CYBERSECURITY (CSEC)

CSEC 110 Introduction to Hardware and Client Operating Systems
(4 Credits, Fall)
Overview of hardware installation, upgrading and troubleshooting. Hard disk management skills, system configuration, installation of operating systems and application software, and advanced use and configuration of graphical user interface. Understanding of basic computer terminology, internet navigation, e-mail, Windows operating system features, and file management is necessary. PREREQ: Cybersecurity major. PRE/COREQ: Placement into MATH 123 or concurrent enrollment in any GEM 3 course. *(2 lecture hours, 4 lab hours, 4 credits)*

CSEC 123 Network Fundamentals
(4 Credits, Fall)
Introduction to the OSI reference model, network addressing, subnetting, TCP/IP network-layer protocols, LAN media and topology, and networking devices. PREREQ: Cybersecurity major. *(2 lecture hours, 4 lab hours, 4 credits)*

CSEC 125 Basic Network Routing
(4 Credits, Fall)
Routing theory, components, and protocols; router setup and startup; router configuration, control, and backup procedures. Includes building and troubleshooting simple LANs. PRE/COREQ: CSEC 123. *(2 lecture hours, 4 lab hours, 4 credits)*

CSEC 127 Server Operating Systems
(4 Credits, Spring)
Planning, installing, and configuring network servers and clients in a server environment. Issues related to protocols, sharing, policies, migration, optimization, architecture, and administration. PRE/COREQ: CSEC 125. *(2 lecture hours, 4 lab hours, 4 credits)*

CSEC 129 Fundamentals of Linux
(4 Credits, Spring)
Introduction to the Linux operating system with emphasis on basic administration tasks. PRE/COREQ: CSEC 127. *(2 lecture hours, 4 lab hours, 4 credits)*

CSEC 131 Introduction to Information Security
(4 Credits, Spring)
Designing a security framework for small, medium, and enterprise-level networks. PRE/COREQ: CSEC 129. *(2 lecture hours, 4 lab hours, 4 credits)*

CSEC 199 Cybersecurity Special Topics
(1-5 Credits, Varies)
This course is designed to permit the offering of special topics appropriate to a student's program. Regular or frequently recurring topics are not offered under this title. The course may be repeated as new topics are presented. *(1 lecture hours, 0 lab hours, 1 credits)*

CSEC 246 Securing a Directory Services Infrastructure
(4 Credits, Fall)
Implementing, troubleshooting, maintaining, and securing a network infrastructure in a directory services environment. PRE/COREQ: CSEC 127 and CSEC 131. *(2 lecture hours, 4 lab hours, 4 credits)*

CSEC 248 Advanced Cybersecurity
(4 Credits, Fall)
Key security concepts including security threats, securing network resources, encryption technologies, securing communications and applications, and incident response. PRE/COREQ: CSEC 246. *(2 lecture hours, 4 lab hours, 4 credits)*

CSEC 252 Introduction to Programming for Cybersecurity
(4 Credits, Fall)
Accelerated overview of programming, scripting, and relational database design for security professionals. PRE/COREQ: CSEC 248. *(2 lecture hours, 4 lab hours, 4 credits)*

CSEC 255 Ethical Hacking and Countermeasures
(4 Credits, Spring)
Identifying weaknesses and vulnerabilities in target network systems and applying the information to defend against network attacks. PRE/COREQ: CSEC 252. *(2 lecture hours, 4 lab hours, 4 credits)*

CSEC 257 Introduction to Digital Forensics
(4 Credits, Spring)
Forensic methods and techniques in the collection, processing, and analysis of digital evidence. PRE/COREQ: CSEC 255. *(2 lecture hours, 4 lab hours, 4 credits)*

CSEC 290 Cybersecurity Capstone
(4 Credits, Spring)
Advanced penetration testing methodologies and techniques in acquiring, processing, and analyzing data for various host, network, and mobile-based devices. PRE/COREQ: CSEC 257. *(2 lecture hours, 4 lab hours, 4 credits)*

Refer to How to Read Course Descriptions *for an explanation of elements found in the course descriptions above.*