

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. Design, construct and maintain computer networks.
2. Install, configure and maintain workstation and server based operating systems.
3. Explain the OSI model.
4. Develop programs and scripts needed to support network administration.
5. Troubleshoot hardware and software problems in a network environment.

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	Cr
<input type="checkbox"/> CSCI 1410 Computer Science & Information Systems	4
<input type="checkbox"/> CSCI 1423 Computer Networking 1 – Client OR CSCI 1475 A+ Hardware/Operating System Prep	4
<input type="checkbox"/> CSCI 1440 Networking Fundamentals	4
<input type="checkbox"/> CSCI 1523 Intro to Computing and Programming Concepts	4
<input type="checkbox"/> CSCI 2420 Computer Security	4
<input type="checkbox"/> CSCI 2451 Computer Networking 2 – Server	4
<input type="checkbox"/> CSCI 2453 Computer Virtualization	4
<input type="checkbox"/> CSCI 2461 Computer Networking 3 – Linux	4
<input type="checkbox"/> CSCI 2465 Computer Networking 4 – Infrastructure	4
<input type="checkbox"/> CSCI 2480 Network Security & Penetration Prevention	4
<input type="checkbox"/> CSCI 2485 Computer Networking 5 – Cisco Enterprise Networking	4
Subtotal	44

General Education Requirements Cr

Refer to the Minnesota Transfer Curriculum Course List for each Goal Area

<input type="checkbox"/> Goal 1: Communication	7
ENGL 1711 Composition 1 – 4 cr	
COMM 17XX – 3 cr	
<input type="checkbox"/> Goal 3 or Goal 4	3
Goal 3: Natural Sciences OR	
Goal 4: Mathematical/Logical Reasoning	
<input type="checkbox"/> Goal 5: History, Social Science and Behavioral Sciences	3
<input type="checkbox"/> Goal 6: Humanities and Fine Arts	3
General Education Requirements	16

Total Program Credits60

Program Start Dates

Fall, Spring, Summer

Course Sequence

The following sequence is recommended for a full-time student. Not all courses are offered each semester.

First Semester

CSCI 1410 Computer Science & Information Systems	4
CSCI 1423 Computer Networking 1 – Client OR CSCI 1475 A+ Hardware/Operating System Prep	4
CSCI 1440 Networking Fundamentals	4
Goal 1: ENGL 1711 Composition 1	4
Total Semester Credits	16

Second Semester

CSCI 2420 Computer Security	4
CSCI 2461 Computer Networking 3 – Linux	4
CSCI 2465 Computer Networking 4 – Infrastructure	4
Goal 1: COMM 17XX	3
Total Semester Credits	15

Third Semester

CSCI 1523 Intro to Computing and Programming Concepts	4
CSCI 2453 Computer Virtualization	4
Goal 3: Natural Science	
OR Goal 4: Mathematical/Logical Reasoning	3
Goal 5: History, Social and Behavioral Sciences	3
Total Semester Credits	14

Fourth Semester

CSCI 2451 Computer Networking 2 – Server	4
CSCI 2480 Network Security & Penetration Prevention (spring only)	4
CSCI 2485 Computer Networking 5 – Cisco Enterprise Networking (spring only)	4
Goal 6: Humanities and Fine Arts	3
Total Semester Credits	15

Total Program Credits60

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)

Minimum Program Entry Requirements
 Students entering this program must meet the following minimum program entry requirements:

Reading: Score of 250+ or grade of "C" or better in READ 0722 or READ 0724 or EAPP 0900

Writing: Score of 250+ on Reading Comprehension or grade of "C" or better in ENGL 0922 or EAPP 0900

Adv. Algebra & Functions: Score of 250+ 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.

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Transfer Opportunities

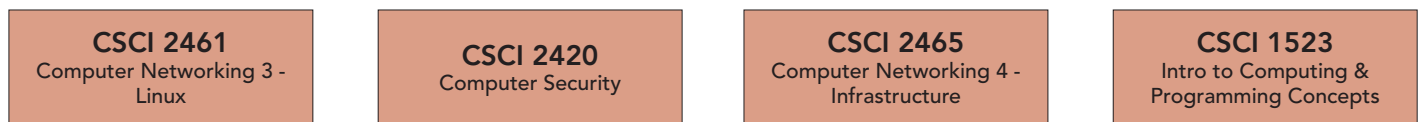
Saint Paul College has transfer agreements & partnerships between many post-secondary institutions. For more information please go to saintpaul.edu/Transfer.

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

Introductory



Intermediate



Advanced (offered once per year)

