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: Craig Shillaber
- Structures: Professor Luca Caracoglia
- 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

Please remember to confirm your enrollment at Northeastern. You will not be able to pre-register for classes (information below) until you confirm enrollment. You can confirm your enrollment by logging into your application account and paying the enrollment deposit.

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 2023 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 7220 – Construction Management
- 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
- 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 5200 – Sustainable Engineering Systems for Buildings

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 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 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 5536 – 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 7260 – Hydrologic Modeling  
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

Electives

CIVE 5536 – Hydrologic and Hydraulic Design
CIVE 7230 – Legal Aspects of Civil Engineering
CIVE 7250 – Environmental Chemistry
CIVE 7251 – Environmental Biological Processes
CIVE 7260 – Hydrologic Modeling
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 7340 – Seismic Analysis and Design
CIVE 7351 – Behavior of Steel Structures

Other Electives

CIVE 5275 – Life Cycle Assessment of Materials, Products, and Infrastructure
CIVE 5520 – Structural Systems
CIVE 7301 – Advanced Soil Mechanics
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 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

Required Core Courses

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

CIVE 5275 – Life Cycle Assessment of Materials, Products, and Infrastructure
CIVE 5363 – Climate Science, Engineering Adaptation, and Policy
CIVE 5536 – Hydrologic and Hydraulic Design
CIVE 7100 – Time Series and Geospatial Data Sciences
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 7260 – Hydrologic Modeling

Restricted Electives

CIVE 5275 – Life Cycle Assessment of Materials, Products, and Infrastructure
CIVE 5363 – Climate Science, Engineering Adaptation, and Policy
CIVE 5366 – Air Quality engineering and Science
CIVE 5536 – Hydrologic and Hydraulic Design

Other Electives
CIVE 5150 – Climate and Atmospheric Change
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 5275 – Life Cycle Assessment of Materials, Products, and Infrastructure
CIVE 5363 - Climate Science, Engineering Adaptation, and Policy
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 5150 - Climate and Atmospheric Change
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
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 5400 – Sustainable Building Systems Seminar

*Restricted Electives*

CIVE 5275 – Life Cycle Assessment of Materials, Products, and Infrastructure  
CIVE 7220 - Construction Management  
CIVE 7230 – Legal Aspects of Civil Engineering  
EMGT 6305 - Financial Management for Engineers  
SBSY 5250 - Building Performance Simulation

*Other Electives*

ACCT 6200 - Financial Reporting and Managerial Decision Making 1  
ACCT 6201 - Financial Reporting and Managerial Decision Making 2  
CIVE 7351 - Behavior of Steel 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:
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/. If you have not set up your MyNEU account, login to your electronic application and look for instructions to do so: https://app.applyyourself.com/AYApplicantLogin/fl_ApplicantConnectLogin.asp?id=neu-grad

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