

# Cyber Security

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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 must submit a TOEFL, IELTS, or Duolingo test score. A minimum score of 80 on the TOEFL, 6.5 on the IELTS, or 120 on the Duolingo is required. **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 CS 532 can be taken after admitted and count towards the MS 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 are encouraged to complete CJ 230 (The Judicial Process in America: An Overview).

## 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 tracks: **Cyber Security track** or **Cybercrime Investigations track**.

### a. Core coursework

Requirements	Hours	
<b>Core courses</b>		
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
<b>Total Hours</b>		<b>15</b>

### 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. No more than 3 hrs of CS 598 or CS 697 can count towards the degree.

### c. Tracks

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

#### 1. Cyber Security Track

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

#### 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
<b>Total Hours</b>		<b>9</b>