UMSL is a NSA/DHS National Center of Academic Excellence in Cyber Defense Education

UMSL | Computer Science
University of Missouri–St. Louis

College of Arts and Sciences

Department of Computer Science

One University Boulevard
St. Louis, Missouri 63121-4400
Telephone: 314-516-5743
Fax: 314-516-5400

Graduate Certificate in Artificial Intelligence

The graduate certificate in Artificial Intelligence is a four-course (12 credit hours) program. It provides skills and training necessary to start and/or advance in the growing areas of AI, with a range of electives to focus more specifically in one's desired direction of study. All students must take two required courses and two electives, subject to the graduate school regulations.

A minimum of three courses must be taken from UMSL. A maximum of two courses can be used from the 4000-level. Courses may be substituted with the permission of the certificate coordinator. For more information, students can contact the department.

Required core courses		Availability
CMP SCI 5130	Advanced Data Structures and Algorithms	F
CMP SCI 5300	Artificial Intelligence	FP
Choose two electives		
CMP SCI 4610	Database Management Systems	F
CMP SCI 5151	Statistical Methods for Data Science	P
CMP SCI 5320	Evolutionary Computation	P
CMP SCI 5340	Machine Learning	FP
CMP SCI 5342	Data Mining	FP
CMP SCI 5370	Biological Data Science	F
CMP SCI 5390	Deep Learning	F
CMP SCI 5420	Digital Image Processing and Computer Vision	F
CMP SCI 6320	Advances in Evolutionary Computation	F
CMP SCI 6340	Genetic Programming	F
CMP SCI 6390	Interpretable Machine Learning	P
CMP SCI 6420	Image Processing and Computer Vision	P
Total courses (credit hours)		**4(12)**

For more info visit https://www.umsl.edu/cs/degrees-and-programs/certificates
Typical Availability: Summer (**S**), Fall (**F**), Spring (**P**)
Mode: Mostly Blended, some in class, some online.
For current course rotation visit https://www.umsl.edu/cmpsci/degrees-and-programs/graduate-studies/3yeacourse.html

V10/17/2025