



## Network Administration and Security Certificate - 30 credits

Program Area: Computer Information Systems (Fall 2023)

**\*\*\*REMEMBER TO REGISTER EARLY\*\*\***

### Program Description

The Computer Networking Certificate is designed to prepare participants with foundation level skills for a job in computer networking. Students are prepared for CompTIA (A+, Network+, Security+), and Cisco RSTech.

This 30-credit certificate seamlessly transfers to the Network Administration and Cybersecurity Diploma (58 credits) and the AAS (72 credits).

### Program Outcomes

- Perform PC configuration and maintenance tasks, including hardware and OS installation and troubleshooting, and configuration for network services
- Describe the OSI Reference Model, layered communications principles, and routing, bridging and switching principles and devices, and use these concepts effectively in verbal and written communication
- Manage Cisco router hardware and the Cisco Internet Operating System (IOS), including planning, installation, configuration, management, upgrading and troubleshooting of routers and switches
- Analyze organizational networking needs, and design and implement Local Area and Wide Area Networks (LANs and WANs), including hardware and software configuration and management, and security (access control)

### Required Courses

Number	Name	Credits	Term
CIS 1402*	Foundations of CIS	3	
CIS 1521*	A+ Operating Systems Technologies	3	
CIS 1522*	A+ Core Hardware	3	
CIS 1946*	CISCO Networking I	3	
CIS 1950*	Windows Client Administration	3	
CIS 1745*	UNIX System Administration	3	
CIS 1810*	Security Fundamentals	3	
CIS 1947*	CISCO Networking II	3	
CIS 1952*	Windows Server Administration	3	
Technical Electives	Choose one of the following: CIS 1500* Computer User Support CIS 2560* Web Server Administration CIS 2811* Intrusion Detection and Prevention Systems Fundamentals CIS 2812* Network Security CIS 2813* Forensics and Incident Response CIS 2814* Ethical Hacking and Systems Defense CIS 2815* Cloud Computing CIS 2973* Server Virtualization	3	
<b>Total Credits</b>		<b>30</b>	

\*Requires a prerequisite or a concurrent course

### Pre-program Requirements

Successful entry into this program requires a specific level of skill in the areas of English/reading and mathematics.

#### English/Reading:

- Eligible for ENGL 1106 - College Composition I, or
- Completion of ENGL/READ 0950/0955 (or equivalent or higher). ENGL/READ 0950/0955 may be taken concurrently with Semester I coursework.



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### Mathematics:

- Eligible for MATH 0970 - Intermediate Algebra, or
- Completion of MATH 0950/0955 (or equivalent or higher). MATH 0950/0955 may be taken concurrently with Semester I coursework.

There are other ways to qualify. Visit [Course Placement](https://lsc.edu/course-placement) (lsc.edu/course-placement) to find out more.

For interpretation of test results and selection of appropriate coursework; or general information about the program, admissions, financial aid, and getting started at LSC, contact the [professional advising team](mailto:advising@lsc.edu) (advising@lsc.edu) or 218-733-7601

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For more information about the Network Administration and Security Certificate including course descriptions, course prerequisites, the program report, and potential career opportunities, see the [program website](https://degrees.lsc.edu/ccna/) (https://degrees.lsc.edu/ccna/)

or

Contact Faculty Advisors, [Tom Gustafson](mailto:thomas.gustafson@lsc.edu) (thomas.gustafson@lsc.edu) at 218-733-7773 or [Matthew McCullough](mailto:matthew.mccullough@lsc.edu) (matthew.mccullough@lsc.edu) at 218-733-6943

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MINNESOTA STATE

CIP Code: 11.1001  
Minnesota State Program ID: 6543  
LSC Major ID: 5613

Created: 3/1/05  
AASC Approval: 12/1/21  
Updated: 2/1/23

*All courses in diploma and/or certificate programs are acceptable for credit toward Lake Superior College degree programs as indicated on individual program planners. This is not a contract; Lake Superior College reserves the right to change the planner as necessary. This document is available in alternative formats upon request, by contacting [Disability Services](#) or (218) 733-7650 or MRS/TTY (800) 627-3529.*