Odysseyware[®]

CURRICULUM OVERVIEW

Fundamentals of Computer Systems

Career and Technical Education Series



Table of Contents

UNDAMENTALS OF COMPUTER SYSTEMS COURSE OVERVIEW				
UNIT 1: COMPUTER HARDWARE AND OPERATING SYSTEMS				
UNIT 2: CONFIGURING THE COMPUTER				
Unit 3: Computer Programs				
Unit 4: Protecting Yourself, the Computer, and Your Data				
Unit 5: Troubleshooting				
Unit 6: Course Review and Exam				
···· · · · · · · · · · · · · · · · · ·				

Fundamentals of Computer Systems Course Overview

The Computer Fundamentals course will provide students with an understanding of computers and how they operate as well as a basic understanding of how to manage and maintain computers and computer systems. These skills will provide students with the ability to configure computers and solve computer problems.

Students will learn details about the different elements of computers and computer systems. They will learn to identify hardware devices and their functions. They will be instructed on the role of operating systems as well as how to install and customize the Windows operating system. Students will learn about networking and the Internet. They will also be introduced to security issues in order to protect themselves and their computers and data.

Students will also learn about some of the software applications typically used on computers today, such as Microsoft Office. In addition, students will learn specifics about maintaining and troubleshooting computers, including managing files, backing up systems, and using the administrative tools in the Windows operating system. Lastly, the students will learn the basics of customer service and working as a help desk support technician.

Objectives

- After completing this course, the student will understand computers and their functions, as well as develop basic customer service skills, and be able to effectively meet customer needs.
- Students will be able to implement problem-solving techniques to understand the nature of computer problems. They
 will also understand hardware components, software, and the Internet, so they are able to develop, maintain, and
 update computer systems.
- After this course, students also will be able to use the Internet to update computer systems and complete other IT service-related tasks. They will be able to install, configure, or modify software and operating systems to ensure optimal system function.
- Students will be able to perform computer backup procedures to protect information. They also will be able to recognize potential security threats and understand the procedures for maintaining security.
- After this course students will be able to provide IT support and training for computers and networks.

For topics in this course, it is helpful for students to be familiar with the basics of using desktop or laptop computers as well as accessing Web sites over the Internet.

If students are not familiar with these topics, it is recommended, though not required, that they familiarize themselves with the operating system and Web browser they will be using for this course. This includes turning on a computer and logging into an account, if necessary, exploring the different types of software available, navigating through some of the operating system menus to understand the available tools, and doing a basic search on the Internet.

Assignments					
1.	Course Overview	10.	The Boot Sequence–Command Prompt and BIOS		
2.	The Motherboard and the CPU	11.	Installation, Upgrades, and Maintenance of		
3.	Storage Systems and Memory		Operating Systems		
4.	Project: Semiconductor Chips	12.	Project: Installing an Operating System		
5.	Graphic Devices and Peripherals	13.	Quiz 2: The Operating System		
6.	Project: Building a Computer	14.	Special Project*		
7	Quiz 1: Computer Hardware	15.	Unit 1 Test		
8.	Operating Systems Basics	16.	Course Project Part 1: Operating System*		
9.	Project: Testing Operating Systems	17.	Glossary and Credits		

	Unit 2: Configuring the Computer					
Computer Systems	Assignments					
	1.	Windows Desktop, Start Menu, and Task Bar,	9.	Project: Setting Up an Internal Network		
ute		Including Windows Task Manager	10.	Troubleshooting Internet Connectivity		
dwo	2.	The Control Panel	11.	Project: Creating a Strategy Using Available		
of C	3.	Project: Help Desk Solutions		Resources		
	4.	Windows Accessories and Built-in Applications	12.	Quiz 2: Networking		
Fundamentals	5.	Project: Scavenger Hunt	13.	Special Project*		
ıdan	6.	Quiz 1: Windows 101	14.	Unit 2 Test		
Fur	7.	Basic Networking Concepts	15.	Course Project Part 2: Networking*		
	8.	Connecting to a Network or Domain	16.	Glossary and Credits		

su	Unit 3: Computer Programs					
Systems	Assignments					
ter S	1.	Internet Uses and Abilities	9.	Microsoft Excel		
nbut	2.	Project: Researching the History of the Internet	10.	Project: Developing a Spreadsheet		
s of Cor	3.	Comparing Internet Browsers	11.	Microsoft PowerPoint/Outlook		
	4.	Configuring Internet Options	12.	Quiz 2: Microsoft Office		
intal	5.	Project: Determining Browser Controls	13.	Special Project*		
Fundamentals of Computer	6.	Quiz 1: The Internet	14.	Unit 3 Test		
	7.	Microsoft Word	15.	Course Project Part 3: Microsoft Office*		
ш	8.	Project: Support Tech	16.	Glossary and Credits		

ns	Unit 4: Protecting Yourself, the Computer, and Your Data					
Systems	Assignments					
ter S	1.	Staying Safe on the Web	9.	Project: Creating a Data Security Plan		
Fundamentals of Computer	2.	Project: Be Secure	10.	Using the Cloud		
Con	3.	Security Threats to Your Computer	11.	Project: Using Cloud Computing Services		
ls of	4.	Security Threat Removal Tools	12.	Quiz 2: Data Protection		
ntal	5.	Project: Putting Your Computer Skills to the Test	13.	Special Project*		
ame	6.	Quiz 1: Virus Protection	14.	Unit 4 Test		
pun	7.	Managing Your File System	15.	Course Project Part 4: Security*		
ъ	8.	Backing Up Your Computer	16.	Glossary and Credits		

	Unit 5: Troubleshooting					
Systems	Assignments					
r Sys	1.	The Computer Management Console	8.	Project: Preventive Maintenance		
of Computer	2.	Built-in Tools from Windows – Troubleshooting,	9.	Computers and the Environment		
ошр		Help and Support, Remote Assistance	10.	Supporting the Computer User		
of C	3.	Project: Troubleshooting Computers	11.	Project: Providing Good Customer Service		
	4.	Using the Internet as a Resource	12.	Quiz 2: The Role of the Help Desk		
Fundamentals	5.	Project: Researching Computer Issues and	13.	Special Project*		
ndar		Solutions	14.	Unit 5 Test		
Ξ	6.	Quiz 1: Troubleshooting Tools and Resources	15.	Course Project Part 5: Preventive Maintenance*		
	7.	Preventive Maintenance	16.	Glossary and Credits		

	Unit 6: Course Review and Exam					
FCS	Assignments					
	1.	Course Project Part 6: Help Desk Policies and	2.	Review		
		Procedures*	3.	Exam		

(*) Indicates alternative assignment