Computer Science

Master of Science
Graduate Certificates – 2
Bachelor of Science in Computer Science
Undergraduate Minor

csc.uis.edu/
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Office Phone: (217) 206-6770
Office Location: UHB 3100

The Master’s Degree

The M.S. degree in Computer Science is offered in an on-campus and an online format. The online Computer Science graduate curriculum has the same requirements as the on-campus curriculum, allowing students to actively participate in dynamic, diverse, and interactive online learning communities and to complete their degrees on their own time via the Internet. The online format enables them to complete course work using the latest networked information technologies for increased interaction with educational resources, advisors, and materials. Applicants to the online M.S. degree are accepted in fall, spring and summer semesters. The Computer Science Department at its own discretion may consider accepting students under conditional admission, thereby allowing students whose baccalaureate degrees are in disciplines other than Computer Science to complete program entrance requirements. A placement exam measuring programming skills and knowledge of Java is required for all conditionally admitted students. The exam will be administered during the first week of the semester and will determine if students will be required to take CSC 501.

Advising

On acceptance, students are assigned a member of the Computer Science faculty to serve as their academic advisor. Before registering for the first time, the student should discuss an appropriate course of study with the academic advisor.

Grading Policy

Students must earn a grade of B- or better in all courses that apply toward the degree, and a cumulative 3.0 grade point average is required to graduate. In addition, graduate students who do not maintain a 3.0 grade point average will be placed on academic probation according to campus policy. Graduate students enrolled in 400-level courses should expect more stringent grading standards and/or additional assignments. Courses taken on a CR/NC basis will not count toward the degree.

Transfer Courses

Transfer hours for the Computer Science MS are limited to a minimum and maximum of four graduate semester hours with a grade of B or better. They will be evaluated on a case-by-case basis and approved by Student Petition. Transferred hours will be counted in the 12 hours of 400 and above electives. Transfer students will be required to take a minimum of 16 hours of 500 level elective course work at UIS.

NOTE: Students also should refer to the campus policy on Grades Acceptable Toward Master’s Degrees section of this catalog.

Degree Requirements

Prerequisite Courses

Applicants are expected to have completed a program of study similar to that required for a bachelor’s degree in Computer Science. Candidates who lack proper undergraduate background or who do not have an undergraduate minimum grade point average of 2.70 may be conditionally admitted to the program and must demonstrate competency by successfully completing specified prerequisite courses. The department prefers that the Java programming and mathematics requirements are already met. Remaining prerequisite courses may be taken at UIS or equivalent courses may be taken elsewhere. These courses will not count toward the graduate degree and must be completed before admission is granted.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 302</td>
<td>Discrete Structures</td>
<td>4</td>
</tr>
<tr>
<td>or MAT 302</td>
<td>Discrete Mathematics</td>
<td></td>
</tr>
<tr>
<td>or MAT 114</td>
<td>Finite Mathematics and Its Applications</td>
<td></td>
</tr>
<tr>
<td>CSC 225</td>
<td>Computer Programming Concepts I</td>
<td>3</td>
</tr>
<tr>
<td>CSC 275</td>
<td>Computer Programming Concepts II</td>
<td>3</td>
</tr>
<tr>
<td>CSC 376</td>
<td>Computer Organization</td>
<td>4</td>
</tr>
<tr>
<td>CSC 385</td>
<td>Data Structures and Algorithms</td>
<td>4</td>
</tr>
<tr>
<td>CSC 388</td>
<td>Programming Languages</td>
<td>4</td>
</tr>
<tr>
<td>CSC 389</td>
<td>Introduction to Operating Systems</td>
<td>4</td>
</tr>
<tr>
<td>MAT 113</td>
<td>Business Calculus</td>
<td>4</td>
</tr>
<tr>
<td>or MAT 115</td>
<td>Calculus I</td>
<td></td>
</tr>
<tr>
<td>MAT 121</td>
<td>Applied Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Hours 33

Core Courses

Students must complete 32 hours of approved courses. No more than 12 hours of graduate level course work may be taken before a student is fully admitted to the program. Course work must include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC Electives 1,2</td>
<td>500-level CSC Courses</td>
<td>16</td>
</tr>
<tr>
<td>or 400-level or higher CSC Courses</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>or CSC 540</td>
<td>Graduate Research Seminar</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Hours 32

1 CSC electives must be approved by the student’s academic advisor.
2 Courses numbered CSC 410, CSC 442 or CSC courses that include “ECCE” in the title may not be counted.

