

# Computer Science and Business Administration, BS (Boston)

The computer science and business administration combined major delivers a technical degree with a strong grounding in business. Students will complete most of the requirements of a business major, including macroeconomics and microeconomics, while also focusing on technical skills like program design, software development, computer organization, systems and networks, theories of computation, principles of languages, and advanced algorithms and data.

## 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.

## Universitywide Requirements

All undergraduate students are required to complete the Universitywide Requirements (<https://catalog.northeastern.edu/undergraduate/university-academics/university-wide-requirements/>).

## NUPath Requirements

All undergraduate students are required to complete the NUPath Requirements (<https://catalog.northeastern.edu/undergraduate/university-academics/nupath/>).

## Computer Science Courses

Code	Title	Hours
<b>Computer Science Overview</b>		
Must be taken in alignment with your home college.		
CS 1200 or BUSN 1102	First Year Seminar Personal Skill Development for Business	1
CS 1210 or BUSN 1103	Professional Development for Khoury Co-op Professional Development for Business Co-op	1
<b>Computer Science Fundamental Courses</b>		
All students can take a self assessment to place out of CS 2000. Students who place out of CS 2000 will substitute it with a course offered by Khoury College 3000 level or higher during the course of the degree.		
CS 1800 and CS 1802	Discrete Structures and Seminar for CS 1800	5
CS 2000 and CS 2001	Introduction to Program Design and Implementation and Lab for CS 2000	5
CS 2100 and CS 2101	Program Design and Implementation 1 and Lab for CS 2100	5
<b>Computer Science Required Courses</b>		
CS 3000	Algorithms and Data	4
CS 3100 and CS 3101	Program Design and Implementation 2 and Lab for CS 3100	5
CS 3200	Introduction to Databases	4
CS 4530 or CS 4535	Fundamentals of Software Engineering Professional Practicum Capstone	4
<b>Computer Science Required Electives</b>		
Complete two of the following:		8
CS 3650	Computer Systems	
CS 4700	Network Fundamentals	
CS 4730	Distributed Systems	
DS 4300	Large-Scale Information Storage and Retrieval	
<b>Khoury Approved Electives</b>		
With advisor approval, directed study, research, project study, and appropriate graduate-level courses may also be taken as upper-division electives.		
Complete 4 semester hours from within the following options:		4
CS 2500 or higher, except CS 5010		
CY 2000 or higher, except CY 4930		

DS 2500 or higher, except DS 4900

MKTG 4606 Digital, Analytics, Technology, and Automation Research Practicum

**Business Courses**

Code	Title	Hours
<b>Required Business Courses</b>		
ACCT 1201	Financial Accounting and Reporting	4
ACCT 2301	Profit Analysis for Managers and Advisors	4
FINA 2201	Financial Management	4
MGSC 2301	Business Statistics	4
MKTG 2201	Introduction to Marketing	4
ORGB 3201	Organizational Behavior	4
or ORGB 3203	Behavioral Aspects of Digital Transformation	
STRT 4501	Strategy in Action	4

**Business Concentration**

Complete a business concentration from the following list.

- Accounting (<https://catalog.northeastern.edu/undergraduate/business/concentrations/accounting/>)
- Accounting and Advisory Services (<https://catalog.northeastern.edu/undergraduate/business/concentrations/accounting-advisory-services/>)
- Brand Management (<https://catalog.northeastern.edu/undergraduate/business/concentrations/brand-management/>)
- Corporate Innovation (<https://catalog.northeastern.edu/undergraduate/business/concentrations/corporate-innovation/>)
- Entrepreneurial Startups (<https://catalog.northeastern.edu/undergraduate/business/concentrations/entrepreneurial-startups/>)
- Finance (<https://catalog.northeastern.edu/undergraduate/business/concentrations/finance/>)
- Fintech (<https://catalog.northeastern.edu/undergraduate/business/concentrations/fintech/>)
- Healthcare Management and Consulting (<https://catalog.northeastern.edu/undergraduate/business/concentrations/healthcare-management-consulting/>)
- International Business (<https://catalog.northeastern.edu/undergraduate/business/concentrations/international-business/>) (available only as a second concentration)
- Management (<https://catalog.northeastern.edu/undergraduate/business/concentrations/management/>)
- Marketing (<https://catalog.northeastern.edu/undergraduate/business/concentrations/marketing/>)
- Marketing Analytics (<https://catalog.northeastern.edu/undergraduate/business/concentrations/marketing-analytics/>)
- Social Innovation and Entrepreneurship (<https://catalog.northeastern.edu/undergraduate/business/concentrations/social-innovation-entrepreneurship/>)
- Supply Chain Management (<https://catalog.northeastern.edu/undergraduate/business/concentrations/supply-chain-management/>)

