Cybersecurity and Business Administration, BS

The cybersecurity and business 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 (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/).

Cybersecurity Major Requirements

Code	Title	Hours
Computer Science Overview		
CS 1200	First Year Seminar	1
or BUSN 1102	Personal Skill Development for Business	
CS 1210	Professional Development for Khoury Co-op	1
or BUSN 1103	Professional Development for Business Co-op	
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 3500 and CS 3501	Object-Oriented Design and Lab for CS 3500	5
CS 3650	Computer Systems	4
CS 3700	Networks and Distributed Systems	4
Cybersecurity Required Courses		
CY 2550	Foundations of Cybersecurity	4
CY 3740	Systems Security	4
CY 4170	The Law, Ethics, and Policy of Data and Digital Technologies	4
or CY 5240	Cyberlaw: Privacy, Ethics, and Digital Rights	
CY 4740	Network Security	4
Cybersecurity Electives		
If courses require prerequisites, those should be taken using general electives.		
Complete one course from the following:		3-4
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 4240	Large-Scale Parallel Data Processing	
CS 4400	Programming Languages	
CS 4500	Software Development	

CS 4710	Mobile and Wireless Systems
CS 6710	Wireless Network
CY 5200	Security Risk Management and Assessment
CY 5210	Information System Forensics
CY 5770	Software Vulnerabilities and Security
DS 4300	Large-Scale Information Storage and Retrieval
DS 4400	Machine Learning and Data Mining 1
EECE 2322 and EECE 2323	Fundamentals of Digital Design and Computer Organization and Lab for EECE 2322
EECE 3324	Computer Architecture and Organization
EECE 4534 and EECE 4535	Microprocessor-Based Design and Lab for EECE 4534
IS 4300	Human Computer Interaction
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 3408	International Security
POLS 3420	U.S. National Security Policy
POLS 3423	Terrorism and Counterterrorism

Business Requirements

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

Business Concentration

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

- 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/)
- Business Analytics (http://catalog.northeastern.edu/undergraduate/business/concentrations/business-analytics/)
- 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/)

Business Cooperative Education Requirement

Complete one six-month co-op experience.

Integrative Requirement

Code	Title	Hours
MISM 2301	Management Information Systems	4

Supporting Courses

Code	Title	Hours
Mathematics Courses		
Complete one of the following:		4
MATH 1341	Calculus 1 for Science and Engineering	
MATH 1231	Calculus for Business and Economics	
Economics		
Complete one of the following:		4
ECON 1115	Principles of Macroeconomics	
ECON 1116	Principles of Microeconomics	

Writing Requirements

Code	Title	Hours
College Writing		
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 credits of general electives.		16

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 all 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 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
CS 1200	1	CS 2510 and CS 2511	5	CS 3500 and CS 3501	5	Vacation	
CS 1800 and CS 1802	5	CY 2550	4	Elective 1	4		
CS 2500 and CS 2501	5	MATH 1341 or 1231	4				
ENGW 1111	4	ACCT 1201	4				
ECON 1115 or 1116	4						
	19		17		9		0

Year 2

Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
CS 3000	4	CS 3700	4	MKTG 2201	4	Co-op	
CS 3650	4	CY 3740	4	Elective 3	4		
ACCT 2301	4	Business concentration 1	4				
MGSC 2301	4	Elective 2	4				
		CS 1210	1				
	16		17		8		0

Year 3

Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
Co-op		CY 4170 or 5240	4	FINA 2201	4	Co-op	
		Business concentration 2	4	ORGB 3201	4		
		Business concentration 3	4				
		CY 4740	4				
	0		16		8		0

Year 4

Fall	Hours	Spring	Hours	Summer 1	Hours
Co-op		ENGW 3302	4	STRT 4501	4
		MISM 2301	4	Elective 4	4
		Business concentration 4	4		
		Cybersecurity elective	4		
	0		16		8

Total Hours: 134