

IT-NETWORK SPECIALIST



Program Code 10-150-2
Expected Program Costs: \$10,500
Median Annual Salary: \$36,000

OVERVIEW

Computers have become essential tools in almost every type of activity in virtually every form of business. To increase efficiency of their use, LANs (Local Area Networks) and WANs (Wide Area Networks) are used to interconnect computers and their supporting devices to enable data and resources to be shared. As a result, network specialists who install and ensure efficient operation of LANs and WANs are in high demand.

The network specialist administers and supports personal computer and network environments that include installation, troubleshooting, analysis and repair.

The IT-Network Specialist program is offered at the Stevens Point and Wisconsin Rapids campuses.

PROGRAM OUTCOMES

Employers will expect you, as an IT-Network Specialist graduate, to be able to:

- Design and implement the hardware and software aspects of a basic network
- Install, configure, administer, maintain and enhance a network operating system and client environment
- Analyze and solve network problems using a structured problem solving process
- Demonstrate effective customer service
- Develop and interpret a variety of technical documentation manuals
- Perform professionally and effectively in team, individual and cross-cultural work settings
- Demonstrate knowledge of appropriate IT concepts and terminology when communicating with clients, co-workers, team members and management

CAREER OPTIONS

Help Desk Specialist
Network Administrator
PC Support Specialist
Technical Support Analyst

POTENTIAL FOR ADVANCEMENT

Information Systems Director
Project Manager
Senior Network Administrator

Potential advancement generally requires further education.

ADMISSIONS PROCEDURES

To apply to the IT-Network Specialist program, please submit the following documents to the MSTC Admissions Office:

1. Complete an MSTC application form and return it with the \$30 non-refundable application fee.
2. Complete the Accuplacer or ACT test.
Minimum scores required:
 - Reading-Accuplacer score of 55
 - Sentence Skills-Accuplacer score of 60
 - Math-Accuplacer score of 34
 - ACT equivalents for above scores are acceptable.

If a student does not meet the required test scores, they may retest or complete an identified structured course(s) in the Academic Support Center.

- Written Communication, courses in mathematics and some science courses have placement requirements. Please refer to the course description section in the back of the catalog, listed under General Education, for course specific information.
3. Submit an official copy of all academic transcripts, including high school, college or university and HSED/GED.

**Mid-State Technical College
Admissions
500 32nd Street North
Wisconsin Rapids, WI 54494**

PROGRAM COURSE DESCRIPTION

10102101 // 3 credits Intro to Business

An introduction to what a business is, how it operates, and how it is managed. Students will identify forms of ownership and the processes used in production and marketing, finance, personnel and management in business operations.

10102103 // 3 credits Business Law & Ethics

This course will introduce the student to basic ethical theories and value systems; students will apply these perspectives to moral issues, problems, situations which arise within the business environment. Emphasis will be placed on how the applicable laws are being interpreted.

10103106 // 3 credits Microsoft Office-Introduction

Develops introductory skills in the Microsoft Office Suite (Word, Excel, Access, PowerPoint, and Outlook) while reinforcing the students' knowledge of computer concepts, Windows Explorer and Internet usage through demonstrations and lab exercises. Students should possess basic keyboarding, mouse and Windows XP skills. Students may develop these skills in Academic Support Center computer training prior to enrolling or while concurrently enrolled in the Microsoft Office-Introduction course.

10105160 // 3 credits Business Law

Examines the classifications of law, elements of legal contracts, and business applications. Negotiable instruments, sales and bailment contracts, principal-agent relations, and real estate law are also explained. Ethical practices are emphasized rather than narrow, legal definitions.

10150101 // 3 credits Network Fundamentals

This CISCO Academy based course develops skill in PC hardware and software troubleshooting including installation of hardware components and problem determination and correction of malfunctioning hardware and software.

Corequisite: Windows Operating Systems 10103102 or Microsoft Office-Introduction 10103106

10150110 // 3 credits IT Troubleshooting-Beginning

This CISCO Academy based course provides an introduction to networking that includes terminology, basic concepts of planning, designing, implementing, troubleshooting and administration. Topics included are peer-to-peer versus server-based networks, network topologies, media, interface cards, protocols and architectures. An in-depth coverage of the OSI model is included.

Prerequisite: Network Fundamentals 10150101

10150111 // 3 credits IT Troubleshooting-Intermediate

This CISCO Academy based course expands upon basic network concepts covered in IT-Troubleshooting-Beginning. Topics include planning a network upgrade, configuration and management of networking devices, addressing structure, routing, ISP services, and troubleshooting network problems.