Master’s Closure

Computer Science graduate students must complete a comprehensive closure exercise to demonstrate an ability to formulate, investigate, analyze, and report results on a problem in writing and orally. Computer Science master’s degree candidates are expected to fulfill the campus closure requirement by earning a grade of B- or better in CSC 540. Students who have not made satisfactory progress in CSC 540 will be assigned a grade lower than B- and will have to re-register and re-take the course. Students who have made satisfactory progress in CSC 540, but who have not completed the final course documents can petition the department to complete the remaining documents by enrolling in CSC 541 (zero credit hours, one billable
hour) each fall and spring semester until the final course documents are completed.

The Master’s Degree

The M.S. degree in Computer Science is offered in an on-campus and an online format. The online Computer Science graduate curriculum has the same requirements as the on-campus curriculum, allowing students to actively participate in dynamic, diverse, and interactive online learning communities and to complete their degrees on their own time via the Internet. The online format enables them to complete course work using the latest networked information technologies for increased interaction with educational resources, advisors, and materials. Applicants to the online M.S. degree are accepted each fall semester. The Computer Science Department may, at its own discretion, accept new students in other semesters, and may consider accepting students under conditional admission, thereby allowing students whose baccalaureate degrees are in disciplines other than Computer Science to complete program entrance requirements during spring and fall terms.

Advising

On acceptance, students are assigned a member of the Computer Science faculty to serve as their academic advisor. Before registering for the first time, the student should discuss an appropriate course of study with the academic advisor.

Grading Policy

Students must earn a grade of B- or better in all courses that apply toward the degree, and a cumulative 3.0 grade point average is required to graduate. In addition, graduate students who do not maintain a 3.0 grade point average will be placed on academic probation according to campus policy. Graduate students enrolled in 400-level courses should expect more stringent grading standards and/or additional assignments. Courses taken on a CR/NC basis will not count toward the degree.

NOTE: Students also should refer to the campus policy on Grades Acceptable Toward Master’s Degrees section of this catalog.

Degree Requirements

Prerequisite Courses

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- CSC 302 Discrete Structures 4
- or MAT 302 Discrete Mathematics
- or MAT 114 Finite Mathematics and Its Applications
- MAT 113 Business Calculus 4
- or MAT 115 Calculus I
- MAT 121 Applied Statistics 3

Core Courses

Students must complete 32 hours of approved courses. No more than 12 hours of graduate level course work may be taken before a student is fully admitted to the program. Course work must include:

- CSC Electives 1,2
  - 500-level CSC Courses 16
  - 400-level or higher CSC Courses 12
  - CSC 540 Graduate Research Seminar 4

Total Hours 32

1  CSC electives must be approved by the student’s academic advisor.
2  Courses numbered CSC 410, CSC 442 or CSC courses that include “ECCE” in the title may not be counted.

Master’s Closure

Computer Science graduate students must complete a comprehensive closure exercise to demonstrate an ability to formulate, investigate, analyze, and report results on a problem in writing and orally. Computer Science master’s degree candidates are expected to fulfill the campus closure requirement by earning a grade of B- or better in CSC 540. Students who have not made satisfactory progress in CSC 540 will be assigned a grade lower than B- and will have to re-register and re-take the course. Students who have made satisfactory progress in CSC 540, but who have not completed the final course documents can petition the department to complete the remaining documents by enrolling in CSC 541 (zero credit hours, one billable hour) each fall and spring semester until the final course documents are completed.

- Graduate Certificate in Information Assurance
- Graduate Certificate in Systems Security

Graduate Certificates

The Computer Science Department offers a Graduate Certificate in Systems Security and a Graduate Certificate in Information Assurance.

The Computer Science certificates are designed to provide specialized knowledge and skills required for teaching information assurance and systems security at the college level. The curricula focus on developing a cadre of teachers qualified to teach information assurance and systems security classes at community colleges and universities. Certificates are awarded on completion of the course work. Information for each is available from the Computer Science Department.

These certificates are offered only in an online format and are open only to college faculty participating in faculty development courses.
offered through the Center for Systems Security and Information Assurance (CSSIA), www.cssia.org.

Students must hold a baccalaureate degree from an accredited institution and meet campus requirements for admission to graduate study. Candidates for the certificates will be expected to complete course requirements with a grade of B or better (grades of B- or lower will not be accepted).

Descriptions for courses leading to a certificate are available from the UIS online, dynamic course schedule found on the Records and Registration web site. Candidates for the certificates must choose a set of approved courses in consultation with their academic advisor.