

# Cybersecurity and Political Science, BS (Boston)

The cybersecurity and political science combined major offers both a strong computer science foundation and a deep understanding of global and societal needs. Students practice the skills to become an engaged citizen of the world, participating in interdisciplinary scholarship and translational research to address regional and global issues, while also focusing on the conceptual and practical computer science skills 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/general-education-requirements/#nupathtext>).

## Cybersecurity Courses

| Code                                                                                                                                                                                                                                                                           | Title                                             | Hours |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-------|
| <b>Computer Science Overview</b>                                                                                                                                                                                                                                               |                                                   |       |
| Must be taken in alignment with your home college:                                                                                                                                                                                                                             |                                                   |       |
| CS 1200                                                                                                                                                                                                                                                                        | First Year Seminar                                | 1     |
| or INPR 1000                                                                                                                                                                                                                                                                   | First-Year Interdisciplinary Seminar              |       |
| or POLS 1000                                                                                                                                                                                                                                                                   | Political Science at Northeastern                 |       |
| CS 1210                                                                                                                                                                                                                                                                        | Professional Development for Khoury Co-op         | 1     |
| or EESH 2000                                                                                                                                                                                                                                                                   | Professional Development for Co-op                |       |
| <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 4-5 semester hours of CS, CY, or DS coursework at the 3000 level or higher not otherwise required in the degree. |                                                   |       |
| CS 1800                                                                                                                                                                                                                                                                        | Discrete Structures                               | 4     |
| CS 2000                                                                                                                                                                                                                                                                        | Introduction to Program Design and Implementation | 5     |
| and CS 2001                                                                                                                                                                                                                                                                    | and Lab for CS 2000                               |       |
| CS 2100                                                                                                                                                                                                                                                                        | Program Design and Implementation 1               | 5     |
| and CS 2101                                                                                                                                                                                                                                                                    | and Lab for CS 2100                               |       |
| <b>Computer Science Required Courses</b>                                                                                                                                                                                                                                       |                                                   |       |
| CS 2700                                                                                                                                                                                                                                                                        | Data Structures and Analysis                      | 5     |
| and CS 2701                                                                                                                                                                                                                                                                    | and Lab for CS 2700                               |       |
| CS 3100                                                                                                                                                                                                                                                                        | Program Design and Implementation 2               | 5     |
| and CS 3101                                                                                                                                                                                                                                                                    | and Lab for CS 3100                               |       |
| CS 3650                                                                                                                                                                                                                                                                        | Computer Systems                                  | 4     |
| CS 4700                                                                                                                                                                                                                                                                        | Network Fundamentals                              | 4     |
| or CS 4730                                                                                                                                                                                                                                                                     | Distributed Systems                               |       |
| <b>Cybersecurity Required Courses</b>                                                                                                                                                                                                                                          |                                                   |       |
| CY 2550                                                                                                                                                                                                                                                                        | Foundations of Cybersecurity                      | 4     |
| CY 3740                                                                                                                                                                                                                                                                        | Systems Security                                  | 4     |
| CY 4740                                                                                                                                                                                                                                                                        | Network Security                                  | 4     |
| <b>Cybersecurity Elective</b>                                                                                                                                                                                                                                                  |                                                   |       |
| 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 4760                    | Security of Wireless and Mobile Systems                                           |
| CY 4770                    | Foundations of Cryptography                                                       |
| CY 5010                    | Cybersecurity Principles and Practices                                            |
| CY 5200                    | Security Risk Management and Assessment                                           |
| CY 5210                    | Information System Forensics                                                      |
| DS 4300                    | Large-Scale Information Storage and Retrieval                                     |
| DS 4400                    | Machine Learning                                                                  |
| EECE 2322<br>and EECE 2323 | Fundamentals of Digital Design and Computer Organization<br>and Lab for EECE 2322 |
| EECE 3324                  | Computer Architecture and Organization                                            |
| EECE 4534<br>and EECE 4535 | Microprocessor-Based Design<br>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                                                       |

