The PhD in Computer Science seeks to prepare students for careers in academia and industry—from conducting research to developing systems to publishing and presenting papers. The rigorous curriculum provides a broad background in the fundamentals of computer science and advanced courses in a wide range of focus areas.

The past decade has witnessed a dramatic increase in Northeastern’s international reputation for research and innovative educational programs. Since 2012, the Khoury College of Computer Sciences has hired 30 outstanding faculty members and plans to continue this strategic growth in the coming years, advancing its position among the nation’s top research universities. Today, the college has a diverse faculty of 62 working in a wide range of research areas. Seventeen faculty members have joint appointments with other colleges and schools, including engineering, science, business, social sciences and humanities, health sciences and arts, media and design.

Northeastern University is located in the heart of Boston, a city with one of the richest research environments in the world, with thousands of researchers and graduate students and a top startup community. Every week there are numerous talks and lectures on cutting-edge research, either at Northeastern or at other universities and research labs easily accessible from Northeastern.

Students with a Master of Science in Computer Science may petition to the PhD CS curriculum committee for an exemption from the core program courses.

Course Work
A minimum of 16 semester hours of course work beyond the master’s degree is required of all students. Completion of the program core courses may also be required and will be determined upon enrollment in the program. Students with a Master of Science in Computer Science may petition to the PhD CS curriculum committee for an exemption from these courses. Petition forms are available on the college website.

Students should work with their faculty advisor on completing required course work. Students must maintain a minimum GPA of 3.500 as well as earn a grade of B or better in each course.

Paper Requirement
Refer to the Computer Science, PhD, overview (http://catalog.northeastern.edu/graduate/computer-information-science/computer-science/computer-science-phd/#text), for research/survey paper requirements.

Admission to Candidacy
Refer to the Computer Science, PhD, overview, (http://catalog.northeastern.edu/graduate/computer-information-science/computer-science/computer-science-phd/#text) for admission to candidacy requirements.

Residency
Refer to the Computer Science, PhD, overview, (http://catalog.northeastern.edu/graduate/computer-information-science/computer-science/computer-science-phd/#text) for residency requirements.

Teaching Requirement
Refer to the Computer Science, PhD, overview, (http://catalog.northeastern.edu/graduate/computer-information-science/computer-science/computer-science-phd/#text) for the teaching requirement.

Comprehensive Examination/Dissertation Proposal
Refer to the Computer Science, PhD, overview, (http://catalog.northeastern.edu/graduate/computer-information-science/computer-science/computer-science-phd/#text) for comprehensive examination requirements.

Learning Outcomes
- Gain a broad understanding of computer science fundamentals, spanning a substantial portion of the following core areas: artificial intelligence and data science, human-centered computing, software, systems, and theory
- Gain significant expertise in at least one research area in computer science
- Produce and defend original research in an area of computer science
- Be able to communicate research results effectively in both oral and written forms

Program Requirements
Complete all courses and requirements listed below unless otherwise indicated.

Milestones
Annual review
Course requirements
Paper requirement
Comprehensive exam
Teaching requirement
Doctoral candidacy
Dissertation committee
Dissertation proposal
Dissertation defense

Core Requirements
Students must maintain a minimum GPA of 3.500 as well as earn a grade of B or better in each course.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>CS 9990</td>
<td>Dissertation</td>
<td>16</td>
</tr>
<tr>
<td>CS 8982</td>
<td>Readings</td>
<td></td>
</tr>
</tbody>
</table>

Consult your faculty advisor for acceptable courses.

Dissertation
Upon achieving PhD candidacy, complete the following (repeatable) courses for two consecutive semesters:

<table>
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<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CS 9990</td>
<td>Dissertation</td>
</tr>
<tr>
<td>CS 8982</td>
<td>Readings</td>
</tr>
</tbody>
</table>

For any remaining semester(s), complete the following (repeatable) course until graduation:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CS 9996</td>
<td>Dissertation Continuation</td>
</tr>
</tbody>
</table>
Program Credit/GPA Requirements
16 total semester hours required
Minimum overall 3.500 GPA required