CISCO NETWORKING AND SECURITY TECHNOLOGIES - ADVANCED TECHNICAL CERTIFICATE (ATC)

Explore More About This Program: https://cwi.edu/program/cisco-networking-and-security-technologies

Certificate Quick Facts

- **Instructional School:** Science, Technology, and Math
- **Department:** Computer Science and Information Technology
- **Program Code:** CNST.ATC
- **Program Type:** Career and Technical Education
- **Available Fully Online:** No
- **Eligible for Federal Financial Aid:** Yes

NOTE: Courses required for this program *may* have an additional fee; more information can be found on the Special Course Fees web page.

Certificate Requirements

Course	Course Title	Min Credits
General Education Requirements		
Select one of the following:		3
GEM 1 - Written Communication course		
GEM 2 - Oral Communication course		
GEM 3 - Mathematical Ways of Knowing course		3
GEM 6 - Social & Behavioral Ways of Knowing course		3
Major Requirements		
CNST 124	IT Essentials	6
CNST 127	Introduction to Networks	6
CNST 129	Switching, Routing, and Wireless Essentials	6
CNST 135	Enterprise Networking, Security, and Automation	6
CNST 230	Linux Essentials	4
CNST 238	Cisco Certified Network Associate (CCNA) Cyber Ops	4
CNST 240	Virtualization Technologies	4
CNST 242	Cisco DevNet Associate	4
CNST 244	Linux Advanced	4
CNST 248	Python Programming for Cisco	4
Minimum Credit Hours Required		**57**

Certificate Plan: Fall Start

The course sequence listed below is strongly recommended in order to complete your program requirements. Many Career and Technical Education (CTE) courses have prerequisites and/or corequisites that have been accounted for within this Plan of Study Guide. Please register for your major requirements each semester as shown below using the Student Planning tool in myCWI. Consult your advisor for any questions regarding this plan.

NOTE: The required general education courses may be completed during any semester the student prefers, including summer semesters.

First Year

Fall

		Credit Hours
CNST 124	IT Essentials	6
CNST 127	Introduction to Networks	6
Select one of the following:		3
GEM 1 - Written Communication course		
GEM 2 - Oral Communication course		
Total Semester Credit Hours		**15**

Spring

CNST 129	Switching, Routing, and Wireless Essentials	6
CNST 135	Enterprise Networking, Security, and Automation	6
GEM 3 - Mathematical Ways of Knowing course		3
Total Semester Credit Hours		**15**

Second Year

Fall

CNST 230	Linux Essentials	4
CNST 238	Cisco Certified Network Associate (CCNA) Cyber Ops	4
CNST 240	Virtualization Technologies	4
GEM 6 - Social & Behavioral Ways of Knowing course		3
Total Semester Credit Hours		**15**

Spring

CNST 242	Cisco DevNet Associate	4
CNST 244	Linux Advanced	4

CNST 248	Python Programming for Cisco	4
	Total Semester Credit Hours	**12**
	Minimum Credit Hours Required	**57**

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Use network protocol models to explain the layers of communication in data networks.
- Use Cisco CLI commands to perform basic router and switch configuration and verification.
- Configure and verify router interfaces.
- Use advanced configuration commands with routers implementing EIGRP.
- Troubleshoot common network problems at Layers 1, 2, 3, and 7 using a layered model approach.
- Configure, verify, and troubleshoot VLANs, interVLAN routing, VTP, trunking on Cisco switches, and RSTP operation.
- Configure, verify, and troubleshoot DHCP and DNS operation on a router.
- Configure and verify a PPP connection between Cisco routers and Frame Relay on Cisco routers.
- Configure, verify, and troubleshoot storage area networks.
- Configure, verify, and troubleshoot enterprise virtualization.