## Political Science Courses

| Code                                                                                                                                               | Title                                              | Hours |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------|
| <b>Political Science Requirements</b>                                                                                                              |                                                    |       |
| POLS 1150                                                                                                                                          | American Government                                | 4     |
| POLS 1155                                                                                                                                          | Comparative Politics                               | 4     |
| POLS 1160                                                                                                                                          | International Relations                            | 4     |
| POLS 2399                                                                                                                                          | Research Methods in Political Science              | 4     |
| POLS 2400                                                                                                                                          | Quantitative Techniques                            | 4     |
| <b>Political Theory</b>                                                                                                                            |                                                    |       |
| Complete one of the following:                                                                                                                     |                                                    | 4     |
| POLS 2325                                                                                                                                          | Ancient Philosophy and Political Thought           |       |
| POLS 2328                                                                                                                                          | Modern Political Thought                           |       |
| POLS 2330                                                                                                                                          | American Political Thought                         |       |
| POLS 2332                                                                                                                                          | Contemporary Political Thought                     |       |
| <b>Political Science Capstone</b>                                                                                                                  |                                                    |       |
| POLS 4701<br>or POLS 4703                                                                                                                          | Political Science Senior Capstone<br>Senior Thesis | 4     |
| <b>Political Science Electives</b>                                                                                                                 |                                                    |       |
| Complete three courses in the following range (Note: elective courses may also fulfill requirements of an optional concentration of this program): |                                                    | 12    |
| POLS 2000 to POLS 5999                                                                                                                             |                                                    |       |

## Political Science Concentrations (Optional)

If you are working toward one of the following concentrations, declare it with your advisor so that it may be added to your record:

- American Political Institutions (p. 3)
- Campaigns and Elections (p. 4)
- Comparative Politics (p. 4)
- Identity, Culture, and Politics (p. 4)
- International Relations and Diplomacy (p. 4)
- Law and Legal Studies (p. 5)
- Public Policy (p. 5)
- Security Studies (p. 5)

**Integrative Requirement**

| Code                           | Title                                                        | Hours |
|--------------------------------|--------------------------------------------------------------|-------|
| <b>Integrative Requirement</b> |                                                              |       |
| Complete two of the following: |                                                              | 8     |
| CY 4170                        | The Law, Ethics, and Policy of Data and Digital Technologies |       |
| POLS 2390                      | Science, Technology, and Public Policy                       |       |
| POLS 2600                      | Artificial Intelligence and World Politics                   |       |
| or INTL 2600                   | Artificial Intelligence and World Politics                   |       |
| 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 |
|--------------------------------------------|-------------------------------------------------------|-------|
| <b>College Writing</b>                     |                                                       |       |
| ENGW 1111                                  | First-Year Writing                                    | 4     |
| or ENGW 1102                               | First-Year Writing for Multilingual Writers           |       |
| <b>Advanced Writing in the Disciplines</b> |                                                       |       |
| 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 |       |
| <b>Mathematics</b>                         |                                                       |       |
| MATH 1341                                  | Calculus 1 for Science and Engineering                | 4     |

**Required General Electives**

| Code                                             | Title | Hours |
|--------------------------------------------------|-------|-------|
| Complete 20 semester hours of general electives. |       | 20    |

**Cybersecurity and Political Science Major Credit Requirement**

110 semester hours required in the major

**NUpath Requirements Satisfied**

- Analyzing and Using Data
- Conducting Formal and Quantitative Reasoning
- Demonstrating Thought and Action in a Capstone
- Engaging with the Natural and Designed World
- Understanding Societies and Institutions
- Writing Across Audiences and Genres

Integrating Knowledge and Skills Through Experience is satisfied through co-op.

**Program Requirement**

129 total semester hours required

**CONCENTRATION IN AMERICAN POLITICAL INSTITUTIONS**

| Code                            | Title                         | Hours |
|---------------------------------|-------------------------------|-------|
| Complete four of the following: |                               | 16    |
| POLS 3160                       | Campaign Strategy             |       |
| POLS 3300                       | The U.S. Congress             |       |
| POLS 3302                       | Judicial Process and Behavior |       |

|           |                                       |
|-----------|---------------------------------------|
| POLS 3307 | Public Policy and Administration      |
| POLS 3310 | Public Opinion, Voting, and Elections |

**CONCENTRATION IN CAMPAIGNS AND ELECTIONS**

| Code                                     | Title                                 | Hours |
|------------------------------------------|---------------------------------------|-------|
| <b>Required Courses</b>                  |                                       |       |
| POLS 3160                                | Campaign Strategy                     | 4     |
| POLS 3302                                | Judicial Process and Behavior         | 4     |
| <b>Campaigns and Elections Electives</b> |                                       |       |
| Complete two of the following:           |                                       | 8     |
| POLS 2345                                | Urban Policies and Politics           |       |
| POLS 3310                                | Public Opinion, Voting, and Elections |       |
| POLS 3320                                | Politics and Mass Media               |       |

