

# Artificial Intelligence Undergraduate Certificate

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The undergraduate certificate in Artificial Intelligence is a five-course (15 credit hour) program. It provides skills and training necessary to start or progress in the growing areas of AI, with a range of electives to focus more specifically in one's desired direction of study. A minimum GPA of 2.5 is required for admission.

A minimum of three courses must be taken from UMSL. Courses may be substituted with the permission of the certificate coordinator. For more information, students can contact the department chair or email [info@arch.edu](mailto:info@arch.edu).

## Required Courses

CMP SCI 3130	Design and Analysis of Algorithms	3
CMP SCI 4300	Introduction to Artificial Intelligence	3

## Electives

Choose three of the following courses: 9

CMP SCI 4151	Introduction to Statistical Methods for Data Science
CMP SCI 4320	Introduction to Evolutionary Computation
CMP SCI 4340	Introduction to Machine Learning
CMP SCI 4342	Introduction to Data Mining
CMP SCI 4370	Introduction to Biological Data Science
CMP SCI 4390	Introduction to Deep Learning
CMP SCI 4420	Introduction to Digital Image Processing and Computer Vision
CMP SCI 4610	Database Management Systems

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**Total Hours** 15