Northeastern University's Master of Science in Computer Science is designed to prepare students for a variety of careers in computer science. The program combines both computing and important application domains—enabling you to increase your broad-based knowledge in the field while allowing you to delve deeper in specific areas through elective courses.

**Program Requirements**

Complete all courses and requirements listed below unless otherwise indicated.

Students should refer to the course numbering table for graduate course leveling (http://catalog.northeastern.edu/graduate/academic-policies-procedures/records-transcripts/).

**Core Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CS 5010</td>
<td>Programming Design Paradigm</td>
<td>4</td>
</tr>
<tr>
<td>CS 5800</td>
<td>Algorithms</td>
<td>4</td>
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</tbody>
</table>

**Breadth Areas**

Complete three courses from two of the three following breadth areas:

- **Systems and Software**
  - CS 5400  Principles of Programming Language
  - CS 5500  Foundations of Software Engineering
  - CS 5520  Mobile Application Development
  - CS 5600  Computer Systems
  - CS 5610  Web Development
  - CS 5700  Fundamentals of Computer Networking
  - CS 6410  Compilers
  - CS 6510  Advanced Software Development
  - CS 6650  Building Scalable Distributed Systems
  - CS 6710  Wireless Network
- **Theory and Security**
  - CS 6760  Privacy, Security, and Usability
  - CS 7805  Complexity Theory
  - CY 5770  Software Vulnerabilities and Security
  - CY 6740  Network Security
  - CY 6750  Cryptography and Communications Security
- **Artificial Intelligence and Data Science**
  - CS 5100  Foundations of Artificial Intelligence
  - CS 5150  Game Artificial Intelligence
  - CS 5200  Database Management Systems
  - CS 6120  Natural Language Processing
  - CS 6140  Machine Learning
  - CS 6200  Information Retrieval
  - CS 6220  Data Mining Techniques

**Electives**

Complete 12 semester hours from the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CS 5100 to CS 7880</td>
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<td>CS 8674</td>
<td>Master’s Project</td>
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<td>CS 8982</td>
<td>Readings</td>
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<td>CS 7990</td>
<td>Thesis</td>
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<tr>
<td>DS 5110</td>
<td>Introduction to Data Management and Processing</td>
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</tbody>
</table>

**Program Credit/GPA Requirements**

- 32 total semester hours required
- Minimum 3.000 GPA required