COMPUTER SCIENCE, M.S. - CYBERSECURITY

For further information: ComputerScienceGrad@southernct.edu

Application Deadline

Rolling admissions

The Master of Science degree in Computer Science prepares students for the challenges faced by professionals in the rapidly changing field of computer science, as well as for those planning to pursue advanced graduate study in the field of computing. The program provides students with foundations in computer science, along with state-of-the-art skills needed for its two areas of concentration namely, Software Development and Cybersecurity.

Departmental Admission Requirements

In addition to the admission requirements of the School of Graduate and Professional Studies found in the Application and Admissions section of this catalog, all applicants must also submit the following documents directly to the School of Graduate and Professional Studies:

• a one page statement indicating the candidate's academic background, area of interest and their career plans, and
• three letters of recommendation.

International applicants should refer to the Admission of International Students subsection of the Application and Admissions section of this catalog for the additional application requirements.

Candidates seeking admission are expected to have a bachelor's degree in any area of study with a minimum grade point average (GPA) of 3.0 (out of 4.0). Additionally, it is expected that all graduate candidates have the knowledge and skills of programming in a high level language (eg. Java, C++) through the topic of data structures. For those lacking this prerequisite, a 4-credit accelerated programming course (CSC 505: Computer Programming & Data Structures) is offered by the department on a regular basis.

No more than 9 credits of graduate level Computer Science related courses may be transferred from other institutions. Once the School of Graduate and Professional Studies has a completed application file with all required documents, the Graduate Coordinator of the Computer Science Department will arrange a personal interview with the applicant. During this interview, the candidate will draft a planned program of study in consultation with the Graduate Coordinator which will specify the selected area of concentration, the elective courses as well as the chosen capstone option (thesis
or special project). Upon final approval of the application and planned program by the School of Graduate and Professional Studies, those accepted into the program will receive a letter of acceptance from the School of Graduate and Professional Studies and a copy of the planned program verifying their status as a matriculated graduate student.

Program Sequence - 36 Credits

As sequencing changes, it is highly recommended that students meet with their program advisor to finalize a list of requirements for graduation.

The Master of Science degree in Computer Science is a 36-credit program in which all students must complete 30 credits of course work in addition to a 6-credit capstone requirement.

In the event that a candidate's previous academic record meets any of the required planned courses, the Graduate Coordinator may replace such courses with other courses in the program to meet the 36-credit requirement.

Below is a list of program requirements.

**Required Core Requirements (12 credits)**

- CSC 540 — Database Systems — 3 credits
- CSC 543 — Web Programming — 3 credits
- CSC 563 — Multithreaded Distributed Programming — 3 credits
- CSC 565 — Computer Networks — 3 credits

**Concentration Requirements (12 credits)**

All students must select one of the two areas of concentration offered by the department and complete all four courses in the selected area.

**Cybersecurity**

This cybersecurity concentration prepares students with a solid foundation in information assurance strategies and best practices along with the skills necessary to utilize various security tools to monitor networks and systems for security breaches, respond to cyberattacks, and gather data and evidence to be used in prosecuting cybercrime. Students will also gain experience in the cybersecurity tools and techniques used by hackers. Courses include:

- CSC 555 — Principles of Information Security — 3 credits
- CSC 558 — Network Security — 3 credits
- CSC 568 — Ethical Hacking and Penetration Testing — 3 credits
- CSC 578 — Secure Systems — 3 credits
Breadth Requirements (6 credits)

All students are required to complete a total of two additional non-core courses outside of their area of concentration to broaden their knowledge. These courses must be in Computer Science, and must be at the 520 level or higher.

Capstone Requirements (6 credits)

Students select one of two capstone options toward the end of their coursework, namely: the Master's Thesis (CSC 590/591) or a Special Project (CSC 590/ CSC 595) (3-Credits Each). A description of each of these capstone requirements can be found in the "Master 's Degree Requirements" description within the Academic Standards and Regulations section of this catalog.