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](mailto:Andrew.Myers@northeastern.edu)

**MS in Civil Engineering**
- Construction Management: [Professor Ryan Wang](mailto:Ryan.Wang@northeastern.edu)
- Data and Systems: [Professor Amy Mueller](mailto:Amy.Mueller@northeastern.edu)
- Geotechnical/Geoenvironmental Engineering: [Professor Craig Shillaber](mailto:Craig.Shillaber@northeastern.edu)
  [Professor Mike Kane](mailto:Mike.Kane@northeastern.edu)
- Transportation: [Professor Peter Furth](mailto:Peter.Furth@northeastern.edu)
- Water, Environmental, and Coastal Systems: [Professor Ed Beighley](mailto:Ed.Beighley@northeastern.edu)

**MS in Environmental Engineering:** [Professor Matthew Eckelman](mailto:Matthew.Eckelman@northeastern.edu)

**MS in Engineering & Public Policy:** [Professor Matthew Eckelman](mailto:Matthew.Eckelman@northeastern.edu)

**MS in Sustainable Building Systems:** [Professor David Fannon](mailto:David.Fannon@northeastern.edu)

The above also serve as Graduate Advisors for the corresponding areas of study in the CEE Ph.D. program. Professor [Jim Chen](mailto:Jim.Chen@northeastern.edu) 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 Fall 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 your 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 7220 – Construction Management
CIVE 7230 – Legal Aspects of Civil Engineering
EMGT 6305 – Financial Management for Engineers
IE 6200 – Engineering Probability and Statistics

Electives

CIVE 7151 – Urban Informatics and Processing
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
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
    or IE 7275 Data Mining in Engineering
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 5250 – Building Performance Simulation
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 7151 – Urban Informatics and Processing
CIVE 7100 – Time Series and Geospatial Data Sciences
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 5261 – Dynamic Modeling for Environmental Investment and Policy Making
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 7110 – Critical Infrastructure Resilience
CIVE 7381 – Transportation Demand Forecasting and Model Estimation
IE 7200 – Supply Chain Engineering
OR 7310 – Logistics, Warehousing, and Scheduling
SBSY 5250 – Building Performance Simulation

Electives

CIVE 7220 – Construction Management
CIVE 7250 – Environmental Chemistry
CIVE 7251 – Environmental Biological Processes
CIVE 7260 – Hydrologic Modeling
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 7302 – Advanced Foundation Engineering

Electives
CIVE 7230 – Legal Aspects of Civil Engineering
CIVE 7250 – Environmental Chemistry
CIVE 7251 – Environmental Biological Processes
CIVE 7260 – Hydrologic Modeling
CIVE 7313 – Ground Improvement
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 7342 – System Identification  
CIVE 7351 – Behavior of Steel Structures  

Other Electives

CIVE 7151 – Urban Informatics and Processing  
ME 5240 – Computer Aided Design and Manufacturing  
ME 5655 – Dynamics and Mechanical Vibration  
SBSY 5100 – Sustainable Design and Technologies in Construction  

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

**Transportation Concentration**

Required Core Courses

CIVE 5376 – Traffic Engineering and Sustainable Urban Street Design  
IE 6200 – Engineering Probability and Statistics  

Restricted Electives

CIVE 7151 – Urban Informatics and Processing  
CIVE 7381 – Transportation Demand Forecasting and Model Estimation  
CIVE 7382 Advanced Traffic Control and Simulation  

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

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

Course suggestions for Water, Environmental, and Coastal Systems Concentration Students:

Required Core Courses

CIVE 7250 – Environmental Chemistry  
CIVE 7251 – Environmental Biological Processes  
CIVE 7260 – Hydrologic Modeling
Restricted Electives

CIVE 5261 – Dynamic Modeling for Environmental Investment and Policymaking
CIVE 5363 – Climate Science, Engineering Adaptation, and Policy
CIVE 5366 – Air Quality Engineering and Science
CIVE 7110 – Critical Infrastructure Resilience
ME 6200 - Mathematical Methods for Mechanical Engineers 1

Other Electives

CIVE 7151 – Urban Informatics and Processing
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

Restricted Electives

CIVE 5261 – Dynamic Modeling for Environmental Investment and Policymaking
CIVE 5363 – Climate Science, Engineering Adaptation, and Policy
CIVE 5366 – Air Quality Engineering and Science
CIVE 7260 – Hydrologic Modeling
CIVE 7278 – Air Quality Modeling and Forecasting

Other Electives
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 5100 – Sustainable Design and Technologies in Construction
CIVE 5261 – Dynamic Modeling for Environmental Investment and Policymaking
    or PPUA 5261 Dynamic Modeling for Environmental Decision Making
CIVE 7110 – Critical Infrastructure Resilience
CIVE 7151 – Urban Informatics and Processing
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 7230 – Legal Aspects of Civil Engineering
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 CLIMATE SCIENCE AND ENGINEERING**

*Core Courses*

CIVE 5363 – Climate science, Engineering Adaptation, and Policy
CIVE 5366 – Air Quality Engineering and Science
CIVE 7110 – Critical Infrastructure Resilience

*Restricted Electives*

SBSY 5100 – Sustainable Design and Technologies in Construction
EECE 5670 – Sustainable Energy: Materials, Conversion, Storage, and Usage
ENSY 5000 – Fundamentals of Energy System Integration
ENVR 5210 – Environmental Planning
ENVR 5220 – Ecosystem-Based Management
ENVR 5563 – Advanced Spatial Analysis
LPSC 7312 – Cities, Sustainability, and Climate Change
ME 5685 – Solar Thermal Engineering
PPUA 5238 – Climate Change and Global Urbanization
PPUA 5264 – Energy Democracy and Climate Resilience: Technology, Policy, and Social Change

The full list of Required and Restrictive Elective for Climate Science and Engineering 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 5400 – Sustainable Building Systems Seminar

Restricted Electives
CIVE 7220 - Construction Management
    or EMGT 5220 – Engineering Project Management
CIVE 7230 – Legal Aspects of Civil Engineering
EMGT 6305 - Financial Management for Engineers
SBSY 5250 - Building Performance Simulation
SBSY 5300 – Information Systems for Integrated Project Delivery

Other Electives
CIVE 7151 – Urban Informatics and Processing
CIVE 7351 - Behavior of Steel Structures
ACCT 6200 - Financial Reporting and Managerial Decision Making 1
ACCT 6201 - Financial Reporting and Managerial Decision Making 2
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 Student Hub 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 MyNortheastern account?

After you confirm your enrollment, you will be able to access your StudentHub using this link, myNortheastern account. If you have not set up your myNortheastern account, log into your Slate account to find the instructions to do so. Refer to How do I claim my student account if you have any problems.

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

Please take a moment to review the New Student Information 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