The computer science and music combined major with concentration in music composition and technology focuses on the creative application of digital sound technologies to a broad range of artistic, social, and industrial purposes. An emphasis is maintained throughout on imaginative exploration, collaboration across disciplines, and real-world experience. It is designed to give you a firm foundation in music and computing for digital audio technologies. This program is recommended for students with a strong background in music prior to entering Northeastern.

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

Computer Science Fundamental Courses
A grade of C– or higher is required in each course:
CS 1800 Discrete Structures and Seminar for CS 1800 5
and CS 1802 or CS 1801 Recitation for CS 1800 5
CS 2500 Fundamentals of Computer Science 1 and Lab for CS 2500 5
and CS 2501 Fundamentals of Computer Science 2 and Lab for CS 2510 5

Computer Science Required Courses
CS 3200 Database Design 4
CS 3500 Object-Oriented Design 4
CS 4500 Software Development 4
CS 4800 Algorithms and Data 4
IS 4300 Human Computer Interaction (integrative) 4

Computer Science Senior Seminar
THTR 1170 The Eloquent Presenter 1

Computer Science Elective Courses
Complete two courses in the following ranges: 8
CS 2500 or higher, except CS 5010
IS 2000 or higher, except IS 4900
DS 2000 or higher, except DS 4900

Music Courses

Music Theory and Composition
MUSC 1201 Music Theory 1 4
MUSC 1202 Music Theory 2 4
MUSC 3541 Music Analysis Seminar 4
MUST 1301 Introduction to Composition 4

Music in Context
MUSC 1001 Music in Everyday Life 4

Contemporary
Complete one of the following:
MUST 2315 4
MUSC 2101 Black Popular Music 4
MUSC 2308 Principles of Music Literature 4
MUSC 2310 Popular Music Since 1945 4
MUSC 2316 Historical Traditions: History of the Music Industry 4
MUSC 2320 40,000 Years of Music Technology 4
MUSC 3560 Historical Traditions: Music since 1900 4
MUSI 3401 Hip Hop in the Music Industry 4

Music Technology
Must one of the following:
MUST 1220 Introduction to Music Technology 4
MUST 2431 Computer Music Fundamentals 4
MUSC 2350 Acoustics and Psychoacoustics of Music 4

Music Industry
Complete one of the following:
MUSI 1230 Introduction to Music Industry 4
MUSI 2331 Music Recording 2 4
MUSI 3335 Copyright Law for Musicians 4

Music Electives
Complete two of the following:
MUST 4520 Interactive Music Programming 4
MUST 4610 Composition for Electronic Instruments 4
MUST 4XXX Composing with Image and Sound 4
MUST 4XXXX Spatial Audio 4
MUST 3540 Special Topics in Music Technology 4

Foundations of Psychology
PSYC 1101 Foundations of Psychology 4

Computing and Social Issues
Complete one of the following:
PHIL 1145 Technology and Human Values 4
SOCL 1280  The 21st-Century Workplace
INSH 2102  Bostonography: The City through Data, Texts, Maps, and Networks
SOCL 3485  Environment, Technology, and Society
SOCL 4528  Computers and Society
ANTH 3418  Wired/Unwired: Cybercultures and Technopolitics
IA 5240  Cyberlaw: Privacy, Ethics, and Digital Rights

Computer Science and Music with Concentration in Music Composition and Technology, BS

College Writing
ENGW 1111  First-Year Writing  4

Advanced Writing in the Disciplines
ENGW 3302  Advanced Writing in the Technical Professions  4
or ENGW 3315  Interdisciplinary Advanced Writing in the Disciplines

Required General Electives
Complete five general electives.  20

NUpath Requirements Satisfied
- Engaging with the Natural and Designed World
- Exploring Creative Expression and Innovation
- Interpreting Culture
- Conducting Formal and Quantitative Reasoning
- Understanding Societies and Institutions
- Analyzing and Using Data
- Writing in the First Year
- Advanced Writing in the Disciplines
- Writing-intensive in the Major
- Demonstrating Thought and Action in a Capstone

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

Major GPA Requirement
Minimum 2.000 GPA required in all CS and IS courses

Program Requirement
133 total semester hours required

Plan of Study
Sample Pattern, Five Years, Three Co-ops in Spring/Summer 1

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<tr>
<th>Year 1</th>
<th>Fall</th>
<th>Hours</th>
<th>Spring</th>
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Sample Pattern, Four Years, Two Co-ops in Spring/Summer 1

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*Indicates course must be taken in the term listed.
Computer Science and Music with Concentration in Music Composition and Technology, BS

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**Year 2**

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**Total Hours: 134**

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