

Program Overview

Computer Support Specialists install, upgrade, and troubleshoot a variety of computer hardware and software. Students gain understanding of spreadsheet and database programs to develop applications to meet a variety of business needs. Graduates will be able to develop Web pages. Computer Support Specialists develop skills to manage and administer networks.

Campus:

Rice Lake



Admission Requirements

Students in this program must:

- Complete application form and submit with fee (fee waiver may apply if previously submitted)
- Complete Accuplacer entrance assessment to determine placement (waiver may apply with acceptable alternative test scores and/or postsecondary degree completion)
- Complete admissions interview with a WITC counselor (above requirements should be completed prior to interview)

Program-Specific Requirement

Students in this program must:

- Complete the SmarterMeasure Learning Readiness Indicator assessment for online learning at: <http://www.witc.edu/online/smartermeasure.htm>.

Student Profile

Students who enter the program should:

- Be organized and logical
- Understand and analyze complex business transactions
- Enjoy work that requires a high degree of accuracy
- Be able to handle setbacks and remain at a task until a workable solution can be found
- Be able to work under stress

Preparation for Admission

Students should strive to reach a comfort level in the following courses or skills:

- Basic computer skills
- Keyboarding
- Algebra
- Consumer Math

Key to the student's success in this program is the ability to work well alone or with others to identify problems and solve them.

Program Outcomes

Employers will expect graduates of the Information Technology - Computer Support Specialist program to be able to:

- Install hardware and software
- Troubleshoot hardware and software
- Develop spreadsheet and database applications
- Develop Web pages using HTML
- Manage technology for networks
- Administer a client/server network

Collegewide outcomes and indicators will also be addressed to develop personal awareness, career effectiveness, and professionalism. See page 5 for a list of collegewide outcomes and indicators.

Career Outlook

The use of computers in business and industry has led to a strong demand for computer support specialists. Job opportunities after graduation include:

- Computer Support Specialist
- Software Consultant
- Help Desk Technician
- Computer Consultant
- Information Systems Manager
- Computer Operations Specialist
- Computer Network Coordinator
- Computer Operator

Curriculum

| Number | Course Title | Credits |
|---|--|-----------|
| Technical Studies Courses | | |
| 10150102 | Information Security 1 ▲ | 3 |
| 10150118 | MS LAN Administration - Active Directory ▲ | 3 |
| 10150121 | Hardware/Software Installation ▲ | 2 |
| 10150125 | CompTIA A+ Computer Essentials ▲ | 2 |
| 10150126 | CompTIA A+ IT Technician ▲ | 2 |
| 10150138 | IT Essentials | 3 |
| 10154101 | Logic Structures or | 1 |
| 10152135 | Program Logic | 2 |
| 10154102 | Operating Systems 1 | 2 |
| 10154103 | Operating Systems 2 | 3 |
| 10154105 | Spreadsheet Applications | 3 |
| 10154106 | Database (Beginning) ▲ or | 3 |
| 10152100 | Database Concepts and SQL | |
| 10154107 | Database (Advanced) ▲ or | 3 |
| 10152110 | Programming in SQL ▲ | |
| 10154109 | PC Troubleshooting/Upgrading ▲ | 3 |
| 10154110 | Web Authoring with HTML | 3 |
| 10154111 | Case Projects in Information Systems | 2 |
| 10154113 | IT Service and Documentation | 2 |
| 10154114 | Emerging Technologies | 2 |
| 10154140 | Networking or | 3 |
| 10150111 | Cisco Networking Fundamentals | |
| 10890105 | Job Quest | <u>1</u> |
| | | 46 |
| General Studies Courses [▸] | | |
| 10801195 | Written Communication ▲ | 3 |
| 10801196 | Oral/Interpersonal Communication | 3 |
| 10801197 | Technical Reporting ▲ | 3 |
| 10804123 | Math with Business Applications ▲ or | 3 |
| 10804113 | College Technical Mathematics 1A ▲ or | |
| 10804133 | Mathematics and Logic ▲ | |
| 10809166 | Introduction to Ethics: Theory and Application or | 3 |
| 10809172 | Race, Ethnic, and Diversity Studies | |
| 10809195 | Economics | 3 |
| 10809198 | Introduction to Psychology | <u>3</u> |
| | | 21 |
| | ELECTIVES | 3 |
| | PROGRAM REQUIREMENTS | 70 |

▲ Requires a prerequisite and/or corequisite that must be completed with a grade point of 2.0 or better.

