



Network Administration and Security Certificate - 30 credits

Program Area: Computer Information Systems (Fall 2020)

*****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+), Microsoft MCP, and Cisco CCENT.

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	Network Administration: Windows Client	3	
CIS 1745	UNIX System Administration	3	
CIS 1810*	Security Fundamentals	3	
CIS 1947*	CISCO Networking II	3	
CIS 1952*	Windows Server Administration	3	
<i>Technical Electives</i>	<i>Choose one of the following:</i>	3	
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 2972*	SQL Server Administration		
CIS 2973*	Server Virtualization		

Total Credits 30

*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:

- A score of 250 or higher on the reading portion of the Accuplacer, or
- Completion of ENGL/READ 0950 or 0955 (or equivalent course or higher). ENGL/READ 0955 may be taken concurrently with Semester I coursework.



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Mathematics:

- A score of 270 or higher on the Arithmetic portion of the Accuplacer, or
- A score of 236 or higher on the QAS portion **and** a score of 236 or higher on the Arithmetic portion of the Accuplacer, or
- Completion of MATH 0460 (or equivalent course or higher). MATH 0460 may be taken concurrently with Semester I coursework.

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:pat@lsc.edu) (pat@lsc.edu) or 218-733-7601

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 [Valarie McLain](mailto:valarie.mclain@lsc.edu) (valarie.mclain@lsc.edu) at 218-733-7763



MINNESOTA STATE

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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.