The computer science and game development combined major focuses on the specific skills needed to succeed in the highly competitive game industry. You’ll engage in building and developing games and playable media experiences while completing courses in computer science and specialized game technology and design. Interdisciplinary courses enable you to develop your creative and entrepreneurial abilities as well as create a strong portfolio of game pieces.

**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 Overview 1
- CS 1210 Computer Science/Information Science Overview 2: Co-op Preparation

**Computer Science Fundamental Courses**
A grade of C– or higher is required:
- CS 1800 Discrete Structures and Seminar for CS 1800
- or CS 1801 Recitation for CS 1800
- CS 2500 Fundamentals of Computer Science 1
- and CS 2501 Fundamentals of Computer Science 1 and Lab for CS 2500
- CS 2510 Fundamentals of Computer Science 2
- and CS 2511 Fundamentals of Computer Science 2 and Lab for CS 2510

**Upper-Level Computer Science Courses**
- CS 3500 Object-Oriented Design
- CS 3520 Programming in C++ (Integrative course)
- CS 3540 Game Programming (Integrative course)
- CS 3650 Computer Systems
- CS 3700 Networks and Distributed Systems
- CS 4300 Computer Graphics (Integrative course)
- CS 4500 Software Development
- CS 4800 Algorithms and Data
- CS 4850 Building Game Engines (Integrative course)

**Computer Science Elective Course**
- CS 4150 Game Artificial Intelligence (Integrative course)
- or IS 4300 Human Computer Interaction

**Computer Science Senior Seminar**
- THTR 1170 The Eloquent Presenter

**Game Design Courses**

**Game Design**
- GAME 1110 Games and Society
- GAME 2010 The Business of Games
- GAME 2500 Foundations of Game Design
- GAME 3700 Rapid Idea Prototyping for Games
- GAME 3800 Game Concept Development and Production
- GAME 4700 Game Design Capstone 1
- GAME 4701 Game Design Capstone 2

**Game Design Elective**
Complete one GAME course other than GAME 2150, GAME 3150, or GAME 3250.

**Computer Science/Game-Related Electives**
Complete two courses from the following:
- Any course in GAME subject area except GAME 2150, GAME 3150, or GAME 3250
- Any course in the ARTD, ARTE, ARTF, ARTG, ARTH, and ARTS subject areas
- CS 2500 or higher, except CS 5010
- IS 2000 or higher, except IS 4900
- DS 2000 or higher, except DS 4900
- MATH 1342 Calculus 2 for Science and Engineering
- ECON 2350 Statistics
- or PSYC 2320 Statistics in Psychological Research

**Supporting Courses**

**Psychology**
- PSYC 1101 Foundations of Psychology

**Mathematics**
A grade of C– or higher is required:
- MATH 1260 Math Fundamentals for Games (Integrative course)
- MATH 1341 Calculus 1 for Science and Engineering

**Computer Science Writing Requirement**

**College Writing**
- ENGW 1111 First-Year Writing

**Advanced Writing in the Disciplines**
Students are strongly encouraged to take Advanced Writing in the Technical Professions (ENGW 3302) but may substitute Interdisciplinary Advanced Writing in the Disciplines (ENGW 3315).
- ENGW 3302 Advanced Writing in the Technical Professions
or ENGW 3315 Interdisciplinary Advanced Writing in the Disciplines

**Required General Electives**
Complete four general electives.

**NUpath Requirements Satisfied**
- Engaging with the Natural and Designed World
- Exploring Creative Expression and Innovation
- Conducting Formal and Quantitative Reasoning
- Analyzing and Using Data
- Writing in the First Year
- Advanced Writing in the Disciplines
- Writing-Intensive in the Major
- Understanding Societies and Institutions
- 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

**Plan of Study**
**Sample Pattern, Four Years, Two Co-ops**

**Year 1**

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<tr>
<th></th>
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<th>Spring Hours</th>
<th>Summer 1 Hours</th>
<th>Summer 2 Hours</th>
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<td>4 MATH 1341</td>
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**Year 2**

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**Year 3**

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**Year 4**

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*Indicates courses that must be taken in the semester listed.

Total Hours: 134