▸ See page 40 for General Studies course descriptions.

Course Descriptions

(See page 40 for General Studies course descriptions)

10150102

Information Security 1 - Credits: 3

This course will cover hardware, software, and the physical environment related to IT security. The processes of defense, prevention, detection, and response will be studied. Typical types of attacks will be studied and potential solutions or defenses will be explored. Networking and operating system experience is required along with a code of ethics. This course covers topics related to the CompTIA Security+ exam. PREREQUISITE: 10154103 Operating Systems 2.

10150118

MS LAN Administration - Active Directory - Credits: 3

This course provides the students with the concepts and techniques necessary to implement, secure and administer Microsoft's Active Directory Services. Students will learn how to use administrative tools, integrate DNS and Active Directory, manage user and group accounts, configure system policies, and configure multiple active directory sites. PREREQUISITE: 10154102 Operating Systems 1.

10150121

Hardware/Software Installation - Credits: 2

This course will prepare students to install hardware and software. You will learn to properly install various types of hardware and software on an IBM-compatible personal computer. This lecture- and lab-based course will use both group and individual activities. PREREQUISITE: 10154102 Operating Systems 1.

10150125

CompTIA A+ Computer Essentials - Credits: 2

The objective of the CompTIA A+ certification course will be to pass the CompTIA A+ Computer Essentials certification exam. Those holding the CompTIA A+ certification have a broad base of knowledge and competency in core operating system technologies including installation, configuration, diagnosing, preventive maintenance, and basic networking. The CompTIA A+ exams test the following areas of knowledge: operating system fundamentals, installation, configuration, and upgrading; diagnosing and troubleshooting; and networking. As this class focuses on preparing for the exams, prospective students should have experience installing and working with operating systems. Students are required to take the CompTIA A+ certification test as part of this course. PREREQUISITE: 10154109 PC Troubleshooting/Upgrading or equivalent work experience.

10150126

CompTIA A+ IT Technician - Credits: 2

The objective of the CompTIA A+ certification course will be to pass the CompTIA A+ IT Technician certification exam. Those holding the CompTIA A+ certification have a broad base of knowledge and competency in core hardware technologies including installation, configuration, diagnosing, preventive maintenance, and basic networking. The CompTIA A+ exams test the following areas of knowledge: installation, configuring and upgrading; diagnosis and troubleshooting; preventive maintenance; motherboard, processors and memory; printers; basic networking. As this class focuses on preparing for the exams, prospective students should have experience installing and working with computer memory, disk controllers, CPUs, network cards, and video systems. Students are required to take the CompTIA A+ certification test as part of this course. PREREQUISITE: 10154109 PC Troubleshooting/Upgrading or equivalent work experience.

10150138

IT Essentials - Credits: 3

IT Essentials covers the fundamentals of computer hardware and software as well as advanced concepts. Students who complete this course will be able to describe the internal components of a computer, assemble a computer system, install an operating system, and troubleshoot using system tools and diagnostic software.

10154101

Logic Structures - Credits: 1

Logic Structures introduces the student to the development of computer software. The student will diagram simple programming problems and write a pseudocode solution using classical

structured programming techniques (sequence, selection, and repetition). This course sets a foundation for further work in the development of database, spreadsheets, batch files, and programming.

10152135

Program Logic - Credits: 2

In Program Logic, students will learn how to develop a clear consistent strategy to solve problems. The student will analyze problems, review requirements, and then create a solution in pseudocode. With proper pseudocode, students can focus on understanding the logic of the solution and not be limited to the syntax of a specific language. Students will also learn how to properly use decision and repetition structures, functions, subroutines, modules, arrays, and how to use variables and understand variable scope.

10154102

Operating Systems 1 - Credits: 2

A review of the most common command line operations and study of more advanced commands necessary to configure the Windows 2000 operating system for a variety of environments. Topics to be studied include creating directories, batch files, menus, custom configurations, file management, multitasking, windowing, security, and disk management utilities. There will be an introduction to usage, configuration, and tools of the Windows 9.X operating system.

10154103

Operating Systems 2 - Credits: 3

In this course the Linux operating system is examined in-depth with emphasis on features, capabilities, tools, and configurations including an introduction to network configurations. Additional topics will examine other operating systems like MAC OS.

10154105

Spreadsheet Applications - Credits: 3

This course is an in-depth study of spreadsheet concepts and applications using Microsoft Excel. Lab exercises provide students the opportunity to gain experience with many features including workbooks, graphing, macros, what/if analysis, and Internet applications.

