

IT - Network Specialist

68-credit Associate of Applied Science Degree

About the Program

IT - Network Specialist students will benefit from world-class network labs, case projects and a cooperative education experience as they train in the installation and troubleshooting of network operating systems, cabling, Cisco routers and switches, and wireless and other LAN/WAN technologies. Learn from highly qualified instructors who hold a variety of certifications: Microsoft MCSE, MCP; PMI, CCNA; and CompTIA, Network+, Linux+, Security+ and Server+. Students can also obtain certifications by choosing the certification classes as electives while completing the associate degree.

Pearson VUE/Prometric Testing Center

WCTC is both a Pearson VUE and Prometric testing center. We are able to provide day and evening testing for most popular certifications that include:

- Cisco
- CompTIA
- Help Desk Institute
- Linux Professional Institute
- Microsoft
- VMware, Inc.

Potential Job Titles

- Network Administrator
- Network Engineer
- Network Specialist
- Platform Technician
- Product Integration Technician
- Systems Engineer I
- Service Representative
- Client/server Operations Analyst
- Customer Support Technician
- Hardware Integration Engineer

Credit Transfer

Students may choose to continue their education at a four-year college or university such as Carroll College, Milwaukee School of Engineering, UW-Milwaukee, Cardinal Stritch University, University of Phoenix or Ottawa University. Articulation agreements exist that include junior standing. Visit www.wctc.edu/transfer for specific information. Since the details of credit transfers change from time to time, be sure to contact the intended college or university to verify credit transferability.

| Required Courses | | Credits |
|---|----------------------------------|-----------|
| First Semester | | |
| 150-191 | Introduction to Networking | 2 |
| 152-107 | Introduction to Programming | 2 |
| 154-135 | Fundamentals of Support | 2 |
| 631-183 | Computer Hardware Diagnostics | 3 |
| 801-196 | Oral/Interpersonal Communication | 3+ |
| 804-123 | Math with Business Applications | 3+ |
| Total semester credits | | 15 |
| Second Semester | | |
| 107-118 | Information Systems Design | 4 |
| 150-132 | Microsoft Windows Vista | 3 |
| 150-139 | Server 2008 Active Directory | 3 |
| 152-110 | Applications of Web Technology | 2 |
| 801-195 | Written Communication | 3+ |
| Total semester credits | | 15 |
| Third Semester | | |
| 150-155 | Server+ Adv Server Mgmt | 3 |
| 150-180 | Win03 TCP/IP Protocols/Service | 3 |
| 150-185 | Linux Fundamentals I | 3 |
| 150-186 | Linux Fundamentals II | 3 |
| 809-166 | Intro to Ethics: Theory & App | 3 |
| 809-195 | Economics | 3+ |
| Total semester credits | | 18 |
| Fourth Semester | | |
| 102-151 | Business Co-op I | 3 |
| 150-156 | Security+Network Security Impl | 4 |
| 150-174 | Network Communication Analysis | 4 |
| 809-196 | Introduction to Sociology | 3+ |
| 809-199 | Psychology of Human Relations | 3 |
| | Elective | 3 |
| Total semester credits | | 20 |
| + Proficiency exam available | | |
| <i>Curriculum is current as of catalog printing. The most current curriculum requirements for graduation will be provided upon admission to program, or review at www.wctc.edu.</i> | | |

Admission Process

- Fill out a WCTC application
- Send \$30 non-refundable application fee
- Send high school transcript or GED/HSED
- Send any previous college transcripts
- Complete Skills Assessment test (COMPASS)
- Begin pursuing Financial Aid options

For more information, call 262.691.5200.

IT - Network Specialist Required Courses

- 102-151 Business Co-Op I** 3
 Focus on goal setting, interpersonal relationships, and project activities during this occupational experience. The WCTC instructor/coordinator will work closely with the work site supervisor toward common educational objectives.
 Prerequisites: Approval of Co-op Ed Office
- 107-118 Information Systems Design** 4
 Practice techniques used in computer programming and systems analysis and review the structure, lines of authority, and information needs of the business enterprise. Become familiar with system projects, including preliminary investigations, setting objectives, establishing costs and benefits, and collecting data. Discuss the design techniques used in the development of specifications for outputs, inputs, and files, as well as the techniques for

developing procedures and controls of typical business systems.

