

Cyber Security

Program Contact Information

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Program Information

The Master of Science in Cyber Security (formerly known as Computer Forensics and Security Management) (MSSec) is an interdisciplinary program that prepares graduates for a professional career in the field of cyber security by developing in them the necessary skills crucial for success. The program also provides current practitioners the opportunity to obtain advanced-level training to facilitate career advancement. The program includes a set of core, required courses and the opportunity to select from a default option or two tracks of specialization.

Admission Requirements

Students accepted into the program will have earned a bachelor's degree from an accredited college or university or recognized university from abroad. Most of these students will have earned a cumulative undergraduate grade point average (GPA) of 3.0 or higher. Applicants whose native language is not English are required to take either the TOEFL or the IELTS and score 80 or higher on the TOEFL or 6.5 or higher on the IELTS. **The GRE is NOT required.**

Students seeking admission to the program who lack a background in computer science but meet the remaining minimum requirements for admission may be admitted contingent on them completing a set of prerequisite courses (or their equivalents) that may include the following (the program directors may waive/require some courses in addition to the ones listed below depending upon the students' specific background): Among these courses, CS 532/532L can also be counted towards the MS Cyber Security degree.

Requirements	Hours
CS 103 & 103L Introduction to Computer Science in Python and Introduction to Computer Science in Python Lab	4
CS 203 & 203L Object-Oriented Programming in Java and Object-Oriented Programming Lab	4
CS 532 & 532L Systems Programming and Systems Programming Lab	3

Similarly, students seeking admission to the program (especially to the Cyber-Crime Investigations track) who lack a background in criminal justice but meet the remaining minimum requirements for admission may be admitted contingent on them completing a set of prerequisite courses (or their equivalents) that may include the following (the program directors may waive/require some courses in addition to the ones listed below depending upon the students' specific background)

Requirements	Hours
CJ 230 The Judicial Process in America: An Overview	3

Master of Science in Cyber Security

A total of 30 semester hours are required for the degree, organized into: (a) 15 hours of required **core courses**, (b) 6 hours of **electives** from an approved list of relevant Computer Science courses, and (c) 9 hours of coursework in one of the following two pathways: Approved Cyber Security Centric Courses or **Cybercrime Investigations track**.

a. Core coursework

Requirements	Hours
Core courses	
CS 534 Networking	3
CS 623 Network Security	3
CS 636 Computer Security	3
CS 689 Cyber Risk Management	3
CJ 502 Computer Forensics	3
Total Hours	15

b. Electives

In addition to the core courses, students must take two CS electives for a total of six hours. The electives must be from 500+ level or 600+ level, chosen from the following courses:

CS 500-level

courses: CS 501 and CS 501L, CS 510, CS 520 and CS 520L, CS 520L and CS 520L
 CS 520L and CS 533L, CS 555, CS 591, CS 592, CS 597, CS 598

CS 600-level

courses: CS 600, CS 601, CS 602, CS 610, CS 614, CS 616, CS 617, CS 620, CS 677, CS 683, CS 684, CS 690, CS 691, CS 692, CS 697, CS 698, CS 699

c. Tracks

In addition to the five core courses and two electives listed above, students must choose either of the following two pathways (Cyber Security Centric Courses or Cybercrime Investigations track, both worth 15 credit hours) to fulfill the requirements of the Master's degree.

1. Cyber Security Centric Courses

Requirements	Hours
CS 645 Modern Cryptography	3
CS 646 Blockchain and Cryptocurrency	3
CS 643 Cloud Security	3
Total Hours	9

2. Cybercrime Investigations Track

Requirements	Hours
CS/CJ 519 Investigating Online Crimes	3
CS/CJ 537 Digital Media Forensics	3
CJ 675 Law Evidence and Procedure	3
Total Hours	9