Program Requirements Guide 2019 - 2020

Computer Network Engineering AAS DEGREE

Program Overview
Networking Specialists can work in a wide variety of jobs. The work could include purchasing, installing, configuring, administrating and/or supporting. Some jobs in networking could include computer network support, user training, installing and maintaining local and/or wide area networks.

The student should have excellent communication and math skills. For the certificate programs, the student is expected to have prior microcomputer and/or networking experience. He/she should exhibit qualities of patience, perseverance and preciseness and be a logical thinker. The student should enjoy working in a team environment and be able to work independently.

Career Opportunities
With almost every size company connected to some type of network, the jobs in networking have become the fastest growing jobs in the computer field. With companies networking to share resources and reduce expenses the networking specialist is an invaluable part of the new company structure. There is a wide variety of jobs in networking including installation, maintenance, training, managing and user support.

Graduates find excellent opportunities as Network Administrators, Network Support, and Certified Network Engineers in business, manufacturing, government and education. Jobs for Networking Specialists for all types of installations are found throughout the country with opportunities for excellent earnings and rapid advancement. Jobs include the following:

- Networking Engineer
- Network Help Desk Support
- Data Communications Specialist
- PC Network Administrator
- Information Specialist
- WAN Manager Network Administrator
- LAN Specialist
- Telecommunications Specialist
- Certified Network Engineer
- LAN Manager

Program Outcomes
1. Graduates will have knowledge and skills in computer network engineering.
2. Graduates will have knowledge and experience in system design, analysis and maintenance.
3. Graduates of the Computer Network programs will be prepared for employment as computer network engineers.
4. Graduates will be prepared to take industry certification exams.

Program Faculty
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Part-Time/Full-Time Options
Some day and evening class availability. Students may attend full time or part time.

Program Requirements
☐ Check off when completed

Course
☐ CSCI 1410 Computer Science & Information Systems ........................................... 4
☐ CSCI 1423 Computer Networking 1 – Client .................................................. 4
☐ CSCI 1440 Networking Fundamentals ......................................................... 4
☐ CSCI 1523 Intro to Computing and Programming Concepts .......................... 4
☐ CSCI 2420 Computer Security ................................................................. 4
☐ CSCI 2451 Computer Networking 2 – Server .............................................. 4
☐ CSCI 2453 Computer Virtualization ............................................................. 4
☐ CSCI 2461 Computer Networking 3 – Linux ............................................... 4
☐ CSCI 2465 Computer Networking 4 – Infrastructure ........................................ 4
☐ CSCI 2475 A+ Hardware/Operating System Prep ......................................... 4
☐ CSCI 2570 Machine Architecture and Organization ........................................ 4
Subtotal .................................................... 44

General Education Requirements

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area:
☐ Goal 1: Communication ................................................................. 7
ENGL 1711 Composition 1 + 4 cr
COMM 17XX – 3 cr
☐ Goal 3 or Goal 4 ................................................................. 3
☐ Goal 3: Natural Sciences OR
Goal 4: Mathematical/Logical Reasoning ........................................... 3
(MATH 1730 or proficiency required)
Goal 5: History, Social and Behavioral Sciences .................................. 3
Goal 6: Humanities and Fine Arts .................................................. 3
Subtotal .................................................... 16

Total Program Credits ............................................. 60

See back of this guide for Transfer Opportunities

Information is subject to change.
This Program Requirements Guide is not a contract.
Computer Network Engineering AAS DEGREE (continued)
(44 credits + 16 GenEd credits)

Transfer Opportunities

Saint Paul College has a transfer articulation agreement between the following program and post-secondary institutions for the baccalaureate degree program listed below.

For more information please go to saintpaul.edu/Transfer.

Computer Network Engineering AAS

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<th>BA</th>
<th>Individualized Studies</th>
<th>BS</th>
<th>Information Technology</th>
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<tbody>
<tr>
<td></td>
<td>Metropolitan State University</td>
<td></td>
<td>Saint Mary's University, Twin Cities Campus</td>
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<tr>
<td>BS</td>
<td>Computer Information Systems</td>
<td>BS</td>
<td>Operations Management</td>
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<td></td>
<td>College of St. Scholastica</td>
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<td>Minnesota State University, Moorhead</td>
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Minimum Program Entry Requirements

Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 78+ or grade of “C” or better in READ 0722
Writing: Score of 78+ or grade of “C” or better in ENGL 0922
College Level Mathematics: Score of 50+ or grade of “C” or better in MATH 0920

Assessment Results and Prerequisites:

Students admitted into Saint Paul College programs may need to complete additional courses based on assessment results and course prerequisite requirements. Certain MATH, READ, and ENGL courses have additional prerequisites.

The below chart illustrates the courses required for completion of this degree.