Prerequisites: 152-106 Basic Programming/Logic (or concurrent) and 801-196 Oral/Interpersonal Comm; or Equivalent work experience and 107-106 Basic Programming/Logic

150-132 Microsoft Windows Vista 3
Develop the knowledge and skills necessary to address the implementation and desktop support needs of customers who are planning to deploy and support Microsoft Windows Vista in a variety of network operating system environments. Topics covered will include installation, configuration, optimization and troubleshooting of the Windows Vista operating system. Additional focus will include network configuration, remote access and the configuration of Windows Firewall and Windows Defender. Be prepared for the Microsoft MCP certification.
Prerequisites: 150-191 Introduction to Networking or 107-191 Introduction to Networking

150-139 Server 2008 Active Directory 3
Gain the knowledge and skills to successfully plan, implement and troubleshoot a Microsoft Directory service infrastructure. Prerequisites: 150-132 Microsoft Windows Vista (or concurrent)

150-155 Server+ Adv Server Mgmt 3
Learn about server hardware technologies, including how to install, configure, and upgrade server hardware, as well as preventive maintenance, troubleshooting, and disaster-recovery techniques for servers. Prepare for the CompTIA Server+ certification exam, which validates an individual's knowledge of advanced hardware issues.
Prerequisites: 150-191 Introduction to Networking or 107-191 Introduction to Networking or Recommend Industry Experience

150-156 Security+Network Security Impl 4
Take an in-depth look at the security risks and threats to an organization's data, and use a structured approach to address the safeguarding of critical electronic assets. Prepare for the CompTIA Security+ certification exam.
Prerequisites: 150-191 Introduction to Networking or 107-191 Introduction to Networking or Recommend Industry Experience

150-174 Network Communication Analysis 4
Gain an understanding of the tools and technologies associated with the data communications industry. Examine both large-scale communications systems such as public and private Wide Area Networks and small-scale systems such as Local Area Networks, as well as network and protocol analysis, network management, security, and network design. Discuss communication services and applications.
Prerequisites: 150-191 Introduction to Networking or 107-191 Introduction to Networking

150-180 Win03 TCP/IP Protocols/Service 3
Take an in-depth look at the TCP/IP protocols suite for IT professionals. Explore core TCP/IP protocols such as IP, ICMP, IGMP, and UDP, as well as physical protocols such as Ethernet and application protocols such as DNS, DHCP, and WINS. Study NDIS- and Windows-based networking architecture. Prerequisites: 107-051 Implementing MS Win XP Prof and 107-052 Windows .Net Server or 150-133 Microsoft Win XP Professional or 150-132 Microsoft Windows Vista and 150-134 Win2003 Serv Admin (or concurrent) or 107-151 WIN2000 PROF and 107-152 WIN2000 SERVER or 107-033 Microsoft Win XP Professional (or concurrent) or 107-034 Win2003 Serv Admin (or concurrent)

150-185 Linux Fundamentals I 3
Explore the history and architecture of the Linux operating system. Learn to install and configure Linux OS on the Intel hardware platform. Become familiar with common Linux/UNIX shell commands, and learn to operate the common graphical environments (such as KDE and GNOME). Learn how to configure Linux as a

client in a typical TCP/IP network. Prepare for the LPI 101 certification exam.

Prerequisites: 107-128 Operating Systems Mgmt

150-186 Linux Fundamentals II 3
Explore some of the advanced features of the Linux operating system. Learn about kernel configuration, security, and basic network services such as send mail and Web servers. Prepare for the LPI 102 certification exam.
Prerequisites: 150-185 Linux Fundamentals I (or concurrent) or 107-085 Linux Fundamentals I and 150-191 Introduction to Networking or 107-191 Introduction to Networking

150-191 Introduction to Networking 2
Study network types, topology, and media, as well as local area network issues dealing with operating systems, costs, and hardware. Gain hands-on experience in hardware and software work involved in networking. Experience in using the basic functions of a computer is necessary.

152-107 Introduction to Programming 2
Learn fundamental Object-oriented Programming (OOP) concepts: classes, objects, methods, properties, event handling, control logic, data structures, algorithms, concurrency and problem solving, with minimal exposure to language semantics. A unique drag-and-drop, graphical environment is provided, which results in mistake-free code generation. Learners hone problem solving skills while exploring concepts visually, and then seeing how these concepts translate to code. This is a common, required course for Programmer Analysts, Network Specialists and Computer Support Specialists. Degree-tailored language semantics will be introduced in the final weeks of the course.

