INFORMATION SYSTEMS, MS INFORMATION SYSTEMS SECURITY SPECIALIZATION

With the proliferation of internet-enabled devices, social media use and software-dependent organizations, securing and safeguarding data, information and business processes is an ever-increasing urgent concern, especially in a post-9/11 world. The information systems security specialization focuses on timely and distinctive skills that allow students to design secured information systems and make recommendations for the protection of sensitive corporate data in accordance with commerce and privacy regulations. Students learn how to plan, budget for and implement secure network systems (LAN, WAN, wireless, mobile, IoT, AR) and lead organizational staff in the secure exchange of digital information across a variety of platforms. Topics include: VPN, firewalls, intrusion detection systems and defensive strategies, cryptography, social engineering, phishing, anti-virus, anti-spam, ethical hacking, ransomware attacks and application security techniques. Students also learn the managerial and administrative aspects of information security such as risk analysis, vulnerability analysis and remediation, network security architectures, policy development and enforcement, legal/regulatory compliance issues, risk management, business continuity planning, and disaster recovery preparation and execution.

Curriculum

Core Courses (4 units)

Course	Title
CIS 413-DL	Telecommunications Networks
CIS 414-DL	Object Oriented Programming
or MSDS 430-DL	Python for Data Analysis
CIS 417-DL	Database Systems Design & Implementation
CIS 498-DL	Information Systems Project
or CIS 590-DL	Capstone Research

Specialization Courses (7 units)

Course	Title
CIS 452-DL	Fundamentals of Network Security
CIS 455-DL	Disaster Recovery and Continuity
CIS 457-DL	Management of Information Security
CIS 494-DL	Project Management Concepts
Any three electives	
CIS 419-DL	Web Application Development
CIS 431-DL	Database Administration
CIS 435-DL	Practical Data Science Using Machine Learning
CIS 436-DL	Big Data Management and Analytics
CIS 453-DL	Advanced Cyber Security
CIS 459-DL	Innovation with Blockchain Technology
CIS 460-DL	Information Technology Management
CIS 465-DL	Information Technology Strategy
CIS 495-DL	IT Project Management
CIS 496-DL	Information Technology Business Writing and Communication
CIS 497-DL	Information Technology Finance

About the Final Project

Students may pursue their capstone experience independently or as part of a team. As their final course, students take either the individual research project in an independent study format or the classroom final project class in which students integrate the knowledge they have gained in the core curriculum in a project presented by the instructor. In both cases, students are guided by faculty in exploring the body of knowledge on information systems while contributing research of practical value to the field. The capstone independent project and capstone class project count as one unit of credit.

Course	Title
Choose one	
CIS 498-DL	Information Systems Project
CIS 590-DL	Capstone Research