The computer science and cognitive psychology combined major provides a foundation in general psychology, psychology of language, cognition, and statistics—all supplemented by an experimental laboratory course, seminar course, and psychology electives. Students who choose this program often have a general interest in human psychology or specific interests in artificial intelligence or human-computer interaction.

**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

<table>
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<tr>
<th>Code</th>
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<th>Hours</th>
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<tbody>
<tr>
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<td>First Year Seminar</td>
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<tr>
<td>CS 1210</td>
<td>Professional Development for Khoury Co-op</td>
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**Computer Science Fundamental Courses**

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<tr>
<td>CS 1800</td>
<td>Discrete Structures and Seminar for CS 1800</td>
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<td>CS 2500</td>
<td>Fundamentals of Computer Science 1 and Lab for CS 2500</td>
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<td>CS 2510</td>
<td>Fundamentals of Computer Science 2 and Lab for CS 2510</td>
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**Computer Science Required Courses**

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<tr>
<td>CS 3000</td>
<td>Algorithms and Data</td>
<td>4</td>
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<td>CS 3500</td>
<td>Object-Oriented Design</td>
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</tr>
<tr>
<td>CS 4100</td>
<td>Artificial Intelligence (Integrative course)</td>
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<tr>
<td>CS 4500</td>
<td>Software Development (Integrative course)</td>
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<tr>
<td>IS 4300</td>
<td>Human Computer Interaction (Integrative course)</td>
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### Presentation Requirement

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<tr>
<td>THTR 1170</td>
<td>The Eloquent Presenter</td>
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### Khoury Elective Courses

With adviser approval, a directed study, research, project study, or appropriate graduate-level course may also be taken as a computer science elective.

Complete twelve credits of CS, CY, DS, or IS classes that are not already required. Choose courses within the following ranges:

- CS 2500 or higher, except CS 5010
- CY 2000 or higher, except CY 4930
- DS 2500 or higher, except DS 4900
- IS 2000 or higher, except IS 4900

### Psychology Courses

**Required Courses**

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<td>PSYC 1101</td>
<td>Foundations of Psychology</td>
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<td>PSYC 2320</td>
<td>Statistics in Psychological Research</td>
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<tr>
<td>PSYC 3464</td>
<td>Psychology of Language</td>
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<td>PSYC 3466</td>
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**Advanced Psychology**

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<td>PSYC 3452</td>
<td>Sensation and Perception</td>
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<td></td>
<td>or PSYC 3458</td>
<td>Biological Psychology</td>
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**Laboratory in Psychology**

Complete one of the following:

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<td>PSYC 4610</td>
<td>Laboratory in Psycholinguistics</td>
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<tr>
<td>PSYC 4612</td>
<td>Laboratory in Cognition</td>
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</tr>
<tr>
<td>PSYC 4622</td>
<td>Laboratory in Sensation and Perception</td>
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**Seminar in Psychology**

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<td>PSYC 4658</td>
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<tr>
<td>PSYC 4660</td>
<td>Seminar in Cognition</td>
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<tr>
<td>PSYC 4668</td>
<td>Seminar in Sensation and Perception</td>
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</tr>
<tr>
<td>PSYC 4674</td>
<td>Seminar in Cognitive Neuroscience</td>
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**Psychology Electives**

Note: Courses satisfying the categories above cannot be reused.

Complete two of the following:

