CYBERSECURITY
Online Master's Degree

Earn Your Master's Degree in Cybersecurity — Online

Professionals with experience in cybersecurity are among the most sought after employees in the world. A USF master of science in cybersecurity will help you gain the credentials you need to advance in this fast-growing field. Choose from four concentrations: cyber intelligence, digital forensics, information assurance or computer security fundamentals.

Who Should Apply

You are most likely to be successful if you have academic or work experience in the areas of C/C++ programming, computer networks, operating-system design, algorithms, data structures and computer organization. An undergraduate degree in computer science, computer engineering, MIS or IT is recommended for admission.

Program Details

The Master's Degree in Cybersecurity is an interdisciplinary 30 to 33 credit hour program offered by the USF Colleges of Arts and Sciences; Behavioral and Community Sciences; Business; and Engineering. All courses are online, and most courses are delivered in a convenient eight-week format that fits into the busy lives of working adults, allowing swift progression through the program.

Program Requirements

Each concentration requires completion of four core courses, concentration courses, one practicum and one electronic portfolio demonstrating completion of core program competencies.
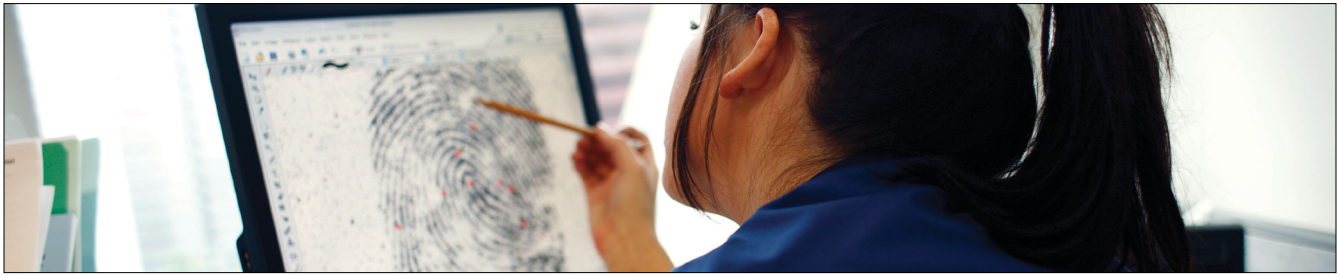
Required Core Courses (12 Credit Hours)

You will be required to complete the following core courses for each concentration.

- Data Networks, Systems and Security (3)
- Applied Cryptography (3)
- Information Security & Risk Management (3)
- Selected Topics in MIS: Decision Processes for Business Continuity and Disaster Recovery (3)

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Concentrations

Students select from the following concentrations:

Cyber Intelligence (18 Credit Hours)

Learn to generate and evaluate courses of action to manage risks, counter vulnerabilities and enhance organizational decision-making as you develop an understanding of how intelligence drives a cybersecurity mission.

Courses will prepare graduates for entry-level or advanced positions as cyber intelligence or threat intelligence analysts.

Six concentration courses are required.

- Advanced Professional & Technical Communication for Analysts (3)
- Information Strategy and Decision Making (3)
- Core Concepts in Intelligence (3)
- Advanced Intelligence Analytic Methods (3)
- Cyber Intelligence (3)
- Advanced Cyber intelligence (3)
  (Prerequisite: Cyber Intelligence)

Digital Forensics (15 Credit Hours)

Learn how to investigate computer, cyber and electronic crimes; analyze networks that have been attacked or used for illicit purposes; and properly identify, collect, secure and present digital evidence.

Courses will prepare graduates for entry-level or advanced positions in the field of digital forensics (sometimes called cyber forensics).

Five concentration courses are required.

- Cybercrime and Criminal Justice (3)
- Digital Evidence Recognition and Collection (3)
- Introduction to Digital Evidence (3)
- Network Forensic Criminal Investigations (3)
- Digital Forensic Criminal Investigations (3)

Information Assurance (15 Credit Hours)

Learn how to balance defenses and risks to secure the integrity of systems and data; ensure its availability to authorized personnel and inaccessibility to unauthorized personnel; and maintain the confidentiality of an organization or agency's sensitive, identifying and personal data.

Students will acquire expertise in developing and implementing IT controls and software security; knowledge of legal and regulatory requirements, and methodologies for assessing and managing information risks and responding to breaches and disruptions.

