

Computer Science MS

The M.S. degree in Computer Science has two different options to choose from, offering a wide range of career opportunities. In addition to the traditional option, we offer an option that allows students to incorporate a certificate, following specific interests, into this M.S. program. All graduates will have a broad computing background and will be exposed to a wide range of technologies. They will also be prepared for teamwork, independent research, and technical reporting and presentations. The program can be taken part-time or full-time and can be completed in the evening with many courses available online or in a hybrid format.

Admission Requirements

Applicants apply through and must meet the Graduate School requirements plus the following additional departmental GPA and foundation requirements. Those admitted, for whom we could not determine some foundations or with GPA deficiencies, can be admitted with restrictions - see the restrictions section.

Applicants with relevant full-time training and/or experience can apply for up to 6 proficiency transfer credits toward the degree in CMP SCI 5991 regardless of their undergraduate degree.

GPA

Applicants must have a minimum of a 3.0 (out of 4.0) GPA to be considered for admission. This can be an undergraduate GPA or some later GPA. Applicants with a GPA of 2.75-2.99 will be considered but must provide additional evidence, which can be a combination of GRE, reference letters, and/or relevant experience and should all be presented in the Statement of Intent. Applicants below 2.75 will only be considered if supplemented by lengthy related experience, as demonstrated in the Statement of Intent.

Foundations

Applicants will be evaluated for proficiency in the following areas. This can be prior coursework on transcripts or non-academic training/relevant experience. Applicants are advised to refer to these items below and offer relevant information in the Statement of Intent.

Computer Science

1. At least two different modern general-purpose programming languages.
2. Object-oriented programming, concepts, and terminology
3. Basic dynamic data structures such as strings, lists, stacks, queues, and trees
4. Design and analysis of algorithms
5. Mathematical foundation for computer science (discrete structures) with topics such as sets, logic, functions, and relations

Mathematics

1. A calculus course
2. A probability and statistics course

Restrictions

An applicant missing or not adequately demonstrating in the Letter of Intent some of the above requirements may be admitted on restricted status. The GPA restriction will be lifted after a successful semester.

The foundation restrictions may be lifted after the applicant provides the graduate director evidence of proficiency which can be transcripts or additional non-academic training, or otherwise the admitted student will have to pass appropriate undergraduate courses to lift the remaining restrictions.

Degree Requirements

Candidates for the M.S. degree in Computer Science must complete 30 credit hours of coursework in Computer Science (CMP SCI).

- Up to 6 credit hours of related coursework can be completed outside of CMP SCI, based on the student's interest with permission of the Graduate Director
- Up to 10 credit hours can be transferred into the program
- Up to 12 credits hours from 4000-level courses completed with at least a B- can be used in the program
- At least 3 credit hours must be at the 6000-level
- Students with relevant prior full-time training and/or experience of a minimum of one year can apply for up to 6 proficiency transfer credit hours in CMP SCI 5991

Core Courses

CMP SCI 4250	Programming Languages	3
CMP SCI 5130	Advanced Data Structures and Algorithms	3
CMP SCI 5500	Software Engineering	3
CMP SCI 5710	Modern Computing	3

Additional Requirements

CMP SCI 6000-level course	3-6
Electives ¹	12-15
Colloquia ²	0
Total Hours	30

¹ Electives can count towards graduate certificates.

² A student must attend at least five seminars or colloquia.

Students finding an internship/co-op opportunity can enroll in a credit course CMP SCI 5900 for up to 3 credit hours to be counted as an elective.