

Computer Science and Business Administration, BS

The computer science and business 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 (<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

Code	Title	Hours
Computer Science Overview		
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
Computer Science Fundamental Courses		
CS 1800 and CS 1802	Discrete Structures and Seminar for CS 1800	5
CS 2500 and CS 2501	Fundamentals of Computer Science 1 and Lab for CS 2500	5
CS 2510 and CS 2511	Fundamentals of Computer Science 2 and Lab for CS 2510	5
Computer Science Required Courses		
CS 3000	Algorithms and Data	4
CS 3200	Database Design	4
CS 3500 and CS 3501	Object-Oriented Design and Lab for CS 3500	5
CS 4500 or CS 4530	Software Development Fundamentals of Software Engineering	4
Computer Science Required Electives		
Complete two of the following:		8
CS 3650	Computer Systems	
CS 4700	Network Fundamentals	
CS 4730	Distributed Systems	
DS 3000	Foundations of Data Science	
DS 4200	Information Presentation and Visualization	
DS 4300	Large-Scale Information Storage and Retrieval	
Khoury Elective		
With advisor approval, directed study, research, project study, and appropriate graduate-level courses may also be taken as upper-division electives.		
Complete four credits of CS, CY, DS, or IS classes that are not already required. Choose courses within the following ranges:		4
CS 2500 or higher, except CS 5010		
CY 2000 or higher, except CY 4930		

DS 2500 or higher, except DS 4900

IS 2000 or higher, except IS 4900

Business Courses

Code	Title	Hours
Required Business Courses		
ACCT 1201	Financial Accounting and Reporting	4
ACCT 2301	Managerial Accounting	4
FINA 2201	Financial Management	4
MGSC 2301	Business Statistics	4
MKTG 2201	Introduction to Marketing	4
ORGB 3201	Organizational Behavior	4
STRT 4501	Strategy in Action	4

Business Concentration

Complete a four-course business concentration from the following list.

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

Integrative Course

Code	Title	Hours
Information Resource Management		
MISM 2301	Introduction to Information Systems and Digital Technologies	4

Supporting Courses

Code	Title	Hours
Mathematics		
MATH 1341 or MATH 1231	Calculus 1 for Science and Engineering Calculus for Business and Economics	4
Economics		
ECON 1115	Principles of Macroeconomics	4
ECON 1116	Principles of Microeconomics	4
Computing and Social Issues		
Complete one of the following:		
AFAM 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	
ENGL 2150	Literature and Digital Diversity	
HIST 2220	History of Technology	

INSH 2102	Bostonography: The City through Data, Texts, Maps, and Networks
IS 1300 or PHIL 1300	Knowledge in a Digital World
PHIL 1145	Technology and Human Values
SOCL 1280	The Twenty-First-Century Workplace
SOCL 2485	Environment, Technology, and Society
SOCL 4528	Computers and Society

Computer Science Writing Requirement

Code	Title	Hours
College Writing		
ENGW 1111	First-Year Writing	4
Advanced Writing in the Disciplines		
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 credits of general electives.	16

Business Cooperative Education

Complete one cooperative education experience.

Khoury College GPA Requirement

Minimum 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

- Engaging with the Natural and Designed World
- Conducting Formal and Quantitative Reasoning
- Analyzing and Using Data
- Understanding Societies and Institutions
- 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.

Program Requirement

133 total semester hours required

Plan of Study

Sample Plan of Study: Four Years, Two Co-ops in Summer 2/Fall

Year 1							
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
ACCT 1201		4 CS 2510 and CS 2511		5 ECON 1115		4 MISM 2301	4
CS 1200 or BUSN 1102		1 CS 3200		4 Elective		4 Elective	4
CS 1800 and CS 1802		5 ECON 1116		4			
CS 2500 and CS 2501		5 MATH 1341 or 1231		4			
ENGW 1111		4					
	19		17		8		8

Year 2								
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours	Hours
ACCT 2301		4 CS 1210 or BUSN 1103		1 MKTG 2201		4 Co-op		
CS 3500 and CS 3501		5 CS 3000		4 Business concentration 1		4		
MGSC 2301		4 FINA 2201		4				
Elective		4 Computing and social issues		4				
		Elective		4				
		17		17		8		0
Year 3								
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours	Hours
Co-op		CS Required Elective 1		4 ENGW 3302		4 Co-op		
		Business concentration 2		4 ORGB 3201		4		
		Business concentration 3		4				
		Khoury Elective		4				
		0		16		8		0
Year 4								
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours	Hours
Co-op		CS 4530		4				
		STRT 4501		4				
		CS Required Elective 2		4				
		Business concentration 4		4				
		0		16		8		0

Total Hours: 134

Sample Plan of Study: Four Years, Two Co-ops in Spring/Summer 1

Year 1								
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours	Hours
ACCT 1201		4 CS 2510 and CS 2511		5 CS 3500 and CS 3501		5 Elective		4
CS 1200 or BUSN 1102		1 CS 3200		4 ECON 1115		4 Elective		4
CS 1800 and CS 1802		5 ECON 1116		4				
CS 2500 and CS 2501		5 MATH 1341 or 1231		4				
ENGW 1111		4						
		19		17		9		8
Year 2								
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours	Hours
ACCT 2301		4 Co-op		Co-op		ENGW 3302		4
CS 1210 or BUSN 1103		1				MKTG 2201		4
CS 3000		4						
MGSC 2301		4						
Elective		4						
		17		0		0		8
Year 3								
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours	Hours
FINA 2201		4 Co-op		Co-op		ORGB 3201		4
MISM 2301		4				Elective		4
CS Required Elective 1		4						
Khoury Elective		4						
		16		0		0		8

Year 4			
Fall	Hours	Spring	Hours
CS 4530 or 4500		4 CS Required Elective 2	4
STRT 4501		4 Computing and Social Issues	4
Business concentration 1		4 Business concentration 3	4
Business concentration 2		4 Business concentration 4	4
	16		16

Total Hours: 134