CISCO NETWORKING AND SECURITY TECHNOLOGIES (CNST)

CNST 124 IT Essentials
(6 Credits, Fall)
Introduces the fundamentals of computer and mobile device hardware and software, security, networking, and the responsibilities of an IT professional. Includes scripting basics, sharing resources in a networked environment, using remote access technologies, IoT device configuration and communication types, and best practices in documentation and change management. PREREQ: Cisco Networking and Security Technologies major. COREQ: CNST 127. PRE/COREQ: Placement into MATH 123 or concurrent enrollment in any GEM 3 course. *(3 lecture hours, 6 lab hours, 6 credits)*

CNST 127 Introduction to Networks
(6 Credits, Fall)
Introduces the architecture, structure, functions, and components of the Internet and other computer networks. Includes network operations, building simple local area networks (LANs), performing basic configurations for routers and switches, and implementing Internet Protocol (IP). PREREQ: Cisco Networking and Security Technologies major. COREQ: CNST 124. PRE/COREQ: Placement into MATH 123 or concurrent enrollment in any GEM 3 course. *(3 lecture hours, 6 lab hours, 6 credits)*

CNST 129 Switching, Routing, and Wireless Essentials
(6 Credits, Spring)
Introduces the architecture, components, and operations of routers and switches in small networks, wireless local area networks (WLANs), and security concepts. Includes configuring and troubleshooting routers and switches for advanced functionality using security best practices and resolving common issues with protocols in both IPv4 and IPv6 networks. PREREQ: CNST 124 and CNST 127. COREQ: CNST 135. *(3 lecture hours, 6 lab hours, 6 credits)*

CNST 135 Enterprise Networking, Security, and Automation
(6 Credits, Spring)
Introduces the design, configuration, operation, securing, and troubleshooting of enterprise networks. Includes WAN technologies and QoS mechanisms used for secure remote access; software-defined networking, virtualization, and automation concepts that support the digitalization of networks; and identifying and protecting against cybersecurity threats. Emphasis on the attainment of Cisco CCNA certification. PREREQ: CNST 124 and CNST 127. COREQ: CNST 129. *(3 lecture hours, 6 lab hours, 6 credits)*

CNST 199 Cisco Networking and Security Technologies 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)*

CNST 230 Linux Essentials
(4 Credits, Fall)
Introduction to the Linux command-line and associated tool usage, file management, user accounts, settings management, and systems security. Includes installation, configuration, and troubleshooting of the Linux operating system. This course aligns with the LPIC-1: Linux Administrator certification. PREREQ: CNST 129 and CNST 135. COREQ: CNST 238 and CNST 240. *(2 lecture hours, 4 lab hours, 4 credits)*

CNST 238 Cisco Certified Network Associate (CCNA) Cyber Ops
(4 Credits, Fall)
Examination of the roles and responsibilities of members on an IT security team. Includes computer forensics, threat analysis, and incident response for network security administrators and engineers using Cisco equipment and devices. The curriculum in this course is aligned with, and emphasizes the attainment of, the Cisco certification exam 200-201 Understanding Cisco Cybersecurity Operations Fundamentals (CBROPS). Students are required to attain instructor verification of current Cisco CCNA certification prior to registration. PREREQ: CNST 129, CNST 135, and PERM/INST. COREQ: CNST 230 and CNST 240. *(2 lecture hours, 4 lab hours, 4 credits)*

CNST 240 Virtualization Technologies
(4 Credits, Fall)
Concepts and configuration of enterprise virtualization. Includes virtual machine provisioning and resource management. PREREQ: CNST 129 and CNST 135. COREQ: CNST 230 and CNST 238. *(2 lecture hours, 4 lab hours, 4 credits)*

CNST 242 Cisco DevNet Associate
(4 Credits, Spring)
Examination of basic networking applications and how to implement automation workflows across network, security, collaboration, and computing infrastructure. Includes use of Cisco and other application program interfaces (APIs), as well as modern development tools. This course meets the requirements for the Cisco Certified DevNet Associate certification. PREREQ: CNST 230, CNST 238, and CNST 240. COREQ: CNST 244 and CNST 248. *(2 lecture hours, 4 lab hours, 4 credits)*

CNST 244 Linux Advanced
(4 Credits, Spring)
Examines the advanced installation, configuration, and troubleshooting of the Linux operating system. Includes advanced networking services, email and file servers, and automation services. This course aligns with the LPIC-2: Linux Engineer certification. PREREQ: CNST 230, CNST 238, and CNST 240. COREQ: CNST 242 and CNST 248. *(2 lecture hours, 4 lab hours, 4 credits)*

CNST 248 Python Programming for Cisco
(4 Credits, Spring)
Examines the basic elements of programming in Python, as well as general computer programming concepts and techniques. Students will become familiar with the object-oriented approach, coding tasks, and fundamental notions and techniques used in object-oriented programming in association with Cisco equipment and APIs. This course meets the requirements for the PCEP. Certified Entry-Level Python Programmer certification. PREREQ: CNST 230, CNST 238, and CNST 240. COREQ: CNST 242 and CNST 244. *(2 lecture hours, 4 lab hours, 4 credits)*

CNST 296 Cisco Networking & Security Technologies Independent Study
(1-10 Credits, Varies)
This is a term-long project. Each credit hour is equivalent to 45 hours of work on a project. Students should make arrangements with the instructor in their field of interest. Before enrolling for independent study, a student must obtain approval of the department chair and dean, acting on the recommendation of the instructor who will be supervising the independent study. An Independent Study Registration Form must be completed and turned into a One Stop Student Services location before a student may register for this course. PREREQ: PERM/INST and submission of a completed Independent Study Registration Form. *(0 lecture hours, 0 lab hours, 1 credits)*

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