Prerequisites: IT Troubleshooting-Beginning 10150110 and Network Fundamentals 10150101

10150120 // 3 credits Network Administration-Beginning

This course develops skill in the design, installation, administration and management of computer networks. Topics include: network design, installation and configuration of a commonly used Network Operating System, service packs and updated drivers, user accounts, groups, profiles and policies, file system security, printer management, application software installation, backup and recovery.

Prerequisite: Network Fundamentals 10150101

CURRICULUM

Term	(16 credits)
10102101 Intro to Business	3
10103106 Microsoft Office-Introduction	3
10150101 Network Fundamentals	3
10152101 Programming Logic-Beginning	4
10801195 Written Communication	3

Term	(18 credits)
10102103 Business Law & Ethics -or-	
10105160 Business Law	3
10150110 IT Troubleshooting-Beginning	3
10150120 Network Administration-Beginning	3
10152170 Systems Analysis	3
10801196 Oral/Interpersonal Communication -or-	
10801198 Speech	3
10804107 College Mathematics	3

Term	(17 credits)
10150121 Network Administration-Intermediate	3
10150130 Network Operating Systems	3
10150160 Information Security I	3
10154101 IT Customer Support	2
10809144 Macroeconomics	3
10809122 Intro to American Government -or-	
10809172 Race, Ethnic & Diversity Studies -or-	
10809196 Intro to Sociology	3

Term	(17 credits)
10150111 IT Troubleshooting-Intermediate	3
10150141 Supervised Field Experience	2
10150161 Information Security II	3
10809143 Microeconomics	3
10809188 Developmental Psychology -or-	
10809198 Intro to Psychology Elective	3

Total Credits 68

Please Note:

- The IT-Network Specialist program has August and January start dates. We advise you to meet with an academic advisor or counselor to successfully plan your academic schedule.
- This curriculum sequence is only for student planning. Actual student schedules will vary depending on course availability.
- Degree completion time may vary based on student scheduling and course availability.
- For General Education course descriptions (800 level), see section marked under Course Descriptions.

IT-NETWORK SPECIALIST

10150121 // 3 credits

Network Administration-Intermediate

This course expands upon the administration skills needed for successful management of a network operating system in a business environment. Topics include: installation and configuration of a Network Operating System, monitoring and performance tuning, monitoring and analyzing network traffic, licensing, network devices, DNS, FTP, web services and directory services.

Prerequisite: Network Administration-Beginning 10150120

10150130 // 3 credits

Network Operating Systems

This course develops skill in the installation, setup, management, usage and comparison of various network operating systems and network devices.

Prerequisite: Network Administration-Beginning 10150120

10150141 // 2 credits

Supervised Field Experience

Integrates networking skill developed in classroom study with specific occupational experiences at local employment sites and develops work behavior appropriate to the computer information systems environment.

Prerequisite: Completion of at least 20 credits in occupational specific IT-Network Specialist courses or approval by program instructor.

10150160 // 3 credits

Information Security I

This course introduces students to computer network vulnerabilities and threats. Topics include network security terms and concepts, technology organization and the legal and ethical issues associated with network security, techniques and tools to harden operating systems against attacks, and basic configuration of network security devices.

Prerequisite: Network Fundamentals 10150101 and IT Troubleshooting-Beginning 10150110 or equivalent work experience and consent of instructor.

10150161 // 3 credits

Information Security II

This course will go into greater depth with the concepts, techniques and tools introduced in Information Security-Beginning. New tools and techniques for detecting, analyzing, assessing and defending against network attacks will be presented in the context of properly securing a network. The course will emphasize network attack and defense methodologies with lab work focused on learning and using network attack and defense techniques and tools. The role of network device configuration will be explored.

Prerequisite: Information Security I 10150160

10152101 // 4 credits

Programming Logic-Beginning

This course will introduce students to fundamental computer programming logic and terminology. Students utilize the concepts of structures, pseudocode, and modularization in solving problems. The students will then use these tools to program in a current programming language.

Corequisite: Windows Operating Systems 10103102 or Microsoft Office-Introduction 10103106

10152170 // 3 credits

Systems Analysis

A practical course which provides an overview of the Systems Development Life Cycle and then focuses in on the analysis phase of real world computer and manual systems. Students learn concepts, techniques, and tools to aid in the analysis of existing systems, the identification of user requirements, and the design of database files. Both written and oral communications will be emphasized. Most of the work will be done in groups.

Prerequisite: Programming Logic-Beginning 10152101

10154101 // 2 credits

IT Customer Support

Develops skill in serving the needs of computer information system customers and documenting systems and procedures.

Prerequisites: Systems Analysis 10152170; Written Communication 10801195 or consent of instructor