

Artificial Intelligence and Sociology, BS (Boston)

The artificial intelligence and sociology combined major offers students an integrative curriculum in the scientific study of society and in the collection, manipulation, storage, retrieval, and computational analysis of data in its various forms including numeric, textual, image, and video data from small to large volumes. Sociology provides students with the conceptual tools to understand how various features of society—including inequalities based on race, class, and gender—affect its members. This degree provides conceptual tools that can be used to foster social change and the empowerment of historically marginalized groups alongside the computing skills to manage large volumes of data in these areas.

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>).

Artificial Intelligence Courses

Code	Title	Hours
Fundamental 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 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 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
CS 3200	Introduction to Databases	4
DS 3500	Advanced Programming with Data	4
Artificial Intelligence Foundations		
DS 3000	Mathematical Foundations of Artificial Intelligence	4
DS 4200	Information Presentation and Visualization	4
DS 4300	Large-Scale Information Storage and Retrieval	4
DS 4400	Machine Learning	4
Khoury Approved Electives		
With advisor approval, directed study, research, project study, and appropriate graduate-level courses may also be taken as upper-division electives.		
Complete 4 semester hours from the following:		4
CS 2300 or higher, except CS 5010		
CY 2000 or higher, except CY 4930		
DS 2500 or higher, except DS 4900		
EECE 2160	Embedded Design: Enabling Robotics	
EECE 2322 and EECE 2323	Fundamentals of Digital Design and Computer Organization and Lab for EECE 2322	
MKTG 4606	Digital, Analytics, Technology, and Automation Research Practicum	

Sociology Requirements

Code	Title	Hours
Required Sociology Courses		
SOCL 1101	Introduction to Sociology	4
SOCL 3300	Social Theory	4
Research Methods		

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SOCL 2321	Research Methods in Sociology	4
or INSH 3101	Research Methods in the Social Sciences	
Capstone		
SOCL 4600	Senior Seminar	4
Sociology Electives		
<i>Sociology Elective—Introductory</i>		
Complete two courses between SOCL 1000 and SOCL 2999 not used to satisfy another requirement.		8
<i>Sociology Elective—Intermediate</i>		
Complete three courses between SOCL 3000 and SOCL 4999 not used to satisfy another requirement.		12

Supporting Courses

Code	Title	Hours
Overview Course		
Complete the following in alignment with your home college:		
CS 1200	First Year Seminar	1
or INPR 1000	First-Year Interdisciplinary Seminar	
or SOCL 1000	Sociology at Northeastern	
CS 1210	Professional Development for Khoury Co-op	1
or EESH 2000	Professional Development for Co-op	
Mathematics		
INSH 3102	Introduction to Statistics in the Social Sciences	4
or SOCL 2320	Statistical Analysis in Sociology	
MATH 1341	Calculus 1 for Science and Engineering	4

Writing Courses

Code	Title	Hours
College Writing		
ENGW 1111	First-Year Writing	4
or ENGW 1102	First-Year Writing for Multilingual Writers	
or ENGW 1114	First-Year Writing with Service-Learning	
Advanced Writing in the Disciplines		
ENGW 3302	Advanced Writing in the Technical Professions	4
or ENGW 3308	Advanced Writing in the Social Sciences	
or ENGW 3315	Interdisciplinary Advanced Writing in the Disciplines	

Integrative Course

Code	Title	Hours
Complete one of the following:		
SOCL 2485	Environment, Technology, and Society	4
SOCL 4528	Technology and Society	

Required General Electives

Code	Title	Hours
Complete 28 semester hours of general electives.		28

NUpath Requirements Satisfied

- Advanced Writing in the Disciplines
- Analyzing and Using Data
- Conducting Formal and Quantitative Reasoning
- Demonstrating Thought and Action in a Capstone
- Engaging Differences and Diversity
- Engaging with the Natural and Designed World
- Interpreting Culture
- 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

128 total semester hours required