

Applied Machine Intelligence, MPS (Portland)

Humankind is on the threshold of a new era—an age of artificial intelligence (AI) as revolutionary in its global impact as the Industrial Revolution. With the proliferation of machine learning and AI across all sectors of the global society, and fields such as financial services, healthcare, and robotics, GEOINT and cybersecurity are already changing as intelligent computers take on once-indispensably human tasks. There is an immediate need for individuals to be knowledgeable in how to manage, analyze, communicate, visualize, and lead in the area of AI by being data, technology, and human literate. The experiential AI curricula includes an introductory core, as well as an advanced core with an end-to-end AI education in the areas of finance, HR, business ventures, and healthcare/pharmaceuticals. The goal is to proactively and thoughtfully prepare students for the evolving technology and the challenges it presents. The curricula framework adopts a multidisciplinary approach to problem solving by combining computer science and analytical skills with functional government and industry expertise, creativity, and leadership with program offerings on-ground and online.

The degree program is distinguished from others by:

- Focusing on the specific but widespread field of AI that exists within a variety of industries and applications
- Northeastern faculty experts, who have extensive and proven experience in computer science, analytics, geospatial science, information technology, etc.
- Courses that focus on providing critical skills in data management, data analysis, data visualization, problem solving, and advanced analytical tools, creating AI-driven decision making in fields like healthcare/pharmaceuticals, finance, HR, and business ventures

Program Requirements

Complete all courses and requirements listed below unless otherwise indicated.

Core Requirements

Code	Title	Hours
ALY 6110	Data Management and Big Data	3
EAI 6000	Fundamentals of Artificial Intelligence	3
EAI 6010	Applications of Artificial Intelligence	3
EAI 6020	AI System Technologies	3
EAI 6400	Data Governance and Responsible AI	3

Experiential Network and Capstone

Code	Title	Hours
EAI 6980	Integrated Experiential Capstone	3
Choose one of the following:		
ALY 6080	Integrated Experiential Learning	
INT 6940	Experiential Learning Projects for Professionals	

The remaining quarter hours may be completed by a combination of completing a concentration and additional electives or selecting any courses listed in the concentrations and elective list.

Concentrations

- AI for Business Ventures (p. 2)
- AI for Finance (p. 2)
- AI for Healthcare (p. 2)
- AI for Human Resources (p. 2)

Electives

Code	Title	Hours
ALY 6140	Python and Analytics Systems Technology	
CMN 6000	Introduction to Organizational Communication	
EAI 6080	Advanced Analytical Utilization	
GIS 5201	Advanced Spatial Analysis	
GIS 6360	Spatial Databases	
LDR 6135	Ethical Leadership	
PJM 6005	Project Scope Management	

PJM 6015	Project Risk Management
PJM 6205	Leading and Managing Technical Projects

Program Credit/GPA Requirements

45 total quarter hours required
Minimum 3.000 GPA required

Concentrations

AI FOR BUSINESS VENTURES

Code	Title	Hours
ALY 6040	Data Mining Applications	3
CED 6230	Quantitative Methods	3
EAI 6080	Advanced Analytical Utilization	3
EAI 6120	AI Communication and Visualization	3
ITC 6015	Enterprise Information Architecture	3

AI FOR FINANCE

Code	Title	Hours
ALY 6040	Data Mining Applications	3
EAI 6050	Finance Information Processing	3
EAI 6080	Advanced Analytical Utilization	3
EAI 6120	AI Communication and Visualization	3
FIN 6101	Accounting Fundamentals for Financial Institutions	3

AI FOR HEALTHCARE

Code	Title	Hours
ALY 6040	Data Mining Applications	3
ALY 6150	Healthcare/Pharmaceutical Data and Applications	3
EAI 6060	Healthcare Information Processing	3
EAI 6080	Advanced Analytical Utilization	3
EAI 6120	AI Communication and Visualization	3

AI FOR HUMAN RESOURCES

Code	Title	Hours
ALY 6040	Data Mining Applications	3
ALY 6120	Leadership in Analytics	3
EAI 6070	Human Resources Information Processing	3
EAI 6120	AI Communication and Visualization	3
HRM 6025	Workforce Analytics	3