

CYBERSECURITY *

MASTER OF SCIENCE

Quarter Credit Hours Required = 56

Virginia College's Master of Science in Cybersecurity is designed to provide students with an in-depth study in IT Infrastructure Security. The student will be exposed to and challenged with the most popular aspects of computer security, including cyber-law, cyber-terrorism, forensics, hardening the operating system, viral activity, and compliancy issues. Graduates of this program will be prepared for employment positions involving the security management of a LAN, WLAN, and WAN environments, including our own nation's infrastructure.

Students will be presented with various simulations and live lab environments to examine the overall security administration and computer forensics of network security in fields such as information security, network administration, and firewall management, as well as many other related positions. The program provides a strong foundation in cryptography, forensics, intrusion detection, and firewall devices. Additional areas of study include hardening among various operating systems, simulated and real-life experience through VPN connections, and security measures applied to perimeter network devices.

Upon successful completion of this program, students should be able to

- understand and apply the basics of cyber law to case studies;
- describe the theory behind computer security;
- successfully secure a LAN/WAN environment;
- apply security measures to perimeter network devices;
- understand and apply forensic concepts to digital material; and
- analyze and apply compliancy issues.

	Quarter Credit Hours
MCS 5000 Cyber Law and Research Methods.....	4
MCS 5150 Cyber Terrorism	4
MCS 5250 Viral Activity and Malware	4
MCS 5270 Math for Security Professionals	4
MCS 5300 Psychological Profiling	4
MCS 5350 Cryptography.....	4
MCS 6000 Hardening the Operating System.....	4
MCS 6020 Access Control Systems	4
MCS 6150 Firewalls, Proxies, and Bastion Hosts.....	4
MCS 6170 Intrusion Detection Systems	4
MCS 6250 Computer Forensics.....	4
MCS 6270 Network Traffic Analysis.....	4
MCS 6350 Secure Transmission Systems.....	4
MCS 6400 Compliance and Electronic Data.....	4
TOTAL MINIMUM QUARTER CREDIT HOURS REQUIRED	56

****This program is only offered through Virginia College Online.***