

Artificial Intelligence and Psychology, BS (Boston)

The artificial intelligence and psychology combined major offers an integrative curriculum in the study of mind, brain, and behavior 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. The study of psychology draws upon empirical research with both humans and animals to investigate and seek explanations for the behavior and mental life of individuals and to develop assessment tools and treatment options for addressing clinical problems. In this program, students have an opportunity to augment such knowledge with skills in machine learning and data analytics.

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 Requirements

Code	Title	Hours
Computer Science Overview		
Complete the following in alignment with your home college:		
CS 1200 or INPR 1000 or INSC 1000	First Year Seminar First-Year Interdisciplinary Seminar Science at Northeastern	1
CS 1210 or EESC 2000	Professional Development for Khoury Co-op Professional Development for Co-op	1
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 with 4-5 semester hours of CS, CY, or DS coursework at the 3000 level or higher not otherwise required in the degree.		
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
MATH 1365 or MATH 1465	Introduction to Mathematical Reasoning Intensive Mathematical Reasoning	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
DS 4420	Advanced 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 within the following ranges:		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

Writing Requirements

Code	Title	Hours
College Writing		
ENGW 1111 or ENGW 1102	First-Year Writing First-Year Writing for Multilingual Writers	4
Advanced Writing in the Disciplines		
Complete one of the following:		4
ENGW 3302	Advanced Writing in the Technical Professions	
ENGW 3307	Advanced Writing in the Sciences	
ENGW 3315	Interdisciplinary Advanced Writing in the Disciplines	

Psychology Requirements

Code	Title	Hours
Foundations of Psychology		
PSYC 1101	Foundations of Psychology	4
Statistics in Psychological Research		
PSYC 2320	Statistics in Psychological Research	4
Mathematics Foundations		
MATH 1341	Calculus 1 for Science and Engineering	4
Personality/Social Basis of Behavior		
Complete two of the following:		8
PSYC 3400	Personality	
PSYC 3402	Social Psychology	
PSYC 3404	Developmental Psychology	
PSYC 3406	Clinical Psychology and Mental Health	
Cognitive/Biological Basis of Behavior		
Complete two of the following:		8
PSYC 3450 or PSYC 3451	Learning and Motivation Learning Principles and Behavior Analysis	
PSYC 3452	Sensation and Perception	
PSYC 3458	Biological Psychology	
PSYC 3464	Psychology of Language	
PSYC 3466	Cognition	
Psychology Laboratory		
Complete one of the following (this requirement may not be fulfilled via transfer credit):		4
PSYC 4600	Laboratory in Research Design	
PSYC 4604	Laboratory in Learning and Motivation	
PSYC 4606	Laboratory in Biological Psychology	
PSYC 4610	Laboratory in Psycholinguistics	
PSYC 4612	Laboratory in Cognition	
PSYC 4614	Laboratory in Social Psychology	
PSYC 4616	Laboratory in Personality	
PSYC 4622	Laboratory in Sensation and Perception	
PSYC 4624	Laboratory in Affective Science	
PSYC 4628	Laboratory in Developmental Psychology	
Psychology Seminar		
Complete one of the following:		4
PSYC 4656	Seminar in Biological Psychology	
PSYC 4658	Seminar in Psycholinguistics	
PSYC 4660	Seminar in Cognition	

PSYC 4662	Seminar in Personality
PSYC 4664	Seminar in Social Psychology
PSYC 4666	Seminar in Clinical Psychology
PSYC 4668	Seminar in Sensation and Perception
PSYC 4674	Seminar in Cognitive Neuroscience
PSYC 4676	Seminar in Developmental Psychology
PSYC 4682	Seminar in Learning and Motivation

Psychology Electives

Complete two courses from within the following range: 8

PSYC 2370 to PSYC 5999

Integrative Requirement

Code	Title	Hours
Integrative Course		
Complete one of the following:		4
CS 2484	Principles of Human-Computer Interaction	
PSYC 4540	Quantitative Topics in Psychology and Behavioral Neuroscience	

Required General Electives

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

Psychology GPA Requirement

Minimum 2.000 GPA required in all PSYC courses

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 with the Natural and Designed World
- 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.

Combined Major Credit Requirement

Complete 94 semester hours in the major.

Program Requirement

130 total semester hours required