

CYBERSECURITY - CYBER RESILIENCE EMPHASIS REQUIREMENTS (MS)

The Master of Science (M.S.) in Cybersecurity program offers studies in core areas of cybersecurity that include offensive and defensive security operations, security awareness training, security tools design and implementation, cybersecurity management, security policy and law, and emerging areas in security and privacy. The proposed program offers both hands-on experiential learning and in-depth theoretical studies.

The M.S. in Cybersecurity is designed for both professionals and recent college graduates who aspire to advance their careers in cybersecurity. The degree program consists of 30 credits, including 15 credits of core courses and 15 credits of courses in an emphasis area: either cyber resilience or security engineering. The program will prepare students to obtain positions such as cybersecurity analyst, cybersecurity manager, cybersecurity engineer, or cybersecurity architect.

Degree Requirements

To earn this degree, students must satisfy all of the following requirements.

1. Complete the Common Body of Knowledge courses, or have prior coursework or experience in all topics that are included in the Common Body of Knowledge.
2. Complete all M.S. Cybersecurity core courses.
3. Complete one emphasis: either Cyber Resilience or Security Engineering.
4. Pass the M.S. Cybersecurity comprehensive exam for the selected emphasis. Students in the Security Engineering emphasis may choose to complete a capstone project (CYBER 789) or thesis (CYBER 799) in place of the comprehensive exam.
5. Have a graduate grade point average (GPA) of at least 3.0.

Code	Title	Units
Common Body of Knowledge ¹		0-6
CYBER 701	SYSTEMS FUNDAMENTALS FOR CYBERSECURITY	
COMPSCI 170	INTRODUCTION TO PYTHON PROGRAMMING	
	or COMPSCI 172INTRODUCTION TO JAVA	
	or COMPSCI 174INTRODUCTION TO C++	
or ITSCM 180	INTRODUCTION TO PROGRAMMING FOR BUSINESS APPLICATIONS	
Core Courses		
CYBER 730	FUNDAMENTALS OF ETHICAL HACKING	3
CYBER 731	MANAGEMENT OF INFORMATION ASSURANCE AND SECURITY	3
CYBER 740	CYBERSECURITY AND PRIVACY LAW	3
CYBER 742	COMPUTER FORENSICS	3
CYBER 754	INTRUSION PREVENTION AND DETECTION	3
CYBER 732	DATA DRIVEN SECURITY	3
CYBER 733	INDUSTRIAL AND CRITICAL INFRASTRUCTURE SECURITY	3

CYBER 734	CYBER INCIDENT RESPONSE, BUSINESS CONTINUITY, AND RISK MANAGEMENT	3
Select 6 units from the following list:		6
ITSCM 772	INFORMATION TECHNOLOGY SERVICE MANAGEMENT	
ITSCM 774	DATA ANALYTICS AND BUSINESS INTELLIGENCE	
ITSCM 776	BUSINESS PROCESS INNOVATION AND MANAGEMENT	
ITSCM 760	TOPICS IN INFORMATION TECHNOLOGY AND MANAGEMENT	
MANGEMNT 757	LEADERSHIP DEVELOPMENT	
Total Units		30-36

1. or equivalent coursework or experience