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<td>PSYC 3404</td>
<td>Developmental Psychology</td>
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<tr>
<td>PSYC 3450</td>
<td>Learning and Motivation</td>
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<td>PSYC 3451</td>
<td>Learning Principles and Behavior Analysis</td>
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<td>PSYC 3452</td>
<td>Sensation and Perception</td>
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<tr>
<td>PSYC 3458</td>
<td>Biological Psychology</td>
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<tr>
<td>PSYC 4512</td>
<td>Neuropsychology</td>
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<tr>
<td>PSYC 4520</td>
<td>Language and the Brain</td>
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<tr>
<td>PSYC 4522</td>
<td>Psychology of Reading</td>
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<td>PSYC 4524</td>
<td>Cognitive Development</td>
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<td>PSYC 4610</td>
<td>Laboratory in Psycholinguistics</td>
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<td>Laboratory in Cognition</td>
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<td>PSYC 4622</td>
<td>Laboratory in Sensation and Perception</td>
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<tr>
<td>PSYC 4628</td>
<td>Laboratory in Developmental Psychology</td>
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<td>Seminar in Psycholinguistics</td>
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<tr>
<td>PSYC 4660</td>
<td>Seminar in Cognition</td>
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</table>
PSYC 4668  Seminar in Sensation and Perception
PSYC 4674  Seminar in Cognitive Neuroscience
PSYC 4676  Seminar in Developmental Psychology
With prior approval, directed study research and Honors Project courses can also be counted:
PSYC 4970  Junior/Senior Honors Project 1
PSYC 4971  Junior/Senior Honors Project 2
PSYC 4991  Directed Study Research

Supporting Courses

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<thead>
<tr>
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<tbody>
<tr>
<td>MATH 1341</td>
<td>Calculus 1 for Science and Engineering</td>
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Computing and Social Issues

Complete one of the following:

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<tr>
<td>ANTH 3418</td>
<td>Wired/Unwired: Cybercultures and Technopolitics</td>
</tr>
<tr>
<td>CY 5240</td>
<td>Cyberlaw: Privacy, Ethics, and Digital Rights</td>
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<tr>
<td>ENGL 2150</td>
<td>Literature and Digital Diversity</td>
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<tr>
<td>HIST 2220</td>
<td>History of Technology</td>
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<td>INSH 2102</td>
<td>Bostonography: The City through Data, Texts, Maps, and Networks</td>
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<tr>
<td>IS 1300</td>
<td>Knowledge in a Digital World</td>
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<tr>
<td>or PHIL 1300</td>
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<tr>
<td>PHIL 1145</td>
<td>Technology and Human Values</td>
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<tr>
<td>SOCL 1280</td>
<td>The Twenty-First-Century Workplace</td>
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<tr>
<td>SOCL 3485</td>
<td>Environment, Technology, and Society</td>
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<td>SOCL 4528</td>
<td>Computers and Society</td>
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Computer Science Writing Requirement

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<tr>
<td>ENGW 1111</td>
<td>First-Year Writing</td>
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Advanced Writing in the Disciplines

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<th>Hours</th>
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<tr>
<td>ENGW 3302</td>
<td>Advanced Writing in the Technical Professions</td>
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<tr>
<td>or ENGW 3315</td>
<td>Interdisciplinary Advanced Writing in the Disciplines</td>
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Required General Electives

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<td>Complete 32 credits of general electives.</td>
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Khoury College GPA Requirement

Minimum 2.000 GPA required in all CS, CY, DS, and IS courses

NUpath Requirements Satisfied

- Engaging with the Natural and Designed World
- Conducting Formal and Quantitative Reasoning
- Understanding Societies and Institutions

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

Program Requirement

133 total semester hours required

Plan of Study

Sample patterns:

Four Years, Two Co-ops in Summer 2/Fall

Year 1

<table>
<thead>
<tr>
<th>Semester</th>
<th>Fall Hours</th>
<th>Spring Hours</th>
<th>Summer 1 Hours</th>
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<tr>
<td></td>
<td>CS 1800</td>
<td>5</td>
<td>and CS 2511</td>
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<tr>
<td></td>
<td>PSYC 3466</td>
<td>4</td>
<td>Elective</td>
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</tr>
<tr>
<td></td>
<td>CS 2500</td>
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<td>MATH 1341</td>
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Year 2

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<td>Elective</td>
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<td>PSYC 3452</td>
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<td>or 3458</td>
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Year 3

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Year 4

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<th>Spring</th>
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<tr>
<td>Khoury elective</td>
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<tbody>
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Total Hours: 134

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

**Five Years, Three Co-ops in Summer 2/Fall**
Computer Science and Cognitive Psychology, BS

<table>
<thead>
<tr>
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</tbody>
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Total Hours: 134