The computer science and philosophy combined major offers an opportunity to obtain a fluency in formal logic, including logical proofs and the ability to represent arguments clearly and evaluate them for cogency. You’ll find that logic plays a fundamental role in computer science as you experience an in-depth programming foundation. The philosophy curriculum also focuses on oral and written communication, as well as ethical and social issues related to computing and information technologies.

**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 1
- CS 1210 Computer Science/Information Science 1

**Computer Science Fundamental Courses**
- CS 1800 Discrete Structures 5
- CS 1802 and Seminar for CS 1800
- CS 1801 Recitation for CS 1800
- CS 2500 Fundamentals of Computer Science 1 5
- CS 2501 and Lab for CS 2500
- CS 2510 Fundamentals of Computer Science 2 5
- CS 2511 and Lab for CS 2510
- CS 2800 Logic and Computation 5
- CS 2801 and Lab for CS 2800

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

**Presentation Requirement**
- THTR 1170 The Eloquent Presenter 1

**Computer Science Elective Courses**
Complete two upper-division computer science courses in the following ranges:
- CS 2500 or higher, except CS 5010
- IS 2000 or higher, except IS 4900
- DS 2000 or higher, except DS 4900

**Philosophy Courses**

**Philosophy Required Courses**
- PHIL 1115 Introduction to Logic 4
- or PHIL 1215 Symbolic Logic 4
- PHIL 2325 Ancient Philosophy and Political Thought 4
- or POLS 2325 Ancient Philosophy and Political Thought 4
- PHIL 2330 Modern Philosophy 4
- PHIL 1145 Technology and Human Values 4
- PHIL 4515 Advanced Logic 4
- or PHIL 4520 Philosophy of Logic 4

**Philosophy Restricted Electives**
Take two courses, at least one of which is at the 4000 or 5000 level, from the following:
- PHIL 3343 Existentialism
- PHIL 3445 Philosophy of Religion
- PHIL 3350 20th-Century Continental Philosophy
- PHIL 3355 20th-Century Analytic Philosophy
- PHIL 3385 History of Jewish Rationalism
- PHIL 3435 Moral Philosophy
- PHIL 3436 History of Modern Moral Philosophy
- PHIL 3460 Philosophy and Literature
- PHIL 3465 Advanced Medical Ethics
- PHIL 3480 Environmental Philosophy
- PHIL 4390 Cults and Sects
- PHIL 4500 Theory of Knowledge
- PHIL 4505 Metaphysics
- PHIL 4510 Philosophy of Science
- PHIL 4525 Philosophy of Social Science
- PHIL 4530 Philosophy of Psychology
- PHIL 4535 Philosophy of Mind
- PHIL 4540 Philosophy of Language
- PHIL 4547 Seminar: Apocalypticism
- PHIL 4605 Advanced Seminar: Spinoza
- PHIL 4606 Seminar: Theories and Methods in Religious Studies
- PHIL 4901 Topics in Philosophy Seminar
- PHIL 4903 Seminar in Religion
- PHIL 4906 Topics in Religious Studies
- PHIL 5001 Global Justice
- PHIL 5003 Ethics, Justice, and Global Climate Change
- PHIL 5011 Comparative Religious Ethics

**Electives**
Take three PHIL courses.

**Integrative Course Requirement**
These courses will double count in other areas of your major:
- CS 3800 Theory of Computation
- PHIL 4515 Advanced Logic
Major GPA Requirement
Minimum 2.000 GPA required in all CS and IS courses

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 3309 Advanced Writing in the Humanities
ENGW 3315 Interdisciplinary Advanced Writing in the Disciplines

Required General Electives
Complete 11 general electives.

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-Intensive in the Major
- Interpreting Culture
- Understanding Societies and Institutions
- Employing Ethical Reasoning
- Writing in the First Year
- Advanced Writing in the Disciplines
- Demonstrating Thought and Action in a Capstone

Integrating Knowledge and Skills Through Experience is satisfied through co-op.

Program Requirement
133 total semester hours required

Note: CCIS intentionally makes the total credits required one less than the sum of the credits to allow for a one-credit waiver if needed.

Plan of Study
Sample Patterns:
Four Years, 2 Co-ops in Summer 2/Fall

Year 1
Fall Hours Spring Hours Summer 1 Hours Summer 2 Hours
CS 1800 and CS 1802 5 CS 2510 and CS 2511 5 CS 3500 4 Vacation
CS 2500 and CS 2501 5 CS 2800 and CS 2801 5 Elective 4
CS 1200 1 PHIL 2325, POLS 2325, or PHIL 2330 4
ENGW 1111 4 Elective 4

Year 2
Fall Hours Spring Hours Summer 1 Hours Summer 2 Hours
CS 4800 4 CS Elective 1 4 ENGW 3302, 3309, or 3315 4 Co-op
PHIL 1145 4 PHIL Elective 2 4 Elective 4
PHIL Elective 1 4 Elective 4
Elective 4 Elective 4
CS 1210 1

Year 3
Fall Hours Spring Hours Summer 1 Hours Summer 2 Hours
Co-op 4 CS 3800 4 Elective 4 Co-op
CS Elective 2 4 Elective 4
PHIL 4515 4
Elective 4
THTR 1170 1

Year 4
Fall Hours Spring Hours Summer 1 Hours
Co-op 4 CS 4500 4 Elective 4
PHIL Intermediate/Advanced Elective 4
PHIL Capstone 4
Elective 4

Total Hours: 135

Five Years, Three Co-ops in Summer 2/Fall

Year 1
Fall Hours Spring Hours Summer 1 Hours Summer 2 Hours
CS 1800 and CS 1801 4 CS 2510 and CS 2511 5 Vacation 5 Vacation
CS 2500 and CS 2501 5 CS 2800 and CS 2801 5
CS 1200 1 PHIL 2325, POLS 2325, or PHIL 2330 4
ENGW 1111 4 Elective 4
PHIL 1115 or 1215 4

Year 2
Fall Hours Spring Hours Summer 1 Hours Summer 2 Hours
CS 3500 4 CS Elective 1 4 Vacation Co-op
CS 4800 4 PHIL Elective 1 4

Total Hours: 135
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