10154106

Database (Beginning) - Credits: 3

An introduction to database concepts using Microsoft Access. Relational database systems are explored working with tables, queries, forms, and reports. Topics covered include data structures and relationships, logical and physical database design, and database implementation. PREREQUISITE: 10150138 IT Essentials.

10152100

Database Concepts and SQL - Credits: 3

This course is a comprehensive introduction to database concepts. The interaction between software applications and databases will be discussed. Database terminology will be introduced. Students will learn how to manage, design, and construct relational databases. Structured Query Language (SQL) will be used to define and access databases. Other topics include normalization, entity relationship diagrams, foreign key constraints, and indexes.

10154107

Database (Advanced) - Credits: 3

An advanced course using Microsoft Access that builds on the concepts covered in computer Database (Beginning). Topics include action queries, table relationships, macros and Visual Basic for Applications. Students will design and develop a complete database project. PREREQUISITE: 10154106 Database (Beginning).

10152110

Programming in SQL - Credits: 3

The course covers database design techniques, database manipulation techniques, and database integrity techniques using the SQL programming language. Students will also learn management tasks and security features implemented by server administrators. PREREQUISITE: 10152100 Database Concepts and SQL.

10154109

PC Troubleshooting/Upgrading - Credits: 3

This course is intended to provide a student with basic technical skills necessary to install and troubleshoot computer hardware components. The student will learn how to identify the type and function of each hardware component as well as perform installation, testing, and replacement. This course utilizes A+ certification materials. PREREQUISITE: 10150121 Hardware/Software Installation.

10154110

Web Authoring with HTML - Credits: 3

This class is designed for the student who wants to create Web pages using HTML. The course will cover Web site concepts including tables, frames, animations, image maps, forms, organization, design, and JavaScripts. Students will learn to create, publish, and promote Web pages.

10154111

Case Projects in Information Systems - Credits: 2

This course is the capstone work-based experience for the IT - Computer Support Specialist program. Learners will design, develop, and perform a project either in an actual work experience or a simulated project. The project will be designed to utilize skills typical of a graduate in the computer support specialist field. Weekly simulated timesheets, job progress reports, and oral reports to management will be used to track project progress. Successful completion will require project documentation.

10154113

IT Service and Documentation - Credits: 2

This course explores the role of service, support and documentation responsibilities of the IT professional. Tools for supporting, documenting, tracking, reporting and managing both customers and assets will be utilized. Helpdesk software will be utilized for customer support services.

10154114

Emerging Technologies - Credits: 2

This course will explore new and emerging technologies in Information Technology. Students will research, discuss and learn to support new technologies.

10154140

Networking - Credits: 3

This course teaches students the skills needed to obtain entry-level home network installer jobs. It also helps students develop some of the skills needed to become network technicians, computer technicians, cable installers, and help desk technicians. It provides a hands-on introduction to networking and the Internet using tools and hardware commonly found in home and small business environments. Labs include PC installation, Internet connectivity, wireless connectivity, file and print sharing, and the installation of game consoles, scanners, and cameras.

10150111

Cisco Networking Fundamentals - Credits: 3

This course introduces the components, functions, and design of communication networks including the Internet. It uses the OSI and TCP/IP network models to examine the services provided by different layers of the model. The course examines the protocols used by the application, transport, network, datalink, and physical layers of the OSI model. TCP, IP, and Ethernet will be examined in detail. Learning will be reinforced by the creation and configuration of TCP/IP networks. Network addressing will be covered in detail as well.

10890105

Job Quest - Credits: 1

This course is designed to enhance the student's ability to seek, obtain, and retain employment. Assessment of personal characteristics, job-seeking and retention skills, preparation of employment-related documents, and interviewing strategies are included.

Graduate Employment Information

(WITC Graduate Survey Responses 2009-2010; for most recent data, go to witic.edu)*

| | | | | | |
|---------------------------------|---|---------------------------|-----|-----------------------------|-----------|
| Number of graduates | 3 | Number employed | 1 | % employed in WITC district | 100% |
| Number of responses | 3 | Percent employed | 33% | Range of yearly salary | -\$* |
| Number available for employment | 3 | Employed in related field | 1 | Average yearly salary | \$34,320* |

*Average yearly salary based on composite of graduates from Wisconsin's 16 technical college districts (including WITC graduates). Range of yearly salary not available.

career vision