

Computer Science, MS

CIP Code

~~110201~~ 110701 - Computer ~~Programming/Programmer, General~~ Science.

Degree Requirements

Students choose one of the following options.

1. Traditional Computer Science option
2. Certificate option
3. Professional option

Students must complete the following common **requirements**, and additional specific requirements specific to the chosen option.

Candidates for the M.S. degree in Computer Science must complete 30 credit hours of course work in CMP SCI, subject to the Graduate School regulations. Up to 6 hours can be completed outside CMP SCI in a related field, based on student's interests, and with the permission of the Graduate Director. Up to ~~9~~ **graduate a third of the required** credit hours can be transferred into the program.

At least 18 credit hours must be numbered 5000 or above, and at least 3 credit hours must be at the 6000-level (research courses or thesis). All courses numbered below 5000 must be completed with a grade of at least B-.

All students must complete the following core courses

CMP SCI 4250	Programming Languages	3
CMP SCI 5130	Advanced Data Structures and Algorithms	3
CMP SCI 5500	Software Engineering	3
Total Hours		9

Students having prior similar courses may apply for a waiver if the course was passed at the undergraduate level (students will replace the core course with another) or credit if the course was passed at the graduate level. Students may also

request a waiver based on **a** demonstrated similar experience or a combination of courses and experience.

Students may choose to write an M.S. thesis under the direction of a faculty member in the Department of ~~Mathematics and~~ Computer Science (CMP SCI 6900). A student writing an M.S. thesis must defend the thesis in an oral exam administered by a committee of three department members which includes the thesis director.

Additionally, students must attend at least five different seminars or colloquium presentations in the department prior to applying for graduation.

Traditional Computer Science Option

This option allows students to complete a traditional computer science graduate program. In addition to the common core requirements, students must also complete the following courses as part of the minimum (?) 30 hours:

CMP SCI 4760	Operating Systems	3
CMP SCI 5700	Computer Systems	3

Certificate Option

This option is for students interested in a very specific area of study as indicated by a certificate. In addition to the common core requirements, students must complete any of the graduate certificates in the department as part of the minimum of 30 **credit** hours.

For a list of current certificates visit the Computer Science Department page in the University Bulletin **or visit the departmental list of current certificates.**

Professional Option

This option is for professionals who already have a bachelor's degree and have worked in a computing/technology field for a minimum of three years beyond graduation. It allows them to return to school for an advanced degree while utilizing some of their professional experience. Potential applicants should contact the program director for guidance on the assessment process and may get up to 6

credit hours for their relevant competencies. Each case will be reviewed individually.

Applicants must still satisfy all application and graduation requirements.

More Information

For further information about the degree, financial aid, and the regulations of the Graduate School, see our page on advanced degrees.

If other departments are affected by this proposal, please secure "sign-offs" and indicate for each department the following:

Department	Contact Person	Phone #	Objections
Information Systems	Dinesh Mirchandani		No

Justification for request:

This new option is aimed at a) our BS alumni to encourage them to come back for the MS, and b) the many people who transfer to IT roles on the job and have a bachelor degree. Applicants must still satisfy the same entry and graduation requirements as the other options. The experience credit hours are treated as transfer, and thus cannot be transferred out of UMSL and they combine with other transfers up to the established transfer limits. We also do not allow additional internship credit to these students (we allow internship only for true internships and coops and not for FT employment).

The assessment for the moment will be done by the graduate committee in person interviewing each applicant.