

CYBER SECURITY & INFORMATION ASSURANCE, MS

This program educates professionals for the fast growing and wide ranging information security and cyber security markets by providing foundations in the theory of information security as well as knowledge needed to properly design, implement and manage secured IT infrastructure and risks in an enterprise.

It provides students with a coherent framework for developing foundational knowledge within the multi-disciplinary field of global security studies and informs students of opportunities for internships and professional careers in the private and public sectors concerned with national and global security.

Students will learn the fundamentals of Cyber Security and Information Assurance leadership and decision making in both private and public enterprises. This includes planning, security assessment, and computer security ethics.

To earn the MS in Cyber Security and Information Assurance, students must complete all four required security courses, two security electives, and a minimum of 30 credit hours of course work. Courses must be chosen in consultation with an advisor.

Any courses that were taken as part of the undergraduate program may not be repeated for graduate credit. Because of the rapidly changing nature of this field of study, computing courses taken more than four years ago cannot be counted towards degree requirements unless the student has been continuously registered during the time-frame in question (excluding summers).

An overall grade point average of B (3.0) or higher must be maintained in graduate-level courses with no more than two grades of C.

BRIDGE COURSES

Students from non-computing majors or those who are missing the following courses can be admitted on the condition that they complete the list of bridge courses as part of their program. Students from Computer Science, Information Technology, Computer Engineering, or related majors may need up to two bridge courses. Students from other majors may need up to three bridge courses.

Students admitted with bridge course conditions must complete bridge courses with C- or better in the first year. A bridge course can be waived by a placement test in the first semester. Bridge courses are not counted towards the masters degree.

| Code | Title | Credit Hours |
|----------|-----------------------------|--------------|
| CSIA 354 | INTRODUCTION TO PROGRAMMING | 3 |
| CSIA 301 | COMPUTER NETWORKING | 3 |
| CSIA 317 | OPERATING SYSTEMS | 3 |

REQUIREMENTS

| Code | Title | Credit Hours |
|-------------|--------------------------------|--------------|
| Core | | 12 |
| CSIA 401 | INTRO TO COMPUTER SECURITY | |
| CSIA 411 | CYBER ETHICS, PRIVACY, & LEGAL | |

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| CSIA 451 | NETWORKS SECURITY | |
| CSIA 438 | SECURE SOFTWARE ENGINEERING | |
| Security Electives (choose two) | | 6 |
| CSIA 409 | CLOUD COMPUTING AND SECURITY | |
| CSIA 410 | PLANNING AND BUDGETING THE CISO LIFECYCLE | |
| CSIA 414 | ENTERPRISE CONTINUITY & RECOVERY PLANNING | |
| CSIA 475 | COMPUTER FORENSICS | |
| Electives | | 6 |
| Should be selected from graduate level courses in Computer Science major or other graduate level courses approved by the program director. | | |
| Course, Internship, Thesis or Project Option | | 6 |
| Total Credit Hours: | | 30 |

A student must choose one of the following four options as part of the degree requirements.

- Thesis option.** A student must select a willing faculty mentor from the Cyber division and register for CSIA 485 in their second-to-last semester. During the last semester, they must register for CSIA 490 MASTERS THESIS.
- Project option.** A student must select a willing faculty mentor from the Cyber division and register for CSIA 485 in their second-to-last semester. During the last semester, they must register for CSIA 499 MASTERS PROJECT.
- Internship option.** A student must register for CSIA 494 and one graduate level elective in Computer Science or Cyber Security as approved by the program director.
- Course option.** A student must register for two one graduate level electives in Computer Science or Cyber Security as approved by the program director.

Note(s):

- Students must get consent to register for CSIA 490 MASTERS THESIS, CSIA 494 INTERNSHIP CSIA 485 THESIS/PROJECT RESEARCH, CSIA 499 MASTERS PROJECT from a faculty member from the Cyber division. At the end of each of these courses, a committee consisting of minimum 3 members (where the majority of the members must be from the Cyber division AND at most two of the members can be from outside the division) will review the work performed and approve for successful completion of these courses.

Your degree map is a general guide suggesting courses to complete each term on the academic pathway to your degree. It is based on the most current scheduling information from your academic program. Your program's degree map is reviewed annually and updated as schedules change (although you retain the same course requirements as long as you are continuously enrolled in your degree program).

Always work closely with your academic advisor to understand curriculum requirements and scheduling, as each student's academic plan can look slightly different.

| Year 1 | | | |
|----------|--------------|------------|--------------|
| Fall | Credit Hours | Spring | Credit Hours |
| CSIA 401 | | 3 CSIA 451 | 3 |
| CSIA 411 | | 3 CSIA 438 | 3 |

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| Security Elective ¹ | 3 | Security Elective ¹ | 3 |
| | 9 | | 9 |
| Year 2 | | | |
| Fall | Credit Hours | Spring | Credit Hours |
| CSIA 485, 494, or CSIA 4XX ² | | 3 CSIA 490, 494, 499, or CSIA 4XX ² | 3 |
| CSIA 4XX | | 3 CSIA 4XX | 3 |
| | 6 | | 6 |

Total Credit Hours 30

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Choose from CSIA 409 CLOUD COMPUTING AND SECURITY, CSIA 410 PLANNING AND BUDGETING THE CISO LIFECYCLE, CSIA 414 ENTERPRISE CONTINUITY & RECOVERY PLANNING, or CSIA 475 COMPUTER FORENSICS

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If students are pursuing the internship option, they must take another elective and CSIA 494 INTERNSHIP