Information Assurance and Cybersecurity, MSIA

Our Master of Science in Information Assurance and Cybersecurity combines an understanding of information security technology with relevant knowledge from law, the social sciences, criminology, and management. The MS program is designed for working professionals and recent graduates who want knowledge they can apply in their workplaces to assess and manage information security risks effectively.

Learning Outcomes:

• Build core knowledge surrounding computer system security and network security practices

• Plan and implement security strategies to reduce risk and enhance protection of information assets and systems

• Understand legal and ethical issues associated with information security, privacy, and digital rights.

• Enhance communication skills for effective interaction with corporate management on information assurance/cybersecurity-related issues.

Program Requirements

General Requirements

Foundations		
IA 5010	Foundations of Information Assurance	4
Technical Courses		
Complete 8 semester hours from the following:		8
IA 5120	Applied Cryptography	
IA 5130	Computer System Security	
IA 5150	Network Security Practices	
IA 6120	Software Security Practices	
Contextual Courses		
Complete 8 semester hours from the following:		8
IA 5200	Security Risk Management and Assessment	
IA 5210	Information System Forensics	
IA 5240	Cyberlaw: Privacy, Ethics, and Digital Rights	
IA 5250	Decision Making for Critical Infrastructure	
Capstone		
IA 7900	Capstone Project/Seminar	4
Electives		
Complete 8 semester hours from the following:		8
IA 5040	Introduction to Cyberspace Programming	
IA 5050	Data Mining in Cyberspace	
IA 5120	Applied Cryptography	
IA 5130	Computer System Security	
IA 5150	Network Security Practices	
IA 5200	Security Risk Management and Assessment	
IA 5210	Information System Forensics	
IA 5240	Cyberlaw: Privacy, Ethics, and Digital Rights	
IA 6120	Software Security Practices	
CS 5200	Database Management Systems	
CS 5500	Managing Software Development	
CS 5600	Computer Systems	
CS 5700	Fundamentals of Computer Networking	
CS 5770	Software Vulnerabilities and Security	
CS 6540	Foundations of Formal Methods and Software Analysis	
CS 6710	Wireless Network	
CS 6740	Network Security [1]	
CS 6750	Cryptography and Communications Security	
CS 7805	Theory of Computation	
CRIM 7224	Law and Psychology	
CRIM 7242	Terrorism and International Crime	
CRIM 7252	White-Collar Crime	
CRIM 7312	Special Topics in Criminology and Public Policy	
PPUA 6503	Public Personnel Administration	
PPUA 6505	Public Budgeting and Financial Management	
PPUA 6507	Institutional Leadership and the Public Manager	
POLS 7341	Security and Resilience Policy	

Program Credit/GPA Requirements

32 total semester hours required
Minimum 3.000 GPA required

[1] This course can only be taken for credit if the student has NOT also taken Network Security Practices (IA 5150). These courses cannot both be taken for credit.