

Computer Science with Artificial Intelligence (MS)

This program is offered by the George Herbert Walker School of Business and Technology. It is offered at the St. Louis main campus.

STEM program

Program Description

Artificial Intelligence (AI) is a rapidly-evolving branch of Computer Science. Developing ways for computers to intelligently solve problems, and make effective decisions is highly beneficial in multiple areas. A Master in Computer Science with Artificial Intelligence will provide a foundation for this activity.

Learning Outcomes

Upon the completion of the program, students will be able to:

- Demonstrate mastery of computer science in the following core knowledge areas:
 - Software development
 - Algorithms and data structures
 - Computer organization, hardware and architecture
 - Data and information management
 - Parallel Programming
- Explain the fundamental aspects of Artificial Intelligence and the potential benefits to companies and organizations.
- Utilize a programming language to manage Artificial Intelligence requirements.
- Develop Machine Learning techniques and algorithms to resolve Artificial Intelligence problems in different areas of industry.

Program Curriculum

The 36 credit hours required for the MS in computer science with artificial intelligence include the required core courses

- COSC 5010 Software Engineering I (3 hours)
- COSC 5020 Software Engineering II (3 hours)
- COSC 5070 Advanced Computer Algorithms (3 hours)
- COSC 5160 Parallel and Distribute Computing (3 hours)
- CSSS 5100 Secure Software Design and Threat Analysis (3 hours)
- COSC 5060 Systems Concepts (3 hours)
- COSC 5080 Advanced Operating Systems (3 hours)
- COSC 5140 Network Design and Management (3 hours)
- CSDA 5210 Databases and Data Warehouses (3 hours)
- CSAI 5210 Artificial Intelligence with Python (3 hours)
- CSAI 5220 Machine Learning (3 hours)
- CSAI 5320 Deep Learning - Image, Video and Audio (3 hours)

Admission

See the Admission section of this catalog for general admission requirements. Students interested in applying must submit their application online at www.webster.edu/ apply. Transcripts should be sent from your institution electronically to transcripts@webster.edu. If this service is not available, send transcripts to:

Office of Admission
Webster University
470 E. Lockwood Ave.
St. Louis, MO 63119

Advancement to Candidacy

Students are admitted to their graduate program upon completion of all admission requirements. Students are advanced to candidacy status after successfully completing 12 credit hours with a cumulative GPA of 3.0 or higher. In specialized programs, courses required as prerequisites to the program do not count toward the 12 credit hours required for advancement.