The computer science and environmental science combined major focuses on geological processes that greatly impact the earth, atmosphere, and water in oceans, lakes, and rivers. Understanding these processes requires acquisition and computational analysis of large amounts of data—underscoreing the natural relationship between computer science and environmental science.

**Program Requirements**
Complete all courses listed below unless otherwise indicated. Also complete any corequisite labs, recitations, clinicals, or tools courses where specified and complete any additional courses needed beyond specific college and major requirements to satisfy graduation credit requirements.

**University-Wide Requirements**
All undergraduate students are required to complete the University-Wide Requirements (http://catalog.northeastern.edu/undergraduate/university-academics/university-wide-requirements).

**NUpath Requirements**
All undergraduate students are required to complete the NUpath Requirements (http://catalog.northeastern.edu/undergraduate/university-academics/nupath).

**Computer Science Courses**

**Computer Science Overview**
- CS 1200 Computer Science/Information Science Overview 1

**Computer Science Fundamental Courses**
A grade of C– or higher is required:
- CS 1800 Discrete Structures and Seminar for CS 1800 5
-or CS 1801 Recitation for CS 1800
- CS 2500 Fundamentals of Computer Science 1 and Lab for CS 2500 5
-and CS 2510 Fundamentals of Computer Science 2 and Lab for CS 2510 5

**Computer Science Required Courses**
- CS 3200 Database Design 4
- CS 3500 Object-Oriented Design 4
- CS 3800 Theory of Computation 4
- CS 4500 Software Development 4
- CS 4800 Algorithms and Data 4

**Computer Science Senior Seminar**
- THTH 1170 The Eloquent Presenter 1

**Computer Science Elective Courses**
With advisor approval, a directed study, project study, or appropriate graduate-level course may also be taken as a computer science elective.
Complete one course in the following ranges:
- CS 2500 or higher, except CS 5010 4
- IS 2000 or higher, except IS 4900

**Environmental Science Courses**

**Environmental Science Required Courses**
- ENVR 1200 and ENVR 1201 Dynamic Earth and Lab for ENVR 1200 5
- ENVR 5201 Environmental Planning 4
-or ENVR 5250 Geology and Land-Use Planning
- ENVR 4900 Earth and Environmental Science Capstone 1
-or ENVR 4997 Senior Thesis
Complete one of the following sequences:
- ENVR 1202 and ENVR 1203 History of Earth and Life and Interpreting Earth History 5
- ENVR 2310 and ENVR 2311 Earth Materials and Lab for ENVR 2310

**Environmental Science Integrative Courses**
Complete at least two of the following:
- ENVR 3300 Geographic Information Systems and Lab for ENVR 3300 4
- ENVR 3418 Geophysics 4
- ENVR 4500 Applied Hydrogeology and Lab for ENVR 4500 4

**Environmental Science Electives**
If you complete more than two environmental science integrative courses (above), they will count as environmental science electives.
Complete four of the following:
- ENVR 1101 Environmental Science 4
- ENVR 2340 and ENVR 2341 Earth Landforms and Processes and Lab for ENVR 2340 4
- ENVR 3400 Field Geology 4
- ENVR 3410 Environmental Geochemistry 4
- ENVR 4106 Coastal Processes and Lab for ENVR 4106 4
- ENVR 4504 Environmental Pollution 4
- ENVR 4505 Wetlands 4
- ENVR 4563 Advanced Spatial Analysis 4
- ENVR 5190 Soil Science 4
- ENVR 5201 Geologic Field Seminar 4
-or ENVR 5230 Structural Geology and Lab for ENVR 5230 4
- ENVR 5240 Sedimentary Basin Analysis and Lab for ENVR 5240 4
- ENVR 5242 Ancient Marine Life and Lab for ENVR 5242 4
- ENVR 5248 Marine Geology 4
- ENVR 5270 Glacial and Quaternary History and Lab for ENVR 5270 4

**Supporting Courses**

Calculus
MATH 1251  |  Calculus and Differential Equations for Biology 1  |  4
or MATH 1341  |  Calculus 1 for Science and Engineering  

MATH 1252  |  Calculus and Differential Equations for Biology 2  |  4
or MATH 1342  |  Calculus 2 for Science and Engineering  

MATH 3081  |  Probability and Statistics  |  4

Chemistry
CHEM 1211  |  General Chemistry 1  |  5
and CHEM 1212  |  and Lab for CHEM 1211  
and CHEM 1213  |  and Recitation for CHEM 1211  

CHEM 1214  |  General Chemistry 2  |  5
and CHEM 1215  |  and Lab for CHEM 1214  
and CHEM 1216  |  and Recitation for CHEM 1214  

Computing and Social Issues
Complete one of the following:  
PHIL 1145  |  Technology and Human Values  
SOC 1280  |  The 21st-Century Workplace  
SOC 3485  |  Environment, Technology, and Society  
SOC 4528  |  Computers and Society  
ANTH 3418  |  Wired/Unwired: Cybercultures and Technopolitics  
IA 5240  |  Cyberlaw: Privacy, Ethics, and Digital Rights  
INSH 2102  |  Bostonography: The City through Data, Texts, Maps, and Networks  

Computer Science English Requirement
College Writing
ENGW 1111  |  First-Year Writing  |  4
or ENGW 1102  |  First-Year Writing for Multilingual Writers  

Advanced Writing in the Disciplines
Complete one course from the following:  
ENGW 3302  |  Advanced Writing in the Technical Professions  
ENGW 3315  |  Interdisciplinary Advanced Writing in the Disciplines  

Required General Electives
Complete six general electives.  |  24

Major GPA Requirement
Minimum 2.000 GPA required in all CS and IS courses

NUpath Requirements Satisfied
- Engaging with the Natural and Designed World
- Conducting Formal and Quantitative Reasoning
- Analyzing and Using Data
- Writing in the First Year
- Advanced Writing in the Disciplines
- Writing-intensive in the Major
- Demonstrating Thought and Action in a Capstone

Integrating Knowledge and Skills Through Experience is satisfied through co-op.
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**Five Years, Two Co-ops in Summer 2/Fall**

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**Total Hours: 138**