College of Technology
Cybersecurity
Master of Science Degree
Program Overview

Master of Science Cybersecurity

Program Summary

The Master of Science in Cybersecurity program prepares graduates for leadership roles in information technology security. This degree equips students with the knowledge and skills necessary to develop and manage secure information systems and technology at both enterprise and individual levels, locally and globally.

Students gain theoretical, practical, and applied skills in computer-based information systems, along with a broad understanding of the business and management environments where information technology plays a strategic role

Concentrations

Students will choose from one of the following Cybersecurity concentrations:

Cyber Operations Concentration

This Cyber Operations concentration equips students with the skills to analyze, design, deploy, and monitor cyber technologies. Students will learn how to maintain an organization's security posture and ensure its operational continuity during cyberattacks.

Cybersecurity Policy Concentration

This concentration in Cybersecurity Policy prepares students to analyze, develop, and enforce policies and procedures that safeguard an organization's systems. The coursework delves into the legal and regulatory frameworks surrounding cybersecurity, focusing on the human element, processes, and technology involved.

*As a condition of employment in any security position, a prospective employee may be required to pass a full background investigation for the purpose of obtaining a security clearance.

Program Outcomes

Upon program completion, graduates will be able to:

- Analyze and evaluate a variety of management mechanisms, cryptography solutions, and software coding techniques employed for organizational security.
- Analyze security and operational impacts on wired and wireless network communications.
- Design a secure network architecture with multiple layers of protection.
- Evaluate potential cyber threats, their consequences, and mitigation tactics.
- Evaluate classes of possible threats, consequences associated with each threat, and determine what actions can be taken to mitigate the threat.
- Have a working knowledge of cybersecurity fundamentals and how they are deployed effectively.
- Select and implement large-scale distributed cloud systems.

Program information is subject to change without notice. Consult the University Catalog for the most up to date information.