

# Artificial Intelligence, Graduate Certificate

The graduate certificate in Artificial Intelligence is a ~~five-course~~ four-course (15 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 ~~three~~ two electives.

A minimum of ~~four~~ three courses must be taken ~~in residence in the Department Mathematics and Computer Science at~~ from UMSL. ~~A minimum of three courses must be at the 5000-level or higher.~~ A maximum of two courses can be used from the 4000-level. Courses may be substituted with the permission of the ~~program director~~ certificate coordinator. For more information, students can contact the department chair or email [info@arch.umsi.edu](mailto:info@arch.umsi.edu).

Required Courses		
CMP SCI 5130	Advanced Data Structures and Algorithms	3
CMP SCI 5300	Artificial Intelligence	3
Elective Courses		9 6
Choose <del>3</del> 2 of the following:		
CMP SCI 5320	Evolutionary Computation	
CMP SCI 5340	Machine Learning	
CMP SCI 5342	Data Mining	
CMP SCI 5370	Biological Data Science	
CMP SCI 5390	Deep Learning	
CMP SCI 5420	Digital Image Processing and Computer Vision	
CMP SCI 6320	Advances in Evolutionary Computation	
CMP SCI 6340	Genetic Programming	
Total Hours		15 12

Sign-offs from other departments affected by this proposal

Department	Contact Person	Phone #	Objections
S005150	Dinesh Mirchandani		No

Rationale                      Reducing required hours as determined sufficient.