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—underscoring 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.

**Computer Science Courses**

**Computer Science Overview**
- CS 1200: Computer Science/Information Science Overview 1 (1)
- CS 1210: Computer Science/Information Science Overview 2: Co-op Preparation (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)
- 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**
- THTR 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 5210: Environmental Planning (4)
- or ENVR 5250: Geology and Land-Use Planning
- ENVR 4900: Environmental Science Capstone or ENVR 4997: Senior Thesis (1)

Complete one of the following sequences:
- ENVR 1202 and ENVR 1203: History of Earth and Life and Interpreting Earth History
- ENVR 2310 and ENVR 2311: Earth Materials and Lab for ENVR 2310

**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
- ENVR 2340: Earth Landforms and Processes
- or ENVR 2341: and Lab for ENVR 2340
- ENVR 3400: Field Geology
- ENVR 3410: Environmental Geochemistry
- ENVR 4106: Coastal Processes
- or ENVR 4107: and Lab for ENVR 4106
- ENVR 4504: Environmental Pollution
- ENVR 4505: Wetlands
- ENVR 4563: Advanced Spatial Analysis
- ENVR 5190: Soil Science
- ENVR 5201: Geologic Field Seminar
- or ENVR 5231: and Lab for ENVR 5230
- ENVR 5240: Sedimentary Basin Analysis
- and ENVR 5241: and Lab for ENVR 5240
- ENVR 5242: Ancient Marine Life
- and ENVR 5243: and Lab for ENVR 5242
- ENVR 5248: Marine Geology
- or ENVR 5270: Glacial and Quaternary History
- and ENVR 5271: and Lab for ENVR 5270

**Supporting Courses**
- Calculus

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

**University-Wide Requirements**
All undergraduate students are required to complete the University-Wide Requirements (http://catalog.northeastern.edu/undergraduate/undergraduate-academics/university-wide-requirements).
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 and CHEM 1212 and CHEM 1213  General Chemistry 1
and Lab for CHEM 1211 and Recitation for CHEM 1211  5
CHEM 1214 and CHEM 1215 and CHEM 1216  General Chemistry 2
and Lab for CHEM 1214 and Recitation for CHEM 1214  5

Computing and Social Issues
Complete one of the following:  4
PHIL 1145  Technology and Human Values
SOCL 1280  The 21st-Century Workplace
SOCL 3485  Environment, Technology, and Society
SOCL 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:  4
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.
## Five Years, Two Co-ops in Summer 2/Fall

### Year 1

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<tr>
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<th>Hours Summer 1</th>
<th>Hours Summer 2</th>
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Total Hours: 138