warehousing, and Scheduling  
SBSY 5200 – Sustainable Engineering Systems for Buildings
Electives

CIVE 7255 – Environmental Physical/Chemical Processes
CIVE 7381 – Transportation Demand forecasting and Model Estimation
CIVE 7382 – Advanced Traffic Control and Simulation
EECE 5644 - Introduction to Machine Learning and Pattern Recognition
EECE 7204 - Applied Probability and Stochastic Processes
IE 5617 - Lean Concepts and Applications
IE 7215 - Simulation Analysis

The full list of Required and Restrictive Electives for Data and Systems can be found here.

Geotechnical/Geoenvironmental Concentration

Required Core Requirements

CIVE 7301 – Advanced Soil Mechanics
CIVE 7302 – Advanced Foundation Engineering

Electives

CIVE 5536 – Hydrologic and Hydraulic Design
CIVE 7240 – Construction Equipment and Modeling
CIVE 7312 – Earthquake Engineering
CIVE 7330 – Advanced Structural Analysis
CIVE 7331 – Structural Dynamics
IE 6200 - Engineering Probability and Statistics
IE 7290 - Reliability Analysis and Risk Assessment
ME 5657 – Finite Element Method

The full list of Required and Restrictive Electives for Geotechnical Engineering is found here.
Structures Concentration

Required Core Courses

CIVE 7330 – Advanced Structural Analysis
CIVE 7331 - Structural Dynamics

Restricted Electives

CIVE 5522 – Structural Systems Modeling
CIVE 7312 – Earthquake Engineering
CIVE 7340 – Seismic Analysis and Design
CIVE 7350 – Behavior of Concrete Structures

Other Electives

CIVE 5525 – Prestressed Concrete Design
CIVE 7150 – Data-Driven Decision Support for Civil and Environmental Engineering
CIVE 7151 – Urban Informatics and Processing
ME 5240 – Computer Aided Design and Manufacturing
ME 5655 – Dynamics and Mechanical Vibration
SBSY 5200 – Sustainable Engineering Systems for Buildings

The full list of Required and Restrictive Electives for Structures is found [here](#).

Transportation Concentration

Required Core Courses

CIVE 5373 – Transportation Systems: Analysis and Planning
CIVE 5376 – Traffic Engineering and Sustainable Urban Street Design
IE 6200 – Engineering Probability and Statistics

Restricted Electives

CIVE 7150 – Data-Driven Decision Support for Civil and Environmental Engineering
CIVE 7151 – Urban Informatics and Processing
CIVE 7380 – Performance Models and Simulation of Transportation Networks
The full list of Required and Restrictive Electives for Transportation is found here.

**Water, Environmental, and Coastal Systems Concentration**

*Required Core Courses*

CIVE 5250 – Organic Pollutants in the Environment  
CIVE 5280 – Remote Sensing of the Environment  
CIVE 7255 – Environmental Physical/Chemical Processes  
CIVE 7260 – Hydrologic Modeling  
CIVE 7281 – Coastal and Nearshore Hydrodynamics

*Restricted Electives*

CIVE 5670 – Global Biogeochemistry  
CIVE 7150 – Data-Driven Decision Support for Civil and Environmental Engineering  
CIVE 7151 – Urban Informatics and Processing  
ME 6200 - Mathematical Methods for Mechanical Engineers 1

*Other Electives*

CIVE 5150 – Climate and Atmospheric Change  
EECE 7204 - Applied Probability and Stochastic Processes  
ENVR 5260 - Geographical Information Systems  
EEMB 5516 - Oceanography  
IE 6200 - Engineering Probability and Statistics  
IE 7280 - Statistical Methods in Engineering  
IE 7290 - Reliability Analysis and Risk Assessment  
MATH 7344 - Regression, ANOVA, and Design

The full list of Required and Restrictive Electives for Water, Environmental, and Coastal Systems is found here.

**MASTER’S IN ENVIRONMENTAL ENGINEERING**

*Required Core Courses*

CIVE 7250 – Environmental Chemistry
CIVE 7251 – Environmental Biological Processes
CIVE 7255 - Environmental Physical/Chemical Processes
CIVE 7260 – Hydrologic Modeling

**Restricted Electives**

CIVE 5250 – Organic Pollutants in the Environment
CIVE 5280 – Remote Sensing of the Environment
CIVE 5366 – Air Quality engineering and Science
CIVE 7272 – Air Quality Management

**Other Electives**

CIVE 5670 – Global Biogeochemistry
EECE 7204 - Applied Probability and Stochastic Processes
ENVR 5190 - Soil Science
ENVR 5260 - Geographical Information Systems
IE 6200 - Engineering Probability and Statistics
IE 7280 - Statistical Methods in Engineering
IE 7290 - Reliability Analysis and Risk Assessment
MATH 7344 - Regression, ANOVA, and Design

