



# ENLIGHTIUM ACADEMY

Ignitia™ Career and Technical Education  
Electives

Fundamentals of Computer Systems

Enlightium Academy invites you to open the door to career and college readiness with Career and Technical Education (CTE) courses from Alpha Omega Publications - Ignitia™.

These rigorous, hands-on courses for grades 7-12 promote critical thinking, emphasize problem solving, and encourage students to take responsibility for their own learning. With 24 CTE courses divided into six clusters, these courses put students on practical paths to post-graduate success.

Should you have any questions about the curriculum, please contact [support@enlightiumacademy.com](mailto:support@enlightiumacademy.com) or call Enlightium Academy Customer Support at (866) 488-4818 ext. 2017.

If you have questions about technical support or product configuration, please see the information below for Alpha Omega Publications.

### **Alpha Omega Publications Technical Support**

Alpha Omega Publications' technical support is Ignitia™'s full-service technical support system. We exist to promote and preserve our customers' satisfaction. Our services include:

- Technical Support
- Product Configuration and Update Management

Please use the following information to contact Alpha Omega Publications' technical support:

**Online:**

Access our helpful Technical Support website simply by clicking on the life preserver located in the upper-right corner of any screen in our program!

**Telephone:**

Toll Free: 1-877-251-6662  
Monday –Friday 7 a.m. to 5 p.m. (CT)

## 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.

#### Fundamentals of Computer Systems Course Requirements

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.

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

**FUNDAMENTALS OF COMPUTER SYSTEMS  
UNIT 2: CONFIGURING THE COMPUTER**

**Assignment Titles**

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

**FUNDAMENTALS OF COMPUTER SYSTEMS  
UNIT 3: COMPUTER PROGRAMS**

**Assignment Titles**

- |   |   |
|---|---|
| 1. Internet Uses and Abilities                      | 9. Microsoft Excel                          |
| 2. Project: Researching the History of the Internet | 10. Project: Developing a Spreadsheet       |
| 3. Comparing Internet Browsers                      | 11. Microsoft PowerPoint/Outlook            |
| 4. Configuring Internet Options                     | 12. Quiz 2: Microsoft Office                |
| 5. Project: Determining Browser Controls            | 13. Project: Special Project                |
| 6. Quiz 1: The Internet                             | 14. Unit 3 Test                             |
| 7. Microsoft Word                                   | 15. Course Project Part 3: Microsoft Office |
| 8. Project: Support Tech                            | 16. Glossary and Credits                    |

**FUNDAMENTALS OF COMPUTER SYSTEMS  
UNIT 4: PROTECTING YOURSELF, THE COMPUTER, AND YOUR DATA**

**Assignment Titles**

- |  |   |
|--|---|
| 1. Staying Safe on the Web                           | 9. Project: Creating a Data Security Plan   |
| 2. Project: Be Secure                                | 10. Using the Cloud                         |
| 3. Security Threats to Your Computer                 | 11. Project: Using Cloud Computing Services |
| 4. Security Threat Removal Tools                     | 12. Quiz 2: Data Protection                 |
| 5. Project: Putting Your Computer Skills to the Test | 13. Project: Special Project                |
| 6. Quiz 1: Virus Protection                          | 14. Unit 4 Test                             |
| 7. Managing Your File System                         | 15. Course Project Part 4: Security         |
| 8. Backing Up Your Computer                          | 16. Glossary and Credits                    |

**FUNDAMENTALS OF COMPUTER SYSTEMS  
UNIT 5: TROUBLESHOOTING**

**Assignment Titles**

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

**FUNDAMENTALS OF COMPUTER SYSTEMS  
UNIT 6: COURSE REVIEW AND EXAM**

**Assignment Titles**

- |                          |         |
|--------------------------|---------|
| 1. Course Project Part 6 | 3. Exam |
| 2. Review                |         |