

© DUAL ENROLLMENT

# Cybersecurity Pathway

For Continuing Students

**Pre-requisites needed:**

**COUN 140 OR 150, CIS 190 & CIS 230**



## CIS 195 C: NETWORK SECURITY

Prepares students to identify network security threats & implement procedures for securing networks. Topics covered include CompTIA's Security+ certificate, malware & social engineering attacks, basic cryptography, wireless network security, access control, authentication, risk management & vulnerability assessment are covered. (CSU)



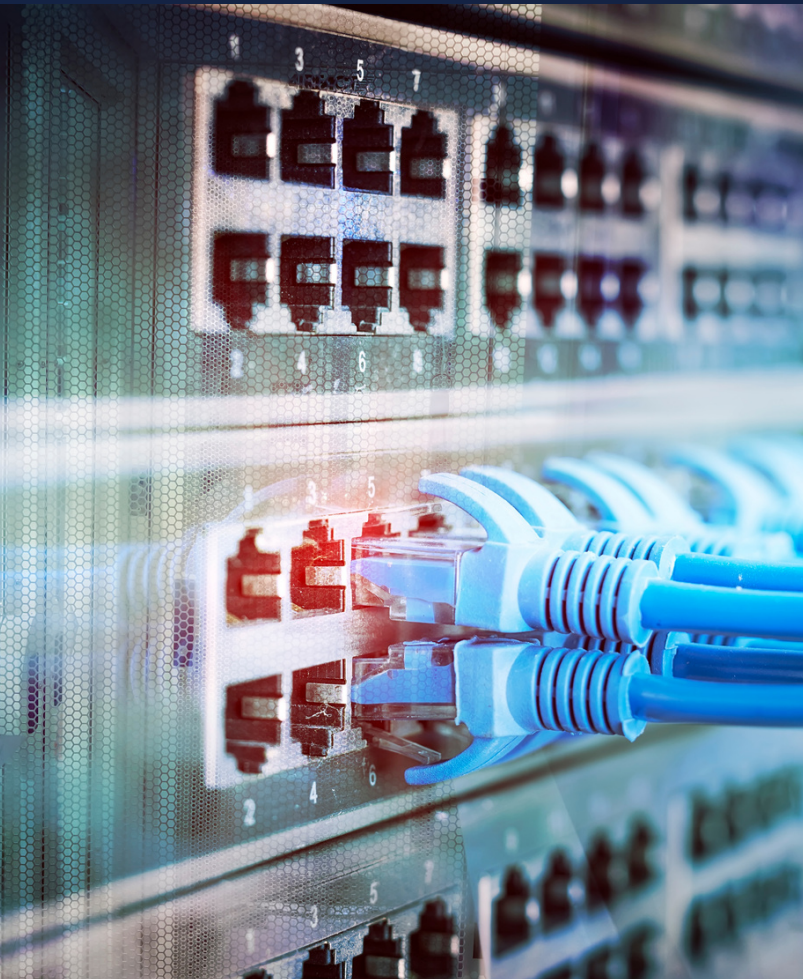
## CIS 196 C: ETHICAL HACKING

Provides students with basic anti-hacking network security concepts and hands-on skills. Important network security topics covered in CEH (Certified Ethical Hacker) certificate such as network and computer attacks, footprinting, port scanning, enumeration, cryptography and OS vulnerabilities are covered. (CSU)



## CIS 247 C: PYTHON PROGRAMMING

In this course, students will obtain a hands-on introduction to the Python language, Python tools, Python applications, and Python Web programming. Through lectures and laboratory work, students learn the skills of Python programming. (CSU/UC, C-ID: COMP 122)



