

# 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
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#### 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
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#### 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 <sup>1</sup>
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

<sup>1</sup> 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.