

ARTIFICIAL INTELLIGENCE, POST-BACCALAUREATE CERTIFICATE

Credential: Certificate

Field of Study: Artificial Intelligence

Program Overview

The post-baccalaureate certificate in artificial intelligence provides an official and transcriptable recognition of successful completion of study in the field of artificial intelligence. The certificate can be awarded to current CWRU graduate students and other students who apply to this certificate program.

Admission

Graduate students shall be admitted to the certificate program upon recommendation of the faculty of the CS program. Requirements for admission include a strong record of scholarship in a completed bachelor's degree program in artificial intelligence, computer science, or related areas, and fluency in written and spoken English.

The program requires applicants to have the background necessary to take advanced courses in Artificial Intelligence. Students should have knowledge equivalent to that in the courses:

Code	Title	Credit Hours
CSDS 233	Introduction to Data Structures	4
MATH 122	Calculus for Science and Engineering II	4
or MATH 126	Math and Calculus Applications for Life, Managerial, and Social Sci II	
MATH 307	Linear Algebra	3
or MATH 201	Introduction to Linear Algebra for Applications	
MATH 380	Introduction to Probability	3-6
or STAT 301 & STAT 302	Introduction to Probability for Statistics and Introduction to Statistical Inference	

Learning Outcomes

- Analyze a complex computing problem and to apply principles of artificial intelligence, computing, and other relevant disciplines to identify solutions.
- Design, implement, and evaluate an artificial intelligence-based solution to meet a given set of requirements.
- Function effectively as a member or leader of a team engaged in activities appropriate to the discipline of artificial intelligence.

Graduate Policies

For graduate policies and procedures, please review the [School of Graduate Studies](#) section of the General Bulletin.

Program Requirements

Students must pass at least five courses from the following list. At most

two courses can be at the 300-level.

Code	Title	Credit Hours
CSDS 323	Numerical Algorithms for Machine Learning	3
CSDS 330	Introduction to Artificial Intelligence	3
CSDS 340	Introduction to Machine Learning	3
CSDS 440	Machine Learning	3
CSDS 443	Algorithmic Fairness	3
CSDS 446	Machine Learning on Graphs	3
CSDS 447	Responsible AI Engineering	3
CSDS 452	Causality and Machine Learning	3
CSDS 463	AI in Medical Imaging	3
CSDS 464	Computational Perception	3
CSDS 465	Computer Vision	3
CSDS 491	Probabilistic Models in AI	3
CSDS 496	Sequential Decision Making	3
CSDS 497	Foundations of Statistical Natural Language Processing	3
CSDS 570	Deep Generative Models	3