Cybersecurity and Criminal Justice, BS (Boston)

The cybersecurity and criminal justice combined degree applies a multidisciplinary approach to ensuring the reliability and security of cyberspace. The program will provide students with a strong programming foundation coupled with academic and experiential knowledge of the criminal justice system. Students learn how social behavior, policy, and legal rules can affect cybersecurity and utilize comparative social science to understand, predict, and explain crime.

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
Computer Science Overview		
Must be taken in alignment with your home college:		
CS 1200	First Year Seminar	1
or CRIM 1000	Criminal Justice at Northeastern	
CS 1210	Professional Development for Khoury Co-op	1
or EESH 2000	Professional Development for Co-op	
Computer Science Fundamentals Courses		
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
Computer Science Required Courses		
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	Network Fundamentals	4
or CS 4730	Distributed Systems	
Cybersecurity Required Courses		
CY 2550	Foundations of Cybersecurity	4
CY 3740	Systems Security	4
CY 4740	Network Security	4
Cybersecurity Elective		
Complete one of the following:		4
COMM 2551	Free Speech in Cyberspace	
CS 2484	Principles of Human-Computer Interaction	
CS 2800	Logic and Computation	
CS 4400	Programming Languages	
CS 4500	Software Development	
or CS 4530	Fundamentals of Software Engineering	

CY 4100	AI Security and Privacy
CY 4760	Security of Wireless and Mobile Systems
CY 4770	Foundations of Cryptography
or CY 4775	Applied Cryptography
CY 5010	Cybersecurity Principles and Practices
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
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

Supporting Courses

Code	Title	Hours
Complete the following course:		
MATH 1341	Calculus 1 for Science and Engineering	4

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	

Criminal Justice Requirements

Code	Title	Hours
Introduction to Crime, Law, and the Justice System		
What do we know about crime and justice? In these three courses, students have an opportunity to develop a foundational understanding of three related phenomena: why crime exists, how our criminal justice system responds to crime, and the constitutional and legal oversight of this process.		
CRIM 1100	Introduction to Criminal Justice	4
CRIM 1110	Criminal Due Process	4
CRIM 1120	Criminology	4

Current Crime and Justice Issues

These courses introduce students to topical issues related to crime and justice.

Complete one of the following:		4
CRIM 1300	The Death Penalty	
CRIM 1400	Human Trafficking	
CRIM 1500	Corruption, Integrity, and Accountability	
CRIM 1700	Crime, Media, and Politics	

Crime Problems and Criminal Justice Institutions

The 2000-level courses in this list ask how does justice work and for whom? These courses introduce students to the systems and institutions tasked with providing justice. Each includes experiential learning components in cooperation with local criminal justice institutions. The 3000-level courses in this list provide students a deeper look at a range of crime problems.

Complete one of the following:		4
CRIM 2310	Courts: The Third Branch of Government	
CRIM 2320	Youth Crime and Justice	
CRIM 2330	Punishment in the Age of Mass Incarceration	
CRIM 2370	Restorative Justice: Transforming the System	
CRIM 2380	Black Families and Incarceration	
CRIM 3010	Criminal Violence	
CRIM 3030	Global Criminology	
CRIM 3040	Psychology of Crime	
CRIM 3050	Organized Crime	
CRIM 3070	Corporate and White-Collar Crime	
CRIM 3100	Criminal Law	
CRIM 3540	Substance Use and Social Justice	
AFCS 3210	Black Abolition Studies: Carcerality, Liberation, and Resistance	

Creating Knowledge about Crime and Justice

How do we know what we know about crime and justice—and how do we develop new knowledge? Harnessing data to learn about issues, identify solutions, and advocate for change.

CRIM 3600	Criminal Justice Research Methods	4
CRIM 3700	Analyzing and Using Data on Crime and Justice	4

Systemic Issues

A consideration of systemic issues facing the criminal justice system.

Complete one of the following:		4
CRIM 3110	Gender, Crime, and Justice	
CRIM 3120	Race, Crime, and Justice	

Criminal Justice Elective

Rounding out knowledge of crime and justice.

Complete one additional criminal justice elective from the 3000, 4000 or 5000-level:		4

Criminal Justice Capstone

Complete one of the following:		4
CRIM 4949	Senior Capstone Seminar	
CY 4930	Cybersecurity Capstone	

Criminal Justice Co-op Integration

Code	Title	Hours
Co-op students should complete at least one of the following courses. CRIM 3000 is required for the first co-op. CRIM 4000 is required if a second co-op is taken:		
CRIM 3000	Co-op Integration Seminar 2	1
CRIM 4000	Co-op Integration Seminar 3	1

Integrative Requirement

Code	Title	Hours
Cybersecurity Integrative Course		
CY 4170	The Law, Ethics, and Policy of Data and Digital Technologies	4
or CY 5240	Cyberlaw: Privacy, Ethics, and Digital Rights	

Criminal Justice Integrative Course

Complete one of the following:		4
CRIM 2340	Corporate Security: Securing the Private Sector	
CRIM 2350	Policing a Democratic Society	
CRIM 3060	Political Crime and Terrorism	
CRIM 4040	Crime Prevention	
CRIM 5900	Topics in Criminal Justice and Criminology	

Required General Electives

Code	Title	Hours
Complete 24 semester hours of general electives.		24

Khoury College GPA Requirement

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

NUpath Requirements Satisfied

- Engaging with the Natural and Designed World
- Conducting Formal and Quantitative Reasoning
- Understanding Societies and Institutions
- Engaging Differences and Diversity
- Analyzing and Using Data
- Employing Ethical Reasoning
- 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

134 total semester hours required.

Plan of Study
Sample Plan of Study

Year 1

Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
CRIM 1100	4	CRIM 1110	4	CS 3100 and CS 3101	5	General Elective	4
CS 1200	1	CRIM 1120	4	MATH 1341	4	General Elective	4
CS 2000 and CS 2001	5	CS 2100 and CS 2101	5				
CS 1800 and CS 1802	5	General Elective	4				
ENGW 1111	4						
	19		**17**		**9**		**8**

Year 2

Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
CRIM 3600	4	CS 1210	1	CS 3000	4	Co-op	0
CRIM 3700	4	CS 4700 or 4730	4	General Elective	4		
CY 2550	4	Crime Problems/CJ Institutions	4				
CS 3650	4	Current Crime and Justice Issues	4				
		CRIM Elective	4				
	16		**17**		**8**		**0**

Year 3

Fall	Hours	Spring	Hours	Summer 1	Hours	Summer 2	Hours
Co-op	0	CRIM 3000	1	ENGW 3302, 3308, 3311, or 3315	4	Co-op	0
		CY 3740	4	General Elective	4		
		CJ Systemic Issues	4				
		Cybersecurity Elective	4				
		CRIM Integrative	4				
	0		**17**		**8**		**0**

Year 4

Fall	Hours	Spring	Hours
Co-op	0	CY 4740	4
		CRIM 4000	1
		CY 4170 or 5240	4
		Capstone	4
		General Elective	4
	0		**17**

Total Hours: 136