152-110 Applications of Web Technology 2
Explore the major software and hardware technologies used by businesses to leverage the world-wide web (WWW) for information and software application platform delivery. The course is designed as a common requirement for all IT degrees. Discover how the web's unique client-server architecture works and how it may be optimized for scalability, security and bandwidth. In addition, explore the evolution of the web from a Web 1.0-style static information-only site to the newer Web 2.0 and Web 3.0 concepts that blur the distinction between a web site and a standard software application. Among the many technologies examined are (X)HTML, CSS, JavaScript, Applets, Flash, Ajax, server-side code execution and languages and frameworks, n-tier server architectures, network hardware and software, content management and support requirements and hands-on applications and development basics.

154-135 Fundamentals of Support 2
Apply problem solving techniques and communication skills in providing technical support to end users. Gain hands-on experience using service management applications. Learn various software applications and VoIP technology to log, track, maintain, and resolve computer issues. Understand how giving and receiving feedback, thinking critically, making effective decisions, and dealing with conflict will result in a successful interaction with computer end users.

631-183 Comp Hdwe Diagnostics 3
Learn the basic functions and general repair of computers. Describe the various forms of microprocessors, coprocessors, bus structures, POST, and BIOS, and learn how to find technical support. Discover how to restore a destroyed CMOS configuration and study how floppy and hard disk drives work mechanically and electronically. Discuss methods of data storage such as IDE, RLL, MFM, ESDI, and ARLL. Study documentation and technical support issues.

801-195 Written Communication 3
Study and practice the transfer of information, ideas, and experiences in written form through reports, letters, memoranda, and other documents. Gain proficiency in the areas of organization,

clarity, accuracy, and directness.

Prerequisites: COMPASS-Writing Skills or ACT-English or ASSET-Writing Skills or Accuplacer Sentence Skills or TABE Advanced Language or 831-103 Intro to College Writing or 851-771 Writing-Program Readiness

801-196 Oral/Interpersonal Comm 3
Practice the necessary skills for effective speech delivery, listening, assertiveness, conflict resolution, teamwork, and general interpersonal communication.

804-123 Math w Business Apps 3
Develop an understanding of real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications.

809-166 Intro to Ethics: Theory & App 3
Gain a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations.
Prerequisites: COMPASS-Reading Skills or 858-775 Reading - Program Readiness or 838-105 Intro Reading & Study Skills or TABE Advanced Reading or Accuplacer Reading Comprehensi or College Proficiency - Reading or Grandfathered Rdg Requirement or ACT-Reading

809-195 Economics 3
Discuss the major institutions and principles that underlie the contemporary American economic system, and consider topics such as the free enterprise system, supply and demand, circular flow, government involvement, the Federal Reserve System, economic growth and development, the effects of international trade, comparative economic systems, and global economics.
Prerequisites: COMPASS-Reading Skills or 858-775 Reading - Program Readiness or 838-105 Intro Reading & Study Skills or TABE Advanced Reading or Accuplacer Reading Comprehensi or College Proficiency - Reading or Grandfathered Rdg Requirement or ACT-Reading

809-196 Introduction to Sociology 3
Learn the basic concepts of sociology: culture, socialization, social stratification, multiculturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues.
Prerequisites: COMPASS-Reading Skills or 858-775 Reading - Program Readiness or 838-105 Intro Reading & Study Skills or TABE Advanced Reading or Accuplacer Reading Comprehensi or College Proficiency - Reading or Grandfathered Rdg Requirement or ACT-Reading

809-199 Psychology of Human Relations 3
Examine the principles of interaction as applied to human relations at home and on the job. Explore topics such as, self concept personality development, learning, motivation, emotions, stress, human relations processes, and special relationships.
Prerequisites: COMPASS-Reading Skills or 858-775 Reading - Program Readiness or 838-105 Intro Reading & Study Skills or TABE Advanced Reading or Accuplacer Reading Comprehensi or College Proficiency - Reading or Grandfathered Rdg Requirement or ACT-Reading

Elective Options
150-137 Server 2008 Network Infrastructure
150-156 Security+ Network security Impl
150-193 Network+

Any course at the associate degree level will meet the elective requirement.