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 Ali Touran (from Fall 2022)
- *Data and Systems*: Professor Amy Mueller
- *Geotechnical/Geoenvironmental Engineering*: Professor Mishac Yegian
- *Structures*: Professor Luca Caracoglia
- *Transportation*: Professor Peter Furth
- *Water, Environmental, and Coastal Systems*: Professor Ed Beighley

MS in Environmental Engineering: Professor Amy Mueller
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 preregister 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 Spring 2023 courses, please visit the "Banner Dynamic Class Schedule", maintained online by the Office of the Registrar. Please select Spring 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 for Spring 2023

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 Management
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
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

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 5300 and 5301 – Environmental Engineering Laboratory + Lab
CIVE 5536 – Hydrologic and Hydraulic Design
CIVE 7311 – Soil Foundation Dynamics
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 7350 – Behavior of Concrete Structures
CIVE 7357 – Advanced Structural Mechanics

Other Electives

CIVE 7311 – Soil and Foundation Dynamics

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 7380 – Performance Models and Simulation of Transportation Networks
CIVE 7385 – Public Transportation

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 5281 – Coastal Dynamics and Design
CIVE 7251 – Environmental Biological Processes

Restricted Electives

CIVE 5275 – Life Cycle Assessment of Materials, Products, and Infrastructure
CIVE 5300 and 5301 – Environmental Sampling and Analysis + Lab
CIVE 7110 – Critical Infrastructure Resilience
ME 6200 - Mathematical Methods for Mechanical Engineers 1

Other Electives

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 7251 – Environmental Biological Processes

Restricted Electives

CIVE 5275 – Life Cycle Assessment of Materials, Products, and Infrastructure
CIVE 5300 and CIVE 5301 - Environmental Sampling and Analysis and Lab for CIVE 5300

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

CIVE 7151 – Urban Informatics and Processing
SBSY 5200 – Sustainable Engineering Systems for Buildings
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 5280 – Remote Sensing of the Environment
CIVE 5300 and CIVE 5301 - Environmental Sampling and Analysis
and Lab for CIVE 5300
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 SUSTAINABLE BUILDING SYSTEMS

Required Core Courses

ARCH 5210 and ARCH 5211- Environmental Systems
and Recitation for ARCH 5210
SBSY 5200 - Sustainable Engineering Systems for Buildings

Restricted Electives

CIVE 5221 – Construction Project Control Organization
CIVE 5231 – Alternative Project Delivery Systems in Construction
CIVE 5275 – Life Cycle Assessment of Materials, Products, and Infrastructure
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 Infrastructure Resilience is found here.

How do I register for classes?

Please review the following links for instructions on how to register using your MyNEU 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 up- 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://myneu.neu.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