**CONCENTRATION IN COMPARATIVE POLITICS**

| Code                                      | Title                                                     | Hours |
|-------------------------------------------|-----------------------------------------------------------|-------|
| <b>Theoretical Requirement</b>            |                                                           |       |
| Complete two of the following:            |                                                           | 8     |
| POLS 2282                                 | The Holocaust and Comparative Genocide                    |       |
| POLS 2356                                 | Democratic Erosion                                        |       |
| POLS 2359                                 | Immigration Politics                                      |       |
| POLS 2370                                 | Religion and Politics                                     |       |
| POLS 3418                                 | Nationalism                                               |       |
| POLS 3487                                 | Politics of Developing Nations                            |       |
| <b>Regional Requirements</b>              |                                                           |       |
| Complete one of the following:            |                                                           | 4     |
| POLS 3435                                 | Politics and Governance of Europe and the European Union  |       |
| POLS 3465                                 | Government and Politics in the Middle East                |       |
| <b>Experiential/Practicum Requirement</b> |                                                           |       |
| Complete one of the following:            |                                                           | 4     |
| POLS 4915                                 | Model Arab League                                         |       |
| POLS 4918                                 | Model NATO                                                |       |
| POLS 4937                                 | Dialogue of Civilizations: Government and Politics Abroad |       |

**CONCENTRATION IN IDENTITY, CULTURE, AND POLITICS**

| Code                             | Title                                                           | Hours |
|----------------------------------|-----------------------------------------------------------------|-------|
| <b>Core Course</b>               |                                                                 |       |
| POLS 3418                        | Nationalism                                                     | 4     |
| <b>Electives</b>                 |                                                                 |       |
| Complete three of the following: |                                                                 | 12    |
| POLS 2359                        | Immigration Politics                                            |       |
| POLS 2368                        | Music and Politics in America and Abroad                        |       |
| POLS 2370                        | Religion and Politics                                           |       |
| POLS 3309                        | Lesbian, Gay, Bisexual, and Transgender Issues in Public Policy |       |
| POLS 3324                        | Law and Society                                                 |       |

**CONCENTRATION IN INTERNATIONAL RELATIONS AND DIPLOMACY**

| Code                                      | Title                                                    | Hours |
|-------------------------------------------|----------------------------------------------------------|-------|
| <b>Experiential/Practicum Requirement</b> |                                                          |       |
| Complete one of the following:            |                                                          | 4     |
| POLS 4910                                 | Model United Nations                                     |       |
| POLS 4915                                 | Model Arab League                                        |       |
| POLS 4938                                 | Dialogue of Civilizations: International Politics Abroad |       |
| <b>Core Courses</b>                       |                                                          |       |

Complete three of the following: 12

|           |                                                          |
|-----------|----------------------------------------------------------|
| POLS 3405 | International Political Economy                          |
| POLS 3406 | International Law                                        |
| POLS 3435 | Politics and Governance of Europe and the European Union |
| POLS 5408 | International Security                                   |

### CONCENTRATION IN LAW AND LEGAL STUDIES

**Code Title Hours**

Complete four of the following: 16

|           |                               |
|-----------|-------------------------------|
| POLS 2330 | American Political Thought    |
| POLS 3300 | The U.S. Congress             |
| POLS 3302 | Judicial Process and Behavior |
| POLS 3324 | Law and Society               |
| POLS 3406 | International Law             |
| POLS 4500 | U.S. Constitutional Law       |
| POLS 4505 | U.S. Civil Liberties          |

### CONCENTRATION IN PUBLIC POLICY

**Code Title Hours**

#### Core Requirement

|           |                                  |   |
|-----------|----------------------------------|---|
| POLS 3307 | Public Policy and Administration | 4 |
|-----------|----------------------------------|---|

#### Electives

Complete three of the following: 12

|           |                                        |
|-----------|----------------------------------------|
| POLS 2345 | Urban Policies and Politics            |
| POLS 2390 | Science, Technology, and Public Policy |
| POLS 2395 | Environmental Politics and Policy      |
| POLS 3425 | U.S. Foreign Policy                    |

### CONCENTRATION IN SECURITY STUDIES

**Code Title Hours**

Complete four of the following: 16

|           |                                |
|-----------|--------------------------------|
| POLS 3420 | U.S. National Security Policy  |
| POLS 3423 | Terrorism and Counterterrorism |
| POLS 3425 | U.S. Foreign Policy            |
| POLS 3487 | Politics of Developing Nations |
| POLS 5408 | International Security         |