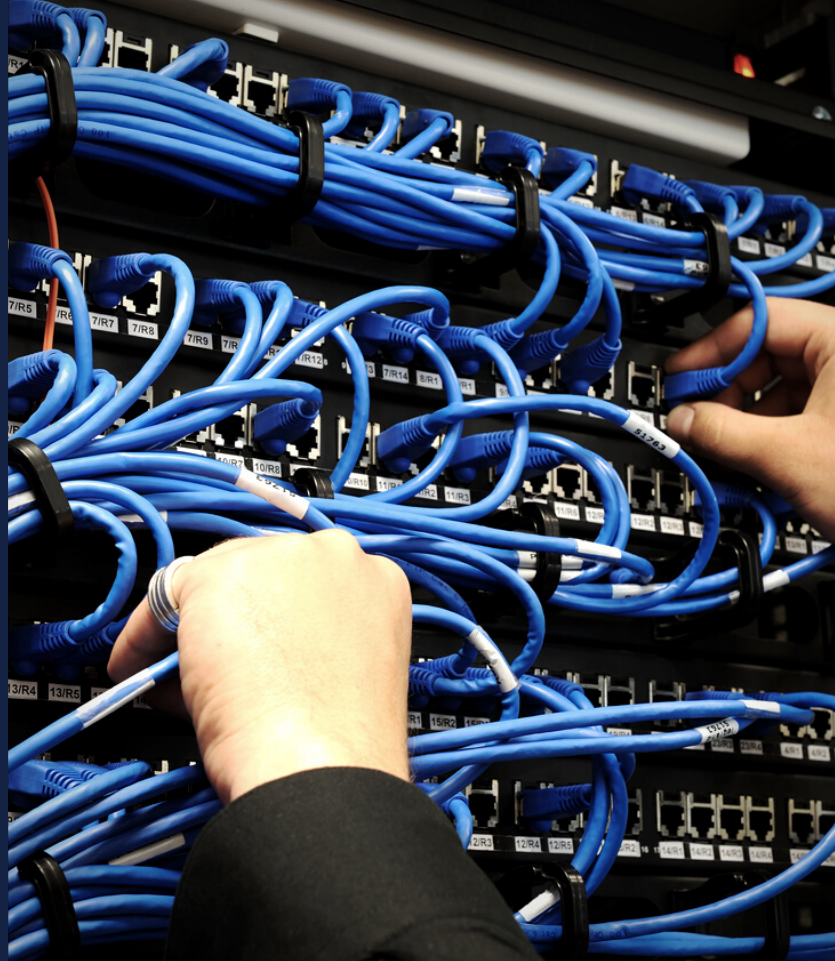
## CIS 231 C: CISCO NETWORKING 2

Introduces students to router fundamentals, router setup and configuration, network management, routing and routed protocols, and network troubleshooting. Topics include: managing Cisco IOS software, Distance Vector Routing Protocols, TCP/IP suite error and control messages, basic router troubleshooting, and access control lists. (CSU)



## CIS 232 C: CISCO NETWORKING 3

Focuses on advanced IP addressing techniques; Variable Length Subnet Masking (VLSM), intermediate routing protocols (RIP v2, single-area OSPF, EIGRP), command-line interface configuration of switches, Ethernet switching, Virtual LANs (VLANs), Spanning Tree Protocol (STP) and VLAN Trunking Protocol (VTP). (CSU)



## CIS 233 C: CISCO NETWORKING 4

Focuses on advanced IP addressing techniques; Network Address Translation (NAT), Port Address Translation (PAT), and DHCP; WAN technology and terminology; PPP, ISDN, DDR, Frame Relay, network management, and introduction to optical networking.(CSU)





## CIS 257 C: CLOUD IMPLEMENTATION AND SECURITY

This course prepares students to understand cloud computing, analyze cloud technologies, secure cloud infrastructures, learn different cloud types and services, and manage virtual servers and cloud storage. The course also will cover the topics of virtualization, software defined networks, storage, and various vendor cloud products, and programming models. (CSU)



## CIS 295 C: CIS INTERNSHIP

This course is designed to give the student credit for work experience at a related occupational worksite, while being concurrently enrolled in a vocational major. For each unit of credit, a minimum of 75 paid or 60 unpaid worksite internship hours is required. The internship allows students to apply knowledge gained in college courses to an actual work setting, sample career choices and improve job-readiness skills. (CSU)

