

Computer Science Minors

Students interested in a minor should contact the CIS department for an application and admission requirements. The department offers three different minors, each with the emphasis indicated. Each requires credits as specified below.

Admission to one of the minors

Students must meet the university's admission requirements for a minor, which include having completed 54 credits. For computer science, prospective minors are encouraged to inquire and plan their minor program prior to earning 54 credits, because the structure of requirements could necessitate the use of more than four semesters. Courses completed prior to formal declaration will count toward the minor program

Admission to the minor is accomplished through an application form available in the office of the chairperson of the department accompanied by the current transcript(s). Upon acceptance the student is assigned an advisor, who works with the student to design an individual minor program that meets the stated requirements. Study plans are to be approved by the department chairperson.

Computer Science

Objectives

1. To develop in the student an understanding of computer science as discipline, its structure, methodologies, and trends.
2. To use the computer as a tool to solve problems.
3. To give the student a sufficient background in computer science to continue his/her study of the discipline independently.
4. To give students a sufficient knowledge in computer science to gain an advantage when entering the current job market.

Requirements

Complete the following courses with a grade of C or better:

CIS 180 Object-Oriented Programming (4)
CIS 181 Programming Paradigms (4)
CIS 280 Software Specification & Design (4)
CIS 360 Algorithms & Data Structures (3)
CIS 361 Models of Computation (3)
On additional 300/400 course (3)

Total Credits: 21

Students with prior experience in programming can substitute CIS 183 for the sequence of courses CIS 180/181. Students can substitute the sequence CIS 115 Computer Programming in C / CIS 215 Program Design and Data Structures for the sequence CIS 180 / 181.

Software Engineering

Objectives

1. To develop in the student the ability to use software development methodologies and software processes to participate in the design and implementation of software systems.
2. To teach the student how to design and implement software.
3. To give the student a sufficient background in software engineering to continue his/her study of the discipline independently.
4. To give students a sufficient knowledge in software engineering to gain an advantage when entering the current job market.

Requirements

Complete the following courses with a grade of C or better:

CIS 180 Object-Oriented Programming (4)
CIS 181 Programming Paradigms (4)
CIS 280 Software Specification & Design (4)
CIS 480 Software Engineering (4)
CIS 481 Parallel & Distributed Software Systems (3)
On additional 300/400 course (3)

Total Credits: 22

CIS 480 has a prerequisite CIS 362 Empirical Methods. Students without a knowledge of empirical methods equivalent to CIS 362 must take that prerequisite course.

Students with prior experience in programming can substitute CIS 183 Object Paradigm for the sequence of courses CIS 180/181.

System Software

Objectives

1. To develop in the student the ability to use computer systems and system software and participate in the design and implementation of operating systems and computer networks.
2. To give the student a sufficient background in systems software to continue his/her study of the discipline independently.

3. To give students a sufficient knowledge in operating software and computer networks to gain an advantage when entering the current job market.

Requirements

Complete the following courses with a grade of C or better:

- CIS 115 Computer Programming with C (3)
- CIS 215 Program Design / Data Structures with C (3)
- CIS 272 Intro. to Computing Systems (4)
- CIS 273 Computer Organization and Design (4)
- CIS 370 Design of Operating Systems (4)
- CIS 475 Computer Networks (3)
- On additional 300/400 course (3)

Total Credits: 24