**MASTER’S IN ENGINEERING AND PUBLIC POLICY**

*Sustainable Engineering and Systems Modeling*

SBSY 5200 – Sustainable Engineering Systems for Buildings
CIVE 7150 – Data-Driven Decision Support for Civil and Environmental Engineering
CIVE 7151 – Urban Informatics and Processing
CIVE 7272 – Air Quality Management
ENGR 5670 - Sustainable Energy: Materials, Conversion, Storage, and Usage
IE 5640 - Data Mining for Engineering Applications
IE 6200 - Engineering Probability and Statistics
IE 7280 - Statistical Methods in Engineering

*Public Policy and Analysis*

INSH 5301 - Introduction to Computational Statistics
INSH 6300 - Research Methods in the Social Sciences
INSH 6500 - Statistical Analysis
LPSC 7311 - Strategizing Public Policy
PPUA 6502 - Economic Analysis for Policy and Planning
PPUA 6506 - Techniques of Policy Analysis
PPUA 6509 - Techniques of Program Evaluation

Electives
CIVE 5250 – Organic Pollutants in the Environment
CIVE 5280 – Remote Sensing of the Environment
CIVE 5670 – Global Biogeochemistry
EMGT 6225 - Economic Decision Making
ENVR 5210 - Environmental Planning
ENVR 5260 - Geographical Information Systems
PHTH 5214 - Environmental Health
PPUA 5262 - Big Data for Cities
PPUA 5263 - Geographic Information Systems for Urban and Regional Policy
PPUA 5264 - Energy Democracy and Climate Resilience: Technology, Policy, and Social Change
PPUA 5270 - Food Systems and Public Policy
PPUA 6101 - Environmental Science and Policy Seminar 1

The full list of Required and Restrictive Electives for Engineering and Public Policy is found here.

MASTER’S IN SUSTAINABLE BUILDING SYSTEMS

Required Core Courses

ARCH 5210 and ARCH 5211- Environmental Systems
and Recitation for ARCH 5210
SBSY 5100 – Sustainable Design and Technologies in Construction
SBSY 5200 – Sustainable Engineering Systems for Buildings
SBSY 5400 – Sustainable Building Systems Seminar

Restricted Electives

CIVE 5221 – Construction Project Control and Organization
CIVE 7220 - Construction Management
EMGT 6305 - Financial Management for Engineers
SBSY 5300 - Information Systems for Integrated Project Delivery

Other Electives
ACCT 6200 - Financial Reporting and Managerial Decision Making 1
ACCT 6201 - Financial Reporting and Managerial Decision Making 2
CIVE 7151 - Urban Informatics and Processing
CIVE 7350 - Behavior of Concrete Structures
FINA 6200- Value Creation through Financial Decision Making
FINA 6216 - Valuation and Value Creation

The full list of Required and Restrictive Electives for Sustainable Building Systems is found here.

How do I register for classes?

Please review the following links for instructions on how to register using your StudentHub account:

- Course Search Article: https://registrar.northeastern.edu/article/new-registration-experience/
- Course Add/Drop Article: https://registrar.northeastern.edu/article/drop-class/

What if my course is full?

Although rare, if a course is full, you may contact the course instructor and ask if an additional seat can be accommodated in the classroom. If a seat isn’t available in your preferred classes right away, you can also join the waitlist. Enrollments are always shifting as students get co-ops or change their course registrations. To join a waitlist, enter the class CRN (the 5 numbers in parentheses next to the course number above) directly into your registration sheet and hit submit. You will then have an option to select “waitlist” from a drop-down menu. The waitlist system will automatically inform you when a seat opens- just log into your account and accept it within the 24-hour time limit!

What if I am a part time student?

We recommend starting with one core course for your concentration.

Will I get a bill after registering for a course?

Yes. Typically, your first e-bill is generated when you register for your courses. You will receive an e-bill from the University with instructions on how to pay the e-bill. If you
have questions about payment, please contact the Student Financial Services office directly: http://www.northeastern.edu/financialaid/

**How do I get a MyNEU account?**

After you confirm your enrollment, you will be able to access your MyNEU portal using this link, [https://me.northeastern.edu/](https://me.northeastern.edu/). If you have not set up your MyNEU account, login to your [electronic application](https://me.northeastern.edu/) for instructions on your admittance letter.

**Do you have another question about enrollment, your visa status or housing?**

Please take a moment to review the [New Student Information](https://me.northeastern.edu/) page.

For more information about beginning your graduate studies at Northeastern University, please read your acceptance letter in full.

We look forward to welcoming you to the Department of Civil and Environmental Engineering and the Graduate School of Engineering.

Regards,

Jerome F. Hajjar  
CDM Smith Professor and Chair,  
Civil and Environmental Engineering College of Engineering Northeastern University

Andrew Myers  
Associate Professor and Associate Chair for Graduate Studies, Civil and Environmental Engineering College of Engineering Northeastern University