

IT Essentials

Learn how to build and set up a computer and connect it securely to a network, your first step to an IT career.

Course Summary

IT Essentials covers fundamental computer and career skills for entry-level IT jobs. The IT Essentials course includes hands-on labs that provide practical experience to prepare you for enterprise networking. Simulation tools help you hone your troubleshooting skills and practice what you learn.

Develop working knowledge of how computers and mobile devices operate.

Identify common security threats and vulnerabilities like malware, phishing, spoofing and social engineering.

Apply skills and procedures to install, configure, and troubleshoot computers, mobile devices, and software.

Develop critical thinking and problem solving skills using both real equipment and Cisco Packet Tracer, a network configuration simulation tool.

Get immediate feedback on your work through built-in quizzes and tests.

Career Pathways

IT Essentials is ideal for students seeking entry-level IT positions in companies, government agencies, educational institutions, or service providers, or to work for themselves.

Career pathways include: IT/technical support, field service technician, help desk technician, network support technician, and more.

Certification: CompTIA A+

Course Description:

The goal of this course is to introduce the student to computer hardware and software, as well as operating systems, networking concepts, mobile devices, IT security, and troubleshooting. The online course materials will assist the student in developing the skills necessary to work as a technician in the field of IT. The specific skills covered in each chapter are described at the start of each chapter.

Learning Objectives:

Upon completion of the IT Essentials students will be able to perform the following tasks:

- select the appropriate computer components to build, repair, or upgrade personal computers
- explain how to correctly use tools and safely work in a lab
- install components to build, repair, or upgrade personal computers
- explain how to perform preventive maintenance and troubleshooting on personal computers

- install Windows operation systems
- perform management and maintenance of Windows operating systems
- configure computers to communicate on a network
- configure devices to connect to the Internet and Cloud services
- explain how to use, configure, and manage laptops and mobile devices
- explain how to configure, secure and troubleshoot mobile, OS X, and Linux operating systems
- install and share a printer to meet requirements
- implement basic host, data, and network security
- explain the roles and responsibilities of the IT professional
- troubleshoot advanced hardware and software problems

Student Responsibilities:

You can expect to spend about 6 to 10 hours per week outside of class on homework, reading assignments, taking exams, and reviewing materials via the Internet. You should attend all class meetings and seek clarification to understand the concepts presented by completing all the course chapters, asking questions, participating in class discussions and activities, and utilizing available resources. Participation and completion of all labs is required and will be done in teams during class time. Lab rules will be strictly adhered to for the safety of the student and to prevent damage to the equipment. Although most labs are done in class with a teammate, some labs may have to be done outside of class when class time does not permit the inclusion of those labs.

Study Courses will be broken down into 2 courses.

IT Essentials I

Chapter 1: Introduction to the Personal Computer System

Chapter 2: Introduction to Lab Procedures and Tool Use

Chapter 3: Computer Assembly

Chapter 4: Overview of Preventive Maintenance

Chapter 5: Windows® Installation

Chapter 6: Windows Configuration and Management

IT Essentials II

Chapter 7: Networking Concepts

Chapter 8: Applied Networking

Chapter 9: Laptops and Mobile Devices

Chapter 10: Mobile, Linux, and OS X Operating Systems

Chapter 11: Printers

Chapter 12: Security

Chapter 13: The IT Professional

Chapter 14: Advanced Troubleshooting
