Cybersecurity - M.S.

Curriculum

The Cybersecurity Master of Science degree program builds cogently on the body of knowledge associated with the protection of networks, communication channels and information, and incorporates a set of core competencies in both technology and business as they relate to planning, implementing and managing system- and enterprise-level security. This program is targeted for students who have bachelor's degrees in information technology, computer science, and network and software engineering, as well as others who have earned bachelor's degrees in fields outside these areas but need the graduate-level degree to advance professionally. All students must complete a capstone project.

Upon completion of the program, graduates are expected to:

- Research, establish and apply strategies and solutions that demonstrate an understanding of security foundations and the practical applications in the information security/assurance field.
- Integrate information security solutions through the alignment of appropriate security methodologies to different security situations.
- Develop system security contingency plans and disaster recovery procedures.
- Propose and test policies and procedures to ensure information systems reliability and availability and the prevention of unauthorized access.
- Effectively communicate information security assessments, plans and actions to all stakeholders, both technical and nontechnical.
- Assess and summarize the legal standards, laws and regulations related to information security/assurance in the global community.

This program is a 12-course degree with a 6-course core and 5-course focus area. The final program requirement is a 3.0 credit capstone research project.

ISA5005 Network Fundamentals (offered online only) or an approved equivalent is a requirement for this program. Students who do not have this course or an approved equivalent within their undergraduate program, or who transferred in, will need to complete this foundation course prior to registering for core and focus classes.

Cybersecurity

Master of Science

Foundation Course		
ISA5005	Network Fundamentals *	3
Core Courses		
ISA5020	Foundations of Information Security Management	3
ISA5030	Legal and Ethical Principles in IT	3
ISA5040	Network Security and Cryptography	3
ISA5050	Digital/Computer Forensics and Investigation	3
MATH5100	Statistical Methods	3
RSCH5700	Research and Inquiry	3
Required Focus		
ISA5085	Principles of Programming	3
ISA6010	Software Security Testing	3
ISA6020	Securing Virtualized and Cloud Infrastructures	3
ISA6030	Hacking Countermeasures and Techniques	3
ISA6040	Advanced Network Intrusion Detection and Analysis	3
Career Capstone Course		
ISA6090	Information Security & Assurance Capstone Research Project	3
Total Credits		**36.0-39.0**

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ISA5005 Network Fundamentals is only offered online.

Admissions Requirements

Please see a campus catalog for Admissions Requirements for this program.