

# COMPUTER INFORMATION TECHNOLOGY

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With the growing importance of computers in the workplace and the emphasis on more sophisticated technologies, qualified computer technicians are in high demand. This program is designed to provide individuals with the knowledge and skills needed to become network administrators. Training includes operating systems, computer repair, programming, networking, emerging trends and troubleshooting skills.

The Computer Information Technology program integrates Cisco technology into their curriculum to prepare students for entry-level career opportunities, continuing education, and pursuit of globally-recognized Cisco CCNA certifications and other industry-standard certifications such as MTA, A+, Networking+, etc. Certificates also included are Cisco Cyber Ops Associates, CCNAv7 Switching, routing, and wireless, and CCNAv7 Introduction to Network.

High school students may begin the Computer Information Technology program by taking classes concurrently with their regular studies and earn credit toward a certificate of proficiency which will apply to the technical certificate and associate of applied science degree.

## Programs

- Computer Information Technology, Associate of Applied Science (<https://catalog.atu.edu/ozark/programs/computer-information-technology/computer-information-technology-aas/>)
- Computer Information Technology, Certificate of Proficiency (<https://catalog.atu.edu/ozark/programs/computer-information-technology/computer-information-technology-cp/>)
- Computer Information Technology, Technical Certificate (<https://catalog.atu.edu/ozark/programs/computer-information-technology/computer-information-technology-tc/>)
- Mobile Applications, Certificate of Proficiency (<https://catalog.atu.edu/ozark/programs/computer-information-technology/mobile-applications-cp/>)

## Courses

### CIS 1103 Programming I

Cross-listed with ICS 1103. This course is designed to give the student an understanding of established and new methodologies using Microsoft Visual Basic programming. Course content will include an overview of programming, designing an application and using variables and constants. Emphasis will be placed on developing logical thinking skills. No prior programming skill is necessary. Ozark CTE General Technology

### CIS 1113 Fundamental Computer Operation

Cross-listed with ICS 1113. Students will learn to manage current Microsoft Operating Systems. Topics included are troubleshooting and applying basic commands that are necessary in a working environment. Students will also explore basic Network and Web Design concepts. No prior computer experience is necessary. Ozark CTE General Technology

### CIS 1153 Networking I

Cross-listed with ICS 1153. Designed as a foundation course that provides the theory and basic understanding of the hardware and software that comes together to build local area networks. Ozark CTE General Technology

### CIS 1203 Programming II

Prerequisite: CIS 1103.

A continuation of Programming I, this course covers the advanced issues of user interfaces, program structure, language syntax, designing programming applications, control structures, functions, arrays, classes and objects. GUI design skills and object-oriented programming concepts are emphasized throughout this course. Ozark CTE General Technology

### CIS 1213 Operating Systems

Prerequisite: CIS 1113.

The goal of this course is to provide a comprehensive understanding of the multiple operating systems commonly found in the information technology field today. Students will learn the theory behind operating systems and some basic to advanced components of each operating system. This course walks the student through current hardware and how it interacts with operating systems. The student will learn basic functions and design of file systems found in Windows, UNIX, and Macintosh operating systems. Ozark CTE General Technology

### CIS 1233 Systems Analysis and Design

This course is an introduction to basic concepts regarding the system life cycle, analytical tools and methods, file and record layouts, and elements of the design phase. CTE General Technology

### CIS 1243 HTML Programming

This class leads students through the beginning Web Site creation process while developing and enhancing HTML, CSS, and visual design skills along the way. Students will begin by learning about layout and navigation, progress to Web typography, colors and images, working with CSS and more. The course covers the latest Web design technologies and trends, including Web accessibility, standards-based coding and CSS positioning. Ozark CTE General Technology

### CIS 1253 Networking II

Prerequisite: CIS 1153 or ICS 1153.

