Applied AI, MPS (Boston)

Humankind is on the threshold of a new era—an age of artificial intelligence as revolutionary in its global impact as the Industrial Revolution. The Master of Professional Studies in Applied AI program offers working professionals operational immersion and firsthand experiences with an end-to-end AI education that aims to prepare students proactively and thoughtfully for the evolving technology landscape and its challenges. The curriculum focuses on building and implementing AI and machine learning technologies, specializing in conversational AI, machine learning for cybersecurity, 3D imaging, and various electives. This comprehensive approach ensures that students are equipped with the skills and knowledge needed to stay ahead in the rapidly changing field of AI.

For the 2025–2026 academic year, the MPS Applied AI program is being offered as a collaboration between the College of Professional Studies and the Office of the Provost. During this period, students will follow Northeastern University's Graduate Academic Calendar and be governed by the academic policies and procedures documented in the university's Graduate Catalog (https://catalog.northeastern.edu/graduate/academic-policies-procedures/).

During the time a student is designated under the Office of the Provost, the College of Professional Studies will provide each student with full academic and student support services (e.g., academic advising services, co-op and career advising services, International Tutoring Center, etc.).

Beginning in the 2026–2027 academic year, students enrolled in the MPS Applied AI program will transition to the College of Professional Studies, and their official college designation will be updated accordingly in the academic system of record. At that time, students will be governed by the academic policies and procedures documented in the university's Graduate Catalog (https://catalog.northeastern.edu/graduate/professional-studies/), specifically relating to the College of Professional Studies.

Program Requirements

Core Courses

Code	Title	Hours
Complete the following:		
AAI 6600	Applied Artificial Intelligence	3
AAI 6610	Applied Machine Learning	3
AAI 6620	Applied Natural Language Processing	3
AAI 6630	Applied Computer Vision	3
Restricted Electives		
Complete six semester hours from the following:		6
AAI 6640	Applied Deep Learning	
AAI 6650	Recommender System	
AAI 6655	Prompt Engineering	
AAI 6665	Generative Artificial Intelligence	
AAI 6740	Applied Reinforcement Learning	
AAI 6790	Applied Quantum AI	
AAI 6850	Applied Blockchain AI	
AAI 6900	AI for Autonomous Systems	
AAI 6983	Special Research Topics in AI	
Capstone		
AAI 6980	Integrated Experiential Capstone	4

Concentration or Electives Option

A concentration is not required. Students may complete the electives option in lieu of a concentration.

- AI for 3D Imaging (p. 2)
- Conversational AI and Chatbots (p. 2)
- Machine Learning for Cybersecurity (p. 2)
- Electives Option (p. 2)

Program Credit/GPA Requirements

34 total semester hours required
Minimum 3.000 GPA required

AI FOR 3D IMAGING CONCENTRATION

Code	Title	Hours
Complete the following:		
AAI 6710	Graph Signal Processing	3
AAI 6720	Graph Neural Networks	3
AAI 6730	Deep Learning for 3D Point Cloud Analysis	3
Complete one of the following:		3
AAI 6640	Applied Deep Learning	
AAI 6650	Recommender System	
AAI 6665	Generative Artificial Intelligence	
AAI 6740	Applied Reinforcement Learning	
AAI 6790	Applied Quantum AI	
AAI 6850	Applied Blockchain AI	
AAI 6900	AI for Autonomous Systems	

CONVERSATIONAL AI AND CHATBOTS CONCENTRATION

Code	Title	Hours
Complete the following:		
AAI 6660	Chatbot Architecture	3
AAI 6670	Chatbot Application	3
Complete two of the following		6
AAI 6640	Applied Deep Learning	
AAI 6650	Recommender System	
AAI 6655	Prompt Engineering	
AAI 6665	Generative Artificial Intelligence	
AAI 6740	Applied Reinforcement Learning	
AAI 6790	Applied Quantum AI	
AAI 6850	Applied Blockchain AI	
AAI 6900	AI for Autonomous Systems	

MACHINE LEARNING FOR CYBERSECURITY CONCENTRATION

Code	Title	Hours
Complete the following:		
AAI 6680	AI for Cybersecurity	3
AAI 6690	Machine Learning for Cyberdetection	3
Complete two of the following:		6
AAI 6640	Applied Deep Learning	
AAI 6650	Recommender System	
AAI 6665	Generative Artificial Intelligence	
AAI 6740	Applied Reinforcement Learning	
AAI 6790	Applied Quantum AI	
AAI 6850	Applied Blockchain AI	
AAI 6900	AI for Autonomous Systems	

ELECTIVES OPTION

Code	Title	Hours
Complete any College of Professional Studies graduate-level courses, unused courses in this program, or a combination of both in lieu of a concentration to meet total program required semester hours.		

Optional Experiential Learning Opportunities

The College of Professional Studies encourages its students to incorporate optional experiential learning opportunities in their academic plans.

Code	Title	Hours
Co-op		
This option requires 1 additional semester hour of credit and tuition in addition to this program's required credit hours.		
INT 6200	Experiential Project Preparation	1
COP 6945	Co-op Work Experience—Full Time	0

or COP 6946	Global Co-op Work Experience—Full Time	
or COP 6954	Co-op Work Experience - Half-Time	
Integrative Experiential Learning		
This option substitutes for 3 semester hours of restricted elective credits in programs that require at least 3 semester hours of restricted elective credits. If the student has already completed the program's restricted electives or the program does not have an elective requirement, this option requires 3 additional hours of credit and tuition in addition to this program's required credit hours.		
INT 6943	Integrative Experiential Learning	3