COMPUTER SCIENCE, M.S. (ONLINE)

Successful applicants typically have a bachelor's degree in computer science or a closely related field from a regionally accredited institution. Successful completion of calculus II and linear algebra is a standard requirement for admission. Applicants with a bachelor's degree in a computational STEM discipline, defined as a degree in computer science, math, physics, engineering, chemistry, or statistics, must have maintained a minimum 3.0 major GPA. Applicants with a bachelor's degree in a non-computational STEM discipline must have maintained a minimum 3.0 GPA in computational STEM courses, defined as courses in computer science, math, physics, engineering, chemistry, and statistics. Applicants should have knowledge of algorithms, database, and operating systems. Students must be proficient in a high-level, object-oriented programming language such as Python, C, C++, C#, or Java. For applicants without a bachelor's degree in computer science, a passing grade on a programming exam administered by the program may be required. Applicants must submit three letters of recommendation and a resume. For those applying with less than the standard preparation, the quality and adequacy of the admissions record will be evaluated by the Graduate Committee of the Department of Computer Science or its designee after reviewing the application for admission. Leveling requirements which must be met before admission will be determined by that committee or its designee. These requirements will be in addition to requirements for the M.S. degree. Leveling requirements (i.e. foundation courses) award Credit or No Credit upon completion and do not affect grade point average. In order to receive Credit for a foundation course, students must receive an 80% or higher. Applications will be accepted on a year-round rolling basis. Admission is selective, and meeting the above criteria does not guarantee admittance.

Courses are fifteen weeks with fall, spring, and summer intakes. The program is a total of 30 hours if no prerequisites are needed, or 45 hours with all foundation courses. The core consists of 18 hours, 5 courses chosen from CSI 5310, CSI 5350, CSI 5321, CSI 5324, CSI 5328, and CSI 5335, and the last course may be one additional core course or one course from CSI 5361, CSI 5355, CSI 5357, or CSI 5352. For students without prior undergraduate coursework in Data Communications or Operating Systems, CSI 5304 or CSI 5305 may be taken. All students must take CSI 5310 and CSI 5350; they may not be waived.

Students advised to take CSI 5305, Foundations of Operating Systems, by default, will (1) take the course to satisfy their 6th core class requirement (2) be graded on the standard grading mode, and (3) acknowledge that they have consulted with their Student Success Advisor about the impact it may have on their degree plan, academic standing, and funding eligibility. Students need to receive an 80% or higher for the course to satisfy their 6th core class requirement. Implications and more language are available in the student orientation course. Students will not be able to change the grade mode back to Credit/No Credit or select another course for this opportunity (if applicable). It is the student's responsibility to notify the program of a decision to opt out of this opportunity. They must email their Student Success Advisor, in writing, no later than the add deadline (usually the 5th day of class). Failure to properly notify the program may result in the student taking CSI 5305 as part of their core requirements, regardless of their decision. Alternately, students who are advised to take CSI 5304 and want to use that course as part of their core requirements must opt in by notifying their Student Success Advisor before the 5th class day, and agree, in writing, to similar language.

Requirements for Master of Science (Online)

Code	Title	Hours
Foundation Courses (Prerequisite Track)		**0-15**
CSI 5301	Foundations of Algorithms	
CSI 5302	Foundations of Database	
CSI 5303	Foundations of Software Engineering	
CSI 5304	Foundations of Data Communications	
CSI 5305	Foundations of Operating Systems	
CSI 5306	Foundations of Mathematics for Computer Science	
Core Courses		**18**
Select two courses from the following:		
CSI 5310	Introduction to Computation Theory	
CSI 5350	Advanced Algorithms	
Select three courses from the following:		
CSI 5321	Advanced Data Communications	
CSI 5324	Software Engineering (required for COSE track)	
CSI 5328	Applied Artificial Intelligence	
CSI 5335	Advanced Database	
Select one course from the following:		
CSI 5361	Cybersecurity Concepts	
CSI 5355	Data Mining and Analysis	
CSI 5357	Cloud Computing	
CSI 5352	Advanced Object-Oriented Development	
Core course not selected from the list above		
CSI 5304	Foundations of Data Communications (for students enrolled in Foundation courses)	
CSI 5305	Foundations of Operating Systems (for students enrolled in Foundation courses)	
Tracks		**12**

Students must pick a specialization from the two tracks: data science and software engineering. Each track consists of four courses totaling 12 hours.

Code	Title	Hours
Data Science (DASC)		
CSI 5351	Data Visualization	
CSI 5355	Data Mining and Analysis	
CSI 5357	Cloud Computing	
CSI 5358	Applied Data Science	
Software Engineering (COSE)		
CSI 5342	Software Verification and Validation	
CSI 5347	Distributed Systems	
CSI 5352	Advanced Object-Oriented Development	
CSI 5354	Advanced Software Engineering	
Total Hours		**30-45**