Choose five of the following concentration courses:

- Advanced Systems Analysis and Design (3)
- Advanced Database Management (3)
- Risk Management and Legal Compliance (3)
- Accounting Systems Audit, Control and Security (3)
- Seminar on Software Testing (3)
  (Prerequisite: Advanced Systems Analysis and Design)
- Project Management (3)
- Any elective pre-approved by the program director of the Muma College of Business information assurance concentration.

Learn more at: cyber.usf.edu/info

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Computer Security Fundamentals (15 Credit Hours)

Learn about various attacks in computer and network systems, including node and network-level attacks; modeling and analyzing attack propagation and impacts; identifying core system vulnerabilities; and detection and defense strategies against attacks, including network forensics.

Courses will prepare graduates for positions in the field of computer security.

Students must have an undergraduate degree or minor in computer science or computer engineering to be admitted into this concentration. In addition, this concentration requires prior undergraduate coursework in:

- Analysis of Algorithms
- Operating Systems
- Computer Architecture
- Program Design
- Computer Organization
- Object-Oriented Software Design
- Data Structures

Five concentration courses are required.

- Principles of Computer Architecture (3)
- Operating Systems (3)
- Introduction to the Theory of Algorithms (3)
- Special Topics: Computer Systems Security (3)
- One elective from other concentration courses (3)

Courses in the computer security fundamentals concentration will be delivered over 16 weeks.

Students who are completing the Computer Security Fundamentals program remotely can work with their instructor to take their course exams at an NCTA Certified Test Center. Find your local NCTA test center here: https://ncta.memberclicks.net/list-of-certified-centers.

Practicum

- Cyber Intelligence – Supervised Field Work (3)
- Digital Forensics – Directed Independent Study (3)
- Information Assurance – Independent Study (3)
- Computer Security Fundamentals – IT Graduate Practicum (3)

Portfolio

Students will be required to submit an electronic portfolio demonstrating completion of core program competencies in cybersecurity and in the area of concentration.

Each objective in the portfolio is reviewed and rated by program faculty for content (knowledge of accepted practices, procedures, and trends in the field) and critical thinking (ability to analyze a problem, organize a response, synthesize perspectives, and draw practical, testable conclusions).

Admission Requirements

In order to qualify for admission into the online master's degree program, you must have English proficiency and one of the following:

- A bachelor's degree from a regionally accredited institution with a 3.00 GPA or better in all work attempted while registered as an undergraduate or graduate student
- The equivalent undergraduate and/or graduate degrees from a foreign institution

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Application Process

To begin the application process, you will need the following documents:

- Two letters of recommendation (one letter should come from a faculty member)
- A current resume
- Undergraduate degree transcripts
- A statement of purpose in which you describe your academic and professional background, reasons for pursuing this degree/concentration and professional goals pertaining to cybersecurity

International students must also submit the following items:

- Proof of English proficiency (if applicable)
- GRE scores directly from the ETS testing service. USF's school code is 5828.

Application Deadlines:

- Spring start – Oct. 15
- Summer start – Feb. 15
- Fall start – June 1

Tuition and Fees

Total costs will vary based on the number of credit hours required by the concentration selected. Costs listed below do not include cost of textbooks or other educational resources and additional fees.

- In-state: $461.43 per credit hour
- Out-of-state: $907.17 per credit hour

The cost per credit hour includes the $30 Distance Learning Fee. Financial aid and scholarships may be available. Tuition and fees are subject to change. See our Cost Guide for more details.

Out-of-State Students

Out-of-state students from one of the 16 Southern Regional Education Board (SREB) states may be eligible for in-state tuition through the Academic Common Market, which allows students to study in a specialized field at an out-of-state college while paying in-state tuition rates. We will work closely with you if you would like to pursue this option, or if you need to confirm or change your residency status. To learn more, visit the SREB website at: www.sreb.org/page/1304/academic_common_market.html

Veterans Assistance

Military Tuition Assistance, Veteran's GI Bill and State Tuition Waivers may be used to pay for this master's degree.

To discuss your options and determine whether our program is right for you, please contact Tiffany Young at Tyoung6@usf.edu or 813-974-7899.

The University of South Florida has been designated as a National Center of Academic Excellence in Information Assurance/Cybersecurity (CAE IA/Cybersecurity).

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