

COMPUTER SCIENCE, M.S.

Program Description

The Master of Science in Computer Science (MSCS) degree is designed to provide students with the knowledge, skill, and professional practices needed to develop complex software systems. The program also prepares students who desire to pursue further graduate work leading to a Ph.D. degree.

Admission Requirements

Applicants should follow the admissions process as stated in the *Graduate Catalog* or the graduate admissions website. For full admission, a four-year Bachelor's degree with GPA of 2.75 or higher out of 4.0 in Computer Science, or related areas listed below is required.

- Computer Science
- Computer Engineering
- Information Technology
- Electrical Engineering
- Software Engineering

Applicants with a four-year bachelor's degree in a major not listed above may be admitted to the program with a condition of successful completion of the following three bridge courses with a grade of B or above in the first two semesters of the program:

- Data Structures and Algorithms (CS 210 Data Structures and Algorithms)
- Data Engineering (CS 410 Database Engineering)
- Applied Probability and Statistics (STA 345 Applied Prob and Stat)

Whether a student meets the above requirements will be determined by the division chair or designee based on the information provided in the admission application and transcripts. Foreign nationals must provide proof of English proficiency with a minimum score of 6.5 in IELTS or 80 on TOEFL IBT (or 550 paper based) and must have met all other admission criteria prior to registering for the first semester of courses.

Program Requirements

Degree Requirements

The MSCS degree requires 30 credit hours (CR) of graduate work. At least 18 CR must come from 600-level courses. The 30 CR is composed of the following components:

Thesis Option

As an elective course, the thesis option offers a student an opportunity for serious investigation into an area of interest. Students must summarize their thesis work in the form of a formal written document and deliver an oral presentation. Thesis work is typically conducted over two semesters (6 CR). Thesis can be taken only after the completion of 18 credits at the minimum. Please refer to Thesis Guideline in CS provided by your advisor for details.

Plan of Study

Code	Title	Credit Hours
Required CS Courses		
CS 510	Advanced Database Systems	3
CS 511	Advanced Programming	3
CS 515	Data Mining	3
CS 600	Advanced Web Technology	3
CS 620	Applied Algorithms	3
Elective Courses		
Select any 600-level courses in master's programs in the Division of 15 Computer Science or 500-level course with special permission by chair of the program.		
Total Credit Hours		30
Students are required to complete a Plan of Study form in consultation with their academic advisors before the students can begin their program of study. This is usually done the week before the first day of classes of first semester.		
Course	Title	Credit Hours
First Year		
First Semester		
CS 510	Advanced Database Systems	3
CS 511	Advanced Programming	3
CS Elective 1		3
Credit Hours		9
Second Semester		
CS 515	Data Mining	3
CS 600	Advanced Web Technology	3
CS Elective 2		3
Credit Hours		9
Third Semester		
CS 620	Applied Algorithms	3
Select one of the following:		3
CS Elective 3		
CS 681	Thesis	
CS Elective 4		3
Credit Hours		9
Fourth Semester		
Select one of the following:		3
CS Elective 5		
Credit Hours		3
Total Credit Hours		30