

Cybersecurity and Economics, BS

The cybersecurity and economics combined degree applies a multidisciplinary approach integrating fundamental economics courses with a strong programming foundation. Students will study both the behavior of individuals and the collective behavior of industries and governments, utilizing computing skills to ensure 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.

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>).

Cybersecurity Major Requirements

Code	Title	Hours
Computer Science Overview		
CS 1200 or ECON 1000	Leadership Skill Development Economics at Northeastern	1
CS 1210	Professional Development for CCIS Co-op	1
Discrete Structures		
A grade of C– or higher is required:		
CS 1800 and CS 1802	Discrete Structures and Seminar for CS 1800	5
Computer Science Fundamentals Courses		
A grade of C– or higher is required in each course:		
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	Object-Oriented Design	4
CS 3650	Computer Systems	4
CS 3700	Networks and Distributed Systems	4
Cybersecurity Required Courses		
CS 2550	Foundations of Cybersecurity	4
CS 3740	Systems Security	4
CS 4740	Network Security	4
CS 4170 or IA 5240	The Law, Ethics, and Policy of Data and Digital Technologies Cyberlaw: Privacy, Ethics, and Digital Rights	4
Cybersecurity Elective		
Complete one of the following:		
		4

CS 2800	Logic and Computation	
CS 4710 or CS 6710	Mobile and Wireless Systems Wireless Network	
CS 5770	Software Vulnerabilities and Security	
CS 4770	Cryptography	
CS 4400	Programming Languages	
CS 4500	Software Development	
CS 4240	Large-Scale Parallel Data Processing	
DS 4300	Large-Scale Information Storage and Retrieval	
DS 4400	Machine Learning and Data Mining 1	
IA 5200	Security Risk Management and Assessment	
IA 5210 and IA 5211	Information System Forensics and Lab for IA 5210	
IS 4300	Human Computer Interaction	
EECE 2160	Embedded Design: Enabling Robotics	
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	
MATH 3527	Number Theory 1	
MATH 4575	Introduction to Cryptography	
COMM 2551	Free Speech in Cyberspace	
CRIM 2200	Criminology	
CRIM 3030	Global Criminology	
CRIM 4040	Crime Prevention	
CRIM 3400	Corporate Security: Securing the Private Sector	
LPSC 1101	Introduction to Law	
LPSC 2301	Introduction to Law, Policy, and Society	
LPSC 3303	Topics in Law and Public Policy	
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	
Computer Science Senior Seminar		
THTR 1170	The Eloquent Presenter	1

Supporting Course

Code	Title	Hours
MATH 1341 or MATH 1231	Calculus 1 for Science and Engineering Calculus for Business and Economics	

Computer Science Writing Requirement

Code	Title	Hours
College Writing		
Complete one of the following:		4
ENGW 1111	First-Year Writing	
ENGW 1102	First-Year Writing for Multilingual Writers	
Advanced Writing in the Disciplines		
Complete one of the following:		4
ENGW 3302	Advanced Writing in the Technical Professions	
ENGW 3308	Advanced Writing in the Social Sciences	
ENGW 3311	Advanced Writing for Prelaw	
ENGW 3315	Interdisciplinary Advanced Writing in the Disciplines	

Economics Requirements

Code	Title	Hours
Required Courses		
A cumulative 2.0 GPA is required.		
ECON 1115	Principles of Macroeconomics	4
ECON 1116	Principles of Microeconomics	4
ECON 2315	Macroeconomic Theory	4
ECON 2316	Microeconomic Theory	4
ECON 2350	Statistics	4
ECON 2560	Applied Econometrics	4
Electives		
Complete four ECON electives with at least two numbered at ECON 3000 or above.		16
ECON 1001 to ECON 2999		
ECON 3000 to ECON 5999		

Integrative Requirement

Code	Title	Hours
Capstone		
Complete one of the following:		4
ECON 4692	Senior Economics Seminar	
CS 4930	Cybersecurity Capstone	
CS 4940	Research Projects on National Security	
Integrative Requirement		
ECON 2560	Applied Econometrics	4

Required General Electives

Code	Title	Hours
Complete six general electives.		24

Cybersecurity GPA Requirement

Minimum 2.000 GPA required in all computer and information science courses.

Program Requirement

133 total semester hours required.