Computer Information Systems M.S.

Graduate studies in Computer Information Systems lead to a master of science (M.S.) degree. This plan is designed to prepare students for key technical, administration and management positions in the analysis, design, implementation, maintenance, operation and management of industrial and commercial computer information systems.

Requirements

Computer Information Systems Basic Preparation

Students aspiring to graduate degree candidacy must have a bachelor’s degree in a related area. Preparatory requirements are proficiency in one or more high level languages, preferably an object-oriented programming language such as Java, C++ or C# and the following undergraduate course: Calculus I or Business Calculus.

<table>
<thead>
<tr>
<th>Upper-level foundation course requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 4320</td>
</tr>
<tr>
<td>CSCI 4333</td>
</tr>
<tr>
<td>CINF 3331</td>
</tr>
<tr>
<td>CINF 4324</td>
</tr>
</tbody>
</table>

Additional Information

- Student select from CINF 3331 Or CENG 3331 And CENG 3131
- None of the above courses may apply to the graduate degree

Students may select from the thesis option or the extended course work option. The thesis option requires 33 credit hours of graduate work and the extended course work option requires 36 credit hours.

Core Requirements (15 hours)

<table>
<thead>
<tr>
<th>Core Requirements (15 hours)</th>
</tr>
</thead>
</table>

The following courses, or approved substitutions are required for both the thesis option and extended course work options:

- CINF 5231 Strategic Information Systems Credit Hours: 3
- CINF 5234 Advanced Systems Analysis and Design Credit Hours: 3
- CSCI 5132 Internet Protocols
- CSCI 5333 Database Management Systems Credit Hours: 3
- CSCI 6530 Research Methods in Computer Science

Computer Information Systems Thesis Option (18 hours)

<table>
<thead>
<tr>
<th>Computer Information Systems Thesis Option (18 hours)</th>
</tr>
</thead>
</table>

3 hours of CENG/CINF/CSCI/SWEN or other approved related courses6 hours of CINF/CSCI 4000–6000 levels5 hours of CINF/CSCI 5100–6000

- CINF 6939 Master’s Thesis Research Credit Hours: 3

Additional Information

CINF/CSCI courses, 5100–6000 level: Students interested in pursuing the thesis option are encouraged to take CINF 5939 (Independent Study in CIS) during their first year, in order to write up their thesis proposals (with the sponsoring of a faculty adviser).

Computer Information Systems Extended Course Work Option (21 hours)

<table>
<thead>
<tr>
<th>Computer Information Systems Extended Course Work Option (21 hours)</th>
</tr>
</thead>
</table>

Students desiring to follow the extended course work option must successfully complete the capstone project course (CINF 6838)3 hours of CENG/CINF/CSCI/SWEN or other approved related courses6 hours of CINF/CSCI 4000–6000 levels9 hours of CINF/CSCI 5100–6000

- CINF 6939 Master’s Thesis Research Credit Hours: 3
CINF 6838 | Research Project and Seminar  
Credit Hours: 3

Additional Information
- CINF 6838 must be taken after completion of the required core and during last 12 hours.
- All electives must be approved before enrolling.

Computer Information Systems Specialization

Note: Data Science Specialization requires STAT 4345 or any Calculus based Statistics course as a prerequisite. (STAT 4345 may be allowed as an elective in this specialization if not taken previously)

Data Science Specialization

Data Science Specialization

STAT 5531 or STAT 5537

Additional Information
Choose 3 (for thesis) or 5 (for extended course work) of CINF 5432, CSCI 5832, CSCI 5833, and two other related.

Cyber Security Specialization

Cyber Security Specialization

CSCI 5233 | Computer Security and Cryptography  
Credit Hours: 3

CSCI 5234 | Web Security

CSCI 5235 | Network Security

Additional Information
Choose 1 (for thesis) or 3 (for extended course work) of CSCI 5737, CSCI 5931, CSCI/CINF 5000–6000 approved electives.

Suggested Plan of Study (for students in the Thesis Option)

The following study plan for the four regular semesters is recommended as a typical example for incoming full-time CIS students who plan to pursue the thesis option. Individual study plans may vary as long as the prerequisite structures are satisfied. Students should seek the advice of their assigned faculty adviser and set up their Candidate Plan of Study (CPS) as early as possible.

<table>
<thead>
<tr>
<th>Semester 1 (9 credits)</th>
</tr>
</thead>
</table>
| CINF 5231 | Strategic Information Systems  
Credit Hours: 3

CSCI 5132 | Internet Protocols

CSCI 5333 | Database Management Systems  
Credit Hours: 3

<table>
<thead>
<tr>
<th>Semester 2 (9 credits)</th>
</tr>
</thead>
</table>
| CINF 5234 | Advanced Systems Analysis and Design  
Credit Hours: 3

CINF 5939 | Independent Study in Computer Information Systems  
Credit Hours: 3

CSCI 6530 | Research Methods in Computer Science

<table>
<thead>
<tr>
<th>Semester 3 (9 credits)</th>
</tr>
</thead>
</table>
| CINF/CSCI 4000–6000 level elective

CINF 6939 | Master’s Thesis Research  
Credit Hours: 3

<table>
<thead>
<tr>
<th>Semester 4 (6 credits)</th>
</tr>
</thead>
</table>
| 6 hours of CINF/CSCI 5000–6000

CINF 6939 | Master’s Thesis Research  
Credit Hours: 3