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

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Credits</th>
<th>Term</th>
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<tbody>
<tr>
<td>CIS 1402</td>
<td>Foundations of CIS</td>
<td>3</td>
<td></td>
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<tr>
<td>CIS 1521</td>
<td>A+ Operating Systems Technologies</td>
<td>3</td>
<td></td>
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<tr>
<td>CIS 1522</td>
<td>A+ Core Hardware</td>
<td>3</td>
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<tr>
<td>CIS 1946</td>
<td>CISCO Networking I</td>
<td>3</td>
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<td>CIS 1950</td>
<td>Network Administration: Windows Client</td>
<td>3</td>
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<tr>
<td>CIS 1745</td>
<td>UNIX System Administration</td>
<td>3</td>
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<tr>
<td>CIS 1810*</td>
<td>Security Fundamentals</td>
<td>3</td>
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<tr>
<td>CIS 1947*</td>
<td>CISCO Networking II</td>
<td>3</td>
<td></td>
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<tr>
<td>CIS 1952*</td>
<td>Windows Server Administration</td>
<td>3</td>
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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 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.
Network Administration and Security Certificate - 30 credits
Program Area: Computer Information Systems (Fall 2020)

***REMEMBER TO REGISTER EARLY***

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 (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/)
or

Contact Faculty Advisors, Tom Gustafson (thomas.gustafson@lsc.edu) at 218-733-7773 or Valarie McLain (valarie.mclain@lsc.edu) at 218-733-7763

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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.