

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 249	Command Line and Scripting Fundamentals	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 course sequence plan. 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 249	Command Line and Scripting Fundamentals	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 for use in network design and troubleshooting.
- Demonstrate an understanding of switching concepts and LAN design to include the use of Virtual LANs with LAN trunking configured by the Spanning Tree Protocol.
- Configure and verify switches for network operation.
- Demonstrate an understanding of routing fundamentals, subnets, and IP addressing schemes.
- Configure and verify routers for network operation.
- Design, plan, implement, operate, and troubleshoot wired and wireless networks.