

# Cybersecurity and Business Administration, BS (Boston)

The cybersecurity and business administration combined major delivers a technical and security-focused 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 the conceptual and practical computer science skills that will enable them to contribute to ensuring the reliability and security of cyberspace.

## 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/>).

## Cybersecurity Major Requirements

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 attempt to place out of CS 2000 and CS 2001. Students who place out of CS 2000 and CS 2001 will instead substitute with 4-5 semester hours of CS, CY, or DS coursework at the 3000 level or higher not otherwise required in 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 3650	Computer Systems	4
CS 4700 or CS 4730	Network Fundamentals Distributed Systems	4
<b>Cybersecurity Required Courses</b>		
CY 2550	Foundations of Cybersecurity	4
CY 3740	Systems Security	4
CY 4170 or CY 5240	The Law, Ethics, and Policy of Data and Digital Technologies Cyberlaw: Privacy, Ethics, and Digital Rights	4
CY 4740	Network Security	4
<b>Cybersecurity Electives</b>		
If courses require prerequisites, those should be taken using general electives.		
Complete one course from the following:		4-5
COMM 2551	Free Speech in Cyberspace	
CRIM 2340	Corporate Security: Securing the Private Sector	
CRIM 3030	Global Criminology	

CRIM 4040	Crime Prevention
CS 2800	Logic and Computation
CS 4400	Programming Languages
CS 4500	Software Development
CS 4530	Fundamentals of Software Engineering
CS 4535	Professional Practicum Capstone
CY 4100	AI Security and Privacy
CY 4760	Security of Wireless and Mobile Systems
CY 4770	Foundations of Cryptography
CY 4775	Applied Cryptography
CY 5200	Security Risk Management and Assessment
CY 5210	Information System Forensics
DS 4300	Large-Scale Information Storage and Retrieval
DS 4400	Machine Learning and Data Mining 1
EECE 2310 and EECE 2311	Introduction to Digital Design and Computer Architecture and Lab for EECE 2310
EECE 3324	Computer Architecture and Organization
EECE 4534 and EECE 4535	Microprocessor-Based Design and Lab for EECE 4534
LPSC 1101	Introduction to Law
LPSC 2301	Introduction to Law, Policy, and Society
LPSC 3303	Topics in Law and Public Policy
MATH 3527	Number Theory 1
MATH 4575	Introduction to Cryptography
PHIL 1145	Technology and Human Values
POLS 2390	Science, Technology, and Public Policy
POLS 3307	Public Policy and Administration
POLS 3324	Law and Society
POLS 3406	International Law
POLS 3420	U.S. National Security Policy
POLS 3423	Terrorism and Counterterrorism

## Business Requirements

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

## Business Concentration

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

- 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/>)

## 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	

## Integrative Requirement

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

## Supporting Courses

Code	Title	Hours
<b>Mathematics Courses</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 1245	Calculus with Applications	
MATH 1251	Calculus and Differential Equations for Biology 1	
MATH 1340	Intensive Calculus for Engineers	
MATH 1341	Calculus 1 for Science and Engineering	

### Economics

Complete one of the following:		4
ECON 1115	Principles of Macroeconomics	
ECON 1116	Principles of Microeconomics	

## Writing Requirements

Code	Title	Hours
<b>College Writing</b>		
ENGW 1111	First-Year Writing	4
or ENGW 1102	First-Year Writing for Multilingual Writers	

### Advanced Writing in the Disciplines

Complete one of the following courses:		4
ENGW 3302	Advanced Writing in the Technical Professions	
or ENGW 3304	Advanced Writing in the Business Administration Professions	
or ENGW 3315	Interdisciplinary Advanced Writing in the Disciplines	

Required General Electives

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

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 all 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 semester hours required

Plan of Study

Sample Plan 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 CS 3100 and CS 3101		5 General Elective	4
CS 1200 or BUSN 1102		1 ECON 1115 or 1116		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		9		8
Year 2							
Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
ACCT 2301		4 CS 1210 or BUSN 1103		1 MGSC 2301		4 Co-op	0
CS 3000		4 CS 4700 or 4730		4 General Elective		4	
CS 3650		4 CY 3740		4			
CY 2550		4 FINA 2201		4			
		Business Concentration		4			
	16		17		8		0

### Year 3

Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
Co-op		0 CY 4170 or 5240		4 MISM 2301		4 Co-op	0
		CY 4740		4 ORGB 3201 or 3203		4	
		Business Concentration		4			
		Business Concentration		4			
	<b>0</b>			<b>16</b>		<b>8</b>	<b>0</b>

### Year 4

Fall	Hours	Spring	Hours
Co-op		0 ENGW 3302, 3304, or 3315	4
		STRT 4501	4
		Business Concentration	4
		Cybersecurity Elective	4
	<b>0</b>		<b>16</b>

**Total Hours: 134**