MASTER OF SCIENCE IN THE FIELD OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

The master of science in Artificial Intelligence and Machine Learning, offered by the Department of Computer Science, prepares students to meet the rapidly growing demand for expertise in areas such as AI, generative AI, machine learning, natural language processing, and computer vision. The curriculum offers deep, focused preparation in modern AI methods, supported by essential grounding in core computer science, as well as coursework in related disciplines. Students learn from research-active faculty, may enroll in advanced courses alongside Ph.D. students, and benefit from evening class options that support working professionals. Both thesis and non-thesis options are available.

REQUIREMENTS

The following requirements must be fulfilled: Non-Thesis option—30 credits, including 12 credits in required courses and 18 credits in elective courses. Thesis option—30 credits, including 12 credits in required courses and 12 credits in elective courses, and 6 credits in thesis.

At least 24 of the 30 credits must be taken at the 6000 level or above. At least 24 of the 30 credits must be taken in the Department of Computer Science.

Code	Title	Credits
Required		
CSCI 6212	Design and Analysis of Algorithms	
CSCI 6364	Machine Learning	
CSCI 6366	Neural Networks and Deep Learning	
CSCI 6510	Trustworthy AI	
Electives		
CSCI 6365	Advanced Machine Learning	
CSCI 6511	Artificial Intelligence	
CSCI 6513	Natural Language Processing	
CSCI 6514	Large Language Models	
CSCI 6527	Introduction to Computer Vision	
CSCI 6443	Data Mining	
CSCI 6444	Introduction to Big Data and Analytics	
ECE 6882	Reinforcement Learning	
BME 6830	Introduction to Medical Imaging Methods	
BME 6840	Digital Image Processing	

Additional electives for non-thesis option

Non-thesis students take two additional elective courses (6 credits). These can be any CSCI courses numbered 6200 and above, graduate-credit-bearing courses from math, statistics, neuroscience, physics, or any SEAS departments, subject to approval of the faculty advisor.A non-thesis option student can take up to two CSCI 6908 Research courses.

Thesis Option

A thesis option student may not take CSCI 6908 Research course but instead must take CSCI 6998 Thesis research and CSCI 6999 Thesis Research

This program can be used with the BA+MS or BA+MS (4+1) program, where up to two classes may be double-counted between the BA/BS and the MS, and where the BS/BA can be in any major in SEAS

Scholarship requirements:

At least a 3.0 GPA overall. A student who receives two or more grades of F will be dismissed from the program. A student who receives three or more grades below B- will be dismissed from the program.