**Integrative Course**

Code	Title	Hours
<b>Information Resource Management</b>		
MISM 2301	Introduction to Information Systems and Digital Technologies	4

**Supporting Courses**

Code	Title	Hours
<b>Mathematics</b>		
Complete one of the following. MATH 1231 or MATH 1341 is strongly recommended for this major:		4
MATH 1231	Calculus for Business and Economics	
MATH 1241	Calculus 1	
MATH 1251	Calculus and Differential Equations for Biology 1	
MATH 1340	Intensive Calculus for Engineers	
MATH 1341	Calculus 1 for Science and Engineering	
<b>Economics</b>		
ECON 1115	Principles of Macroeconomics	4
ECON 1116	Principles of Microeconomics	4
<b>Computing and Social Issues</b>		
Complete one of the following:		4
AFCS 2600	Issues in Race, Science, and Technology	

CY 4170	The Law, Ethics, and Policy of Data and Digital Technologies
CY 5240	Cyberlaw: Privacy, Ethics, and Digital Rights
DS 1300 or PHIL 1300	Knowledge in a Digital World
HIST 2220	History of Technology
INSH 2102	Bostonography: The City through Data, Texts, Maps, and Networks
JRNL 3700	Data Storytelling
PHIL 1145	Technology and Human Values
SOCL 1280	The Twenty-First-Century Workplace
SOCL 2485	Environment, Technology, and Society
SOCL 4528	Technology and Society

### Computer Science Writing Requirement

Code	Title	Hours
<b>College Writing</b>		
ENGW 1111	First-Year Writing	4
<b>Advanced Writing in the Disciplines</b>		
ENGW 3302 or ENGW 3315 or ENGW 3304	Advanced Writing in the Technical Professions Interdisciplinary Advanced Writing in the Disciplines Advanced Writing in the Business Administration Professions	4

### Required General Electives

Code	Title	Hours
Complete 16 semester hours of general electives.		16

### Business Experiential Learning

Code	Title	Hours
Complete at least one of the following experiences:		0-8
BUSN 4945	In-the-Field Experiential Professional Practicum	
COOP 3945	Co-op Work Experience	
COOP 3946	Co-op Work Experience—Half Time	
COOP 3947	Co-op Work Experience Abroad—Half Time	
COOP 3948	Co-op Work Experience Abroad	
EEBA 2945	Internship Experience	
EEBA 2948	Internship Experience Abroad	

### Khoury College GPA Requirement

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

### Business GPA Requirement

Minimum 2.000 GPA required in business courses

### NUpath Requirements Satisfied

- Advanced Writing in the Disciplines
- Analyzing and Using Data
- Conducting Formal and Quantitative Reasoning
- Demonstrating Thought and Action in a Capstone
- Employing Ethical Reasoning
- Engaging with the Natural and Designed World
- Understanding Societies and Institutions
- Writing in the First Year

- Writing-Intensive in the Major

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

## Program Requirement

133 total semester hours required

## Plan of Study

### Sample Plans of Study

#### FOUR YEARS, TWO CO-OPS IN SUMMER SECOND HALF/FALL

Year 1							
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
ACCT 1201		4 CS 2100 and CS 2101		5 ECON 1116		4 MISM 2301	4
CS 1200 or BUSN 1102		1 ECON 1115		4 General Elective		4 General Elective	4
CS 1800 and CS 1802		5 MATH 1341 or 1231		4			
CS 2000 and CS 2001		5 MKTG 2201		4			
ENGW 1111		4					
	19		17		8		8
Year 2							
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
ACCT 2301		4 CS 1210 or BUSN 1103		1 General Elective		4 Co-op	0
CS 3100 and CS 3101		5 CS 3000		4 General Elective		4	
MGSC 2301		4 CS 3200		4			
Computing and Social Issues		4 FINA 2201		4			
		Business Concentration		4			
	17		17		8		0
Year 3							
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
Co-op		0 CS Required Elective		4 ENGW 3302, 3304, or 3315		4 Co-op	0
		Business Concentration		4 ORGB 3201 or 3203		4	
		Business Concentration		4			
		Khoury Elective		4			
	0		16		8		0
Year 4							
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
Co-op		0 CS 4530 or 4535		4			
		STRT 4501		4			
		CS Required Elective		4			
		Business concentration		4			
	0		16				

Total Hours: 134

#### FOUR YEARS, TWO CO-OPS IN SPRING/SUMMER FIRST HALF

Year 1							
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
ACCT 1201		4 CS 2100 and CS 2101		5 CS 3100 and CS 3101		5 General Elective	4
CS 1200 or BUSN 1102		1 ECON 1115		4 ECON 1116		4 General Elective	4
CS 1800 and CS 1802		5 MATH 1341 or 1231		4			

