MASTER OF SCIENCE IN THE FIELD OF COMPUTER SCIENCE

Program Overview

The department of computer science offers a graduate degree program leading to the master of science in the field of computer science. After completing core requirements, students select electives in subject areas such as computer security and information assurance, database and information retrieval systems, software engineering and systems, biomedical computing, digital media and computer graphics, networking and mobile computing, computer architecture, pervasive computing and embedded systems, machine intelligence, robotics, and algorithms and theory. Students may choose to take elective courses within the field of computer science from a variety of subject areas or focused in a particular area. Both thesis and non-thesis options are available.

Visit the program website (http://www.cs.seas.gwu.edu/master-science-computer-science) for additional information.

Prerequisites:

In addition to the entrance requirements, students are expected to be adequately prepared in the basic physical sciences and in mathematics (one year each of university laboratory science and of math beyond precalculus). Students are also expected to have taken a course in computer programming using a structured language, as well as CSCI 1112 Algorithms and Data Structures, CSCI 1311 Discrete Structures I, and CSCI 2461 Computer Architecture I, or their equivalents.

Educational Planner:

In consultation with an academic advisor, each student must develop an Educational Planner through DegreeMAP that governs the student’s degree requirements. The Educational Planner should be established soon after matriculation and must be completed before the end of the student’s first semester. The Educational Planner must be approved by the advisor.

REQUIREMENTS

The following requirements must be fulfilled: Thesis option—30 credits, including 9 credits in required courses and 15 credits in elective courses, and 6 credits in thesis; non-thesis option—30 credits, including 9 credits in required courses and 21 credits in elective courses.

At least 24 of the 30 credits required for the degree must be taken at the 6000 level or above. As a general rule, any course taken below the 6000 level must be a CSCI course and must be eligible to be taken for graduate credit according to the course description in this Bulletin. Any course below the 6000 level must receive the prior written approval of the student’s faculty advisor.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 6212</td>
<td>Design and Analysis of Algorithms</td>
<td></td>
</tr>
<tr>
<td>CSCI 6221</td>
<td>Advanced Software Paradigms</td>
<td></td>
</tr>
<tr>
<td>CSCI 6461</td>
<td>Computer System Architecture</td>
<td></td>
</tr>
</tbody>
</table>

Electives

Students pursuing the thesis option take 15 credits and students pursuing the non-thesis option take 21 credits in elective computer science (CSCI) courses offered for graduate credit. Unless a student’s admission letter states that they are required to take CSCI 6010 and CSCI 6011, students may take up to 6 of these credits in non-CSCI courses with the prior written approval of their advisor. Students who are required to take CSCI 6010 and CSCI 6011 cannot take any non-CSCI courses as part of their program requirements. Such students are strongly encouraged to take these two courses in their first semester.

Thesis

Students pursuing the thesis option take the following:* CSCI 6998 Thesis Research, CSCI 6999 Thesis Research

* See additional information regarding regulations for the master thesis (http://bulletin.gwu.edu/engineering-applied-science/#thesis).

Dual MS in the field of computer science and MS in the field of cybersecurity in computer science degree:

Students who complete the master of science in the field of computer science or the master of science in the field of cybersecurity in computer science and who subsequently wish to pursue the other degree as part of a dual degree program may count the following core courses towards both degrees.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 6212</td>
<td>Design and Analysis of Algorithms</td>
<td></td>
</tr>
<tr>
<td>CSCI 6221</td>
<td>Advanced Software Paradigms</td>
<td></td>
</tr>
<tr>
<td>CSCI 6461</td>
<td>Computer System Architecture</td>
<td></td>
</tr>
</tbody>
</table>