Cross-listed with ICS 1153. Builds upon the skills and concepts learned in Networking I. Emphasis will be on the hands-on aspects of personal computer networks using Microsoft and Linux based networking products, including installations and/or expanding a networking system and troubleshooting problems. This course is designated as "green". Ozark CTE General Technology

### CIS 1303 PC Maintenance I

Cross-listed with ICS 1303. This course is designed to prepare individuals to troubleshoot, build, and repair personal computers, workstations, printers, and other computer peripherals. The student will also learn to install, debug, diagnose, and repair software problems associated with PCs. This course is designated as "green". Ozark CTE General Technology

### CIS 2133 Web Page Design

Prerequisite: CIS 1243.

This course provides a solid foundation for understanding the key issues associated with designing successful, standards-based Web sites that are portable across different operating systems, browsers and Web devices. The purpose of the course is to facilitate proficiency in Web site development through thorough explanations and numerous hands-on activities. Students will be introduced to overall site layout and navigation planning and then proceed to specific topics such as Web typography, colors and images, CSS page layouts, and floating layouts. This course is designated as "green". Ozark CTE General Technology

**CIS 2143 Help Desk Support**

This course is designed to teach individuals to troubleshoot the Microsoft Office Application Suite. It focuses on customer service and communication with the end user. Ozark CTE General Technology

**CIS 2153 Programming in C++**

Prerequisite: CIS 1103 or ICS 1103.

Introduction to Programming in C++ provides an overview of programming concepts, design and an introduction to coding using the C++ language. This course focuses on creating logical computer programs in C++ and will address fundamental concepts of analysis, design, testing and code development. It includes flowcharts, Boolean logic, control flow, data types and structures, variables, arrays, and functions. Ozark CTE General Technology

**CIS 2213 Mobile Applications**

This course is designed to introduce students to mobile application development with modern web application technologies. Using Ionic (Advanced HTML5 Hybrid Mobile Application Framework) and various other web technologies, students will build native mobile applications for iOS and Android platforms that can also be run in a web browser. Lecture: 3 hours. Ozark CTE General Technology fee: \$51.

**CIS 2303 PC Maintenance II**

Prerequisite: CIS 1303 or ICS 1303.

Cross-listed with ICS 2303. This course is designed to teach individuals core elements of computer repair based on the A+ Certification exams. The student will build on the knowledge acquired from PC Maintenance I, allowing them to be more prepared to diagnose, and repair computers in the working environment. Ozark CTE General Technology

**CIS 2493 Cybersecurity**

Prerequisite: A prior Networking course.

This Cisco-based course will help students understand cybersecurity operations, network principles, roles, and responsibilities as well as the related technologies, tools, regulations, and frameworks available. Apply knowledge and skills to monitor, detect, investigate, analyze, and respond to security incidents. This course is designed to be a guided pace course. Self-directed learning skills involve the ability to manage learning tasks without having them directed by others.

**CIS 2593 Specialized Programming**

Prerequisite: A prior object-oriented programming class.

This course provides students with the knowledge and skills needed to develop Python programming applications that they might use in a beginning programming job that is relevant to a business environment. Students will use Python Programming to create and modify programs to be used in a robotic environment.

**CIS 2693 Gaming**

Prerequisite: A prior object-oriented programming class is recommended. Utilizing Transitional Thinking Methodology Active Learning instructional methods, This course helps students develop critical thinking skills in a guided pace environment using a variety of digital development tools. Including, but not limited to, Unreal Engine, Unity, Blender, and GIMP. In this course, you will work in a team environment to create a game of your own style using your creative thinking skills.

**CIS 2793 Cisco I**

Prerequisite: Networking -II.

This is the first Cisco-based course in a 3-course CCNA series that introduces architectures, models, protocols, and networking elements. Students will develop a working knowledge of IP addressing schemes and foundational network security and be able to perform basic configurations for routers and switches. The OSI model will be covered in depth.

**CIS 2893 Cisco II Routers and Switching**

Prerequisite: Cisco -I.

CISCO -SRWE (Switching, Routing, and Wireless Essentials) teaches networking based on technology, Students learn the basics of routing, switching, and advanced technologies to prepare for Cisco CCNA certification and entry-level networking careers.

**CIS 2993 Special Topics for Computer Information Systems**

This course is designed to introduce students to specific areas in Computer Information Systems. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour. Ozark CTE General Technology