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## Artificial Intelligence Undergraduate Certificate

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.

## **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<br>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                                  |    |
| Total Hours                   |  | 15 |