

Minnesota North College - Hibbing Campus
Cisco Networking Technician

Academic Year 2022-23
Certificate (17 credits)

| FALL SEMESTER 2022 – 6 Credits Minimum | | CREDITS | HOURS LEC/LAB |
|--|------------------------------------|----------------|--------------------------|
| CNT 1010 | Network Fundamentals | 3 | 2/2 |
| CNT 1020 * | Router Theory and Technology | 3 | 2/2 |
| SPRING SEMESTER 2023 – 6 Credits Minimum | | | |
| CNT 1030 * | Advanced Routing and Switching | 3 | 2/2 |
| CNT 1040 * | Advanced Networking and Management | 3 | 2/2 |
| ELECTIVES – 5 Credits Required. Can be taken fall or spring semester. | | | |
| CNT 1100 | CISCO Certificate Preparation | 1 | 0/2 |
| CNT 2010 * | Information Assurance | 3 | 2/2 |
| CNT 2070 * | Digital Forensics | 3 | 2/2 |
| ITNS 2010 | Linux Install and Administration | 3 | 1/4 |
| ITNS 2020 | Linux Networking and Security | 3 | 1/4 |
| ITNS 2140 | Microsoft MTA Server | 6 | 3/6 |
| ITNS 2560 | Wireless Networking Technologies | 3 | 2/2 |
| ITNS 2580 | IT Project Management | 3 | 2/2 |

* Course has prerequisite requirements.

PROGRAM DESCRIPTION

The Cisco Networking Technician program provides comprehensive, project-based training in computer network design, set-up, maintenance, troubleshooting, and administration. Students participate in hands-on projects which provide experimental learning while preparing for the CCNA certification exam. This exam, given at the completion of one year, determines if the student is fully qualified to work as a Cisco Certified Networking Associate. Throughout the year, students are learning about network operations and management.

PROGRAM OUTCOMES

Upon completion of the CISCO Networking program, the graduate will be able to:

1. Work collectively and collaboratively, exhibiting skills in leadership and the use of clear and concise communication.
2. Design and implement Internet Protocol version 4 (IPv4) and Internet Protocol version 6 (IPv6), addressing schemes and services to meet public and private network requirements.
3. Demonstrate configuration, verification, and troubleshooting of advanced switching, implementing VLANs, trunking, SVIs, Spanning Tree and switch security.
4. Describe the purpose and basic operation of the protocols in the Open Systems Interconnection (OSI) and Transmission Control Protocol (TCP) models and their associated protocols.
5. Demonstrate configuration, verification, and troubleshooting of advanced routing, implementing static and dynamic routing protocols, secure remote access, management of Internetwork Operating System (IOS) files and licensing, and router security.
6. Implement, secure, and verify Wide Area Network (WAN) links using industry standard protocols and virtual private network (VPN) operations.
7. Analyze and implement proper strategies and methods to troubleshoot data network operations using monitoring tools and network management protocols.

Cisco Networking Technician Certificate

Page 2

EMPLOYMENT OPPORTUNITIES

Upon completion of this program, students will be trained and ready for a career in a field experiencing critical shortages and high-income potential. Entry-level Network Administrators with less than 1-year of experience can expect to earn an average compensation of \$49,436 (payscale.com) and faster than average growth. The Minnesota Department of Employment states a median wage of \$32.36 per hour for computer network support specialists for the first quarter of 2021.

PROGRAM FACULTY

DJ Erickson

dj.erickson@minnesotanorth.edu

Joyce Shalaby

joyce.shalaby@minnesotanorth.edu



Minnesota North College, a member of Minnesota State, is an affirmative action, equal opportunity employer and educator.
This document is available in alternate formats upon request by going to www.MinnesotaNorth.edu to obtain the contact information of your home campus Accessibility Services coordinator.

AASC Approval Date: 11-29-2021
Document Updated: 08-01-2022