

## CompTIA A+ 220-901

### Course Overview

CompTIA A+ 220-901 is a one-semester course that covers the objectives of the CompTIA A+ 220-901 exam. This course begins by describing computer hardware parts and peripherals. You will explain network fundamentals, network hardware, and wireless networking. You will describe features of laptop and mobile devices. You will also describe how to troubleshoot issues related to hardware, networks, storage, mobile devices, and printers.

### Course Goals

By the end of this course, you will:

- Describe the different types of memory and processors.
- Identify and describe the different types of storage and display devices.
- Describe how to install and configure print devices.
- Describe how to install and configure common peripheral devices and expansion cards.
- Describe the different types of connectors and cables for peripherals, display, and power.
- Explain networking concepts and types of IP addresses.
- Identify and describe hardware used for networking.
- Describe how to install a wireless small office home office (SOHO) network.
- Describe features of laptop and mobile devices.
- Identify and troubleshoot issues related to hardware, storage devices, and display.
- Identify and troubleshoot issues related to wired and wireless networks.
- Identify and troubleshoot common issues related to mobile devices and printers.

## **General Skills**

To participate in this course, you should be able to do the following:

- Complete basic operations with word-processing software such as Microsoft Word.
- Perform online research using various search engines and library databases.
- Communicate through email and discussion boards.

*For a complete list of general skills that are required for participation in online courses, refer to the Prerequisites section of the Student Orientation document, found at the beginning of this course.*

## **Credit Value**

CompTIA A+ 220-901 is a 0.5-credit course.

## **Course Materials**

- notebook
- computer desktop
- computer laptop
- projector
- printer
- smartphone

## **Software Requirements**

- word processing software
- Windows (Vista, 7, 8, or 8.1)

## **Credit Information**

Windows screenshots courtesy Microsoft Windows.

# Course Pacing Guide

This course description and pacing guide is intended to help you stay on schedule with your work. Note that your course instructor may modify the schedule to meet the specific needs of your class.

## Unit 1: Hardware

### Summary

In this unit, you will describe the different types of memory and processors. You will identify different types of storage and display devices. You will also install and configure print devices. You will explain BIOS configurations and identify the components of a motherboard. Additionally, you will install and configure common peripheral devices and expansion cards. You will identify different types of computer interfaces and connectors. Finally, you will identify the custom requirements of different types of computers.

Day	Activity/Objective	Type
1 day: 1	<b>Syllabus and Student Orientation</b> <i>Review the Student Orientation and Course Syllabus at the beginning of this course.</i>	Course Orientation
4 days: 2–5	<b>Memory and Processor</b> <i>Describe the purposes and characteristics of memory and processor in a computer.</i>	Lesson
5 days: 6–10	<b>Storage, Display, and Print Devices</b> <i>Describe the different types of storage, display, and print devices.</i>	Lesson
4 days: 11–14	<b>Motherboard and BIOS</b> <i>Describe the components of a motherboard and use basic input output system (BIOS) tools.</i>	Lesson
4 days: 15–18	<b>Peripherals and Expansion</b> <i>Describe how to install and configure common peripheral devices and expansion cards.</i>	Lesson
4 days: 19–22	<b>Connectors, Cables, and Power Supply</b> <i>Describe the different types of connectors and cables for peripherals, display, and power.</i>	Lesson
4 days: 23–26	<b>Custom Computer Configuration</b> <i>Select appropriate components for a custom computer.</i>	Lesson
4 days:	<b>Unit Activity and Discussion—Unit 1</b>	Unit Activity

Day	Activity/Objective	Type
27–30		Discussion
1 day: 31	<b>Posttest—Unit 1</b>	Assessment

## Unit 2: Networking

### Summary

In this unit, you will describe different types of networks and their protocols. You will describe the characteristics of IP addresses and various addressing methods. You will also identify different types of network hardware. Finally, you will describe how to install a wireless small office home office (SOHO) network.

Day	Activity/Objective	Type
4 days: 32–35	<b>Network Fundamentals</b> <i>Explain basic networking concepts.</i>	Lesson
4 days: 36–39	<b>IP Addresses</b> <i>Describe the