COMPUTER SCIENCE (M.S.)

The Department of Computer Science awards the degree of Master of Science with a major in computer science under two plans. The two plans are distinguished on the basis of the breadth and depth of the material covered. The Master of Science degree under the Plan A option is granted to students who pursue a more concentrated set of topics culminating in a master’s thesis. The Master of Science degree under the Plan C option offers students experience in many areas of computer science.

The great variety of subjects that are part of computer science, together with the immense diversity of their applications, makes it imperative that students in the master’s program maintain close contact with their advisors in order to achieve a coherent plan of study directed toward a specific goal. In particular, elections of courses should be made after consultation with and the approval of the student’s advisor.

Admission Requirements

Admission to these programs is contingent upon admission to the Graduate School (http://bulletins.wayne.edu/graduate/general-information/admission). In addition, applicants are expected to have attained a level of scholarship in the baccalaureate program equal to a grade point average of 3.0 or better, including adequate preparation in computer science and supporting courses in mathematics. Normally, the entering student will be expected to have fulfilled the equivalent of the requirements for the Bachelor of Science degree at Wayne State University and to have satisfied any deficiencies by successfully completing necessary prerequisite course work, before becoming an applicant for an advanced degree. The Graduate Record Examination (GRE) is required for admission to the Master of Science program.

Applicants must submit official transcripts from each college or university attended, three letters of recommendation, Graduate Record Examination scores, a statement of approximately 300 words describing the applicant’s academic and professional goals, and the Computer Science Graduate Admission Evaluation Form.

Students planning to pursue some of the more theoretical courses may find it necessary to have additional preparation in mathematics and/or computer science. The student should make a careful examination of the prerequisites for advanced courses in his/her areas of special interest before seeking admission. Prerequisite course work which is required as a condition of admission must be completed prior to enrolling graduate courses.

Upon admission, each student is assigned an advisor for guidance and direction in meeting degree requirements and academic goals. As the student’s interests in computer science become more focused, a change in advisor may be necessary; forms for this purpose are available from the Department office. Such a change must be done prior to submitting the Plan of Work.

Candidacy: By the time twelve credits have been earned, a Plan of Work must be developed with the student’s advisor and submitted to the Chairperson of the Computer Science Graduate Committee. In the Plan of Work the student indicates his/her choice of master’s program, either Plan A or C (see below). Upon approval of the Plan of Work by the Graduate Committee, the student is considered a degree candidate. The student is not permitted to take more than twelve credits in the master’s program unless candidacy has been established. If the student has not graduated after two years as a candidate, the Plan of Work will be reviewed for possible adjustment.

Scholarship/Academic Probation: Students must maintain a minimum overall 3.0 grade point average. Failure to do so for one semester places the student on academic probation. Failure to do so for two semesters will result in the student’s dismissal from the graduate program. All course work must be completed in accordance with the regulations of the Graduate School (http://bulletins.wayne.edu/graduate/general-information/academic-regulations) and the College of Engineering (http://bulletins.wayne.edu/graduate/college-engineering/academic-regulations). The above requirements are those in force as of the publication date of this bulletin; however, students should keep in mind that the degree requirements for any particular student are those in force at the time of his/her admission.

Areas of Research


Data Science and Analytics: Databases, Machine Learning, Computer Graphics & Visualization

Artificial Intelligence

Pattern Recognition and Computer Vision

Software Engineering

Bioinformatics and Health Informatics

Degree Requirements

The Master of Science degree is offered under either Plan A or Plan C. Plan A requires thirty-three credits and includes eight credits for the completion of a thesis. A thesis is a technical paper describing the original creative work of the author. The master’s thesis work is directed by the student’s advisor together with a committee of at least two additional faculty members. All committee members must read and approve the thesis, after which time it must be presented at a public session prior to final acceptance. The thesis must conform to the Graduate School’s specifications on format and presentation (http://bulletins.wayne.edu/graduate/general-information/degree-certificate-requirements/#mastersdegreeext). Plan C requires thirty-three credits in course work. There is no thesis required for the Plan C Master’s degree.

Course Requirements and Restrictions for Plan A

CSC 6500 Theory of Languages and Automata 3
CSC 6580 Design and Analysis of Algorithms 3
CSC 8990 Graduate Seminar 1
Select at least one course that must be taken at or above the 7000 level 1 3
CSC 8999 Master’s Thesis Research and Direction 8

No more than three credits of CSC 7990, Directed Study, can be used to satisfy the degree requirements.

A student must have prior written consent of their advisor and the Graduate Committee Chair before registering for any course outside of the department.
At least twenty-five credits must be taken in residence.

**Course Requirements and Restrictions for Plan C**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 6500</td>
<td>Theory of Languages and Automata</td>
<td>3</td>
</tr>
<tr>
<td>CSC 6580</td>
<td>Design and Analysis of Algorithms</td>
<td>3</td>
</tr>
<tr>
<td>CSC 8990</td>
<td>Graduate Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

Select at least one course must be taken at or above the 700 level

1  CSC 7990 does not satisfy the 7000 level requirement.

All credits must be taken from CSC designated courses.

At least twenty-five credits must be taken in residence.