

ARTIFICIAL INTELLIGENCE CERTIFICATE

The objective of the certificate in artificial intelligence is to expose students to the principles and technologies used to embody machines with human-like intelligent capabilities and to enable the machines to assist humans in performing complex and hazardous tasks. Students completing this certificate program have an opportunity to learn as well as perform hands-on experiments in different areas of artificial intelligence, including automated software systems such as software agents, multi-agent and multi-robot systems, machine vision and image processing technologies, neural network-based adaptive software systems, heuristics and stochastic optimization techniques for critical decision making, and machine learning and knowledge engineering techniques that embed intelligence in computers and information systems.

Program Related Information

Program Contact

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Program Website (<https://www.unomaha.edu/college-of-information-science-and-technology/computer-science/prospective-students/graduate-programs.php>)

Admissions

General Application Requirements and Admission Criteria (<http://catalog.unomaha.edu/graduate/admission/>)

Application Deadlines

- Spring 2026: November 1
- Summer 2026: March 1
- Fall 2026: July 1

Other Requirements

- **English Language Proficiency:** Applicants are required to have a command of oral and written English. Those who do not hold a baccalaureate or other advanced degree from the United States, **OR** a baccalaureate or other advanced degree from a predetermined country on the waiver list, must meet the minimum language proficiency score requirement in order to be considered for admission.
 - Internet-based TOEFL: 80, IELTS: 6.5, PTE: 53, Duolingo: 110
- **Resume:** Submit a resume detailing your work experience and background (if applicable)

Degree Requirements

Provisional Admission

Students who have not taken an undergraduate data structures course with a grade of "B-" or better must do so before they will be allowed to continue in the program.

| Code | Title | Credits |
|--------------------------------|---|-----------|
| CSCI 2030 | MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE | 3 |
| CSCI 3320/8325 | DATA STRUCTURES (or equivalent) | 3 |
| CSCI 3660 | THEORY OF COMPUTATION | 3 |
| Code | Title | Credits |
| Required Course | | |
| CSCI 8456 | PRINCIPLES OF ARTIFICIAL INTELLIGENCE | 3 |
| Electives | | |
| Select three of the following: | | 9 |
| CSCI 8110 | ADVANCED TOPICS IN ARTIFICIAL INTELLIGENCE | |
| CSCI 8300 | IMAGE PROCESSING AND COMPUTER VISION | |
| CSCI 8450 | ADVANCED TOPICS IN NATURAL LANGUAGE UNDERSTANDING | |
| CSCI 8476 | PATTERN RECOGNITION | |
| CSCI 8480 | MULTI-AGENT SYSTEMS AND GAME THEORY | |
| CSCI 8486 | ALGORITHMS FOR ROBOTICS | |
| CSCI 8590 | FUNDAMENTALS OF DEEP LEARNING | |
| Total Credits | | 12 |

Completion of the Certificate

During what is expected to be the semester the certificate is completed and prior to the posted deadline, students should apply for the certificate through MavLINK on or before the deadline. If you complete the application form and do not complete all of the requirements for the certificate, contact the Office of Graduate Studies as soon as possible. You must reapply during the next semester in which you expect to complete the certificate; no additional fee is charged to reactivate your application.

The following requirements are due 12 working days prior to commencement:

- "Incomplete" and "NR" grades from previous terms must be removed so that the grade will be in the Office of Graduate Studies.
- All fees, fines, and other obligations due the university must be settled.

For students currently enrolled in courses that are a part of their plan of study, enrollment must be maintained in order to complete the certificate. A grade for any current enrollment must be received by the Registrar's Office no later than the close of business on the fifteenth working day following the end of a semester.

Awarding of Graduate Certificates

The Office of Graduate Studies will mail the certificate to students when all requirements are completed and all obligations to the university are satisfied. The Graduate College will not approve any changes in the student's permanent record once the certificate is awarded.