SYSTEMS AND ARCHITECTURE CERTIFICATE

This certificate provides students with knowledge in the underlying architecture of computers. Students may choose either the hardware track or the software track. In the hardware track, students gain more in-depth knowledge of the field. Students in this track will develop skills to perform system and component design, quality assurance, and testing. In the software track, knowledge in the underlying architecture helps in generating and understanding optimized software. Students in this track will develop skills that will help them perform systems programming, language processing, and system administration.

Program Related Information

Program Contact

Michelle Perone, Graduate Advisor
402.554.3819
mperone@unomaha.edu

Program Website (https://www.unomaha.edu/college-of-information-science-and-technology/academics/degrees-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 U.S., **OR** a baccalaureate or other advanced degree from a pre-determined 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 detailed resume highlighting your work experience and background (if applicable).

Degree Requirements

Hardware Track

Code	Title	Credits
Prerequisite Courses		
CSCI 3320/8325	DATA STRUCTURES	3
CSCI 3710	INTRODUCTION TO DIGITAL DESIGN AND COMPUTER ORGANIZATION	3
CSCI 4350	COMPUTER ARCHITECTURE	3

Code	Title	Credits
Required Courses		
If a required course is waived, it must be replaced with another course from the electives below.		
CSCI 8150	ADVANCED COMPUTER ARCHITECTURE	3
CSCI 8530	ADVANCED OPERATING SYSTEMS	3
Elective Courses		
Select two of the following:		6
CSCI 8160	INTRODUCTION TO VLSI DESIGN	
CSCI 8446	INTRODUCTION TO PARALLEL COMPUTING	
CSCI 8610	FAULT TOLERANT DISTRIBUTED SYSTEMS	
CSCI 8626	3D COMPUTER GRAPHICS	
Total Credits		**12**

Software Track

Code	Title	Credits
Prerequisite Courses		
CSCI 3320/8325	DATA STRUCTURES	3
CSCI 4220	PRINCIPLES OF PROGRAMMING LANGUAGES	3
CSCI 8506/4500	OPERATING SYSTEMS	3

Code	Title	Credits
Required Courses		
If a required course is waived, it must be replaced with another course from the electives below.		
CSCI 8150	ADVANCED COMPUTER ARCHITECTURE	3
CSCI 8530	ADVANCED OPERATING SYSTEMS	3
Elective Courses		
Select two of the following:		6
CSCI 8446	INTRODUCTION TO PARALLEL COMPUTING	
CSCI 8706	COMPILER CONSTRUCTION	
CSCI 8610	FAULT TOLERANT DISTRIBUTED SYSTEMS	
CSCI 8626	3D COMPUTER GRAPHICS	
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. Information can be found here (http://www.ses.unomaha.edu/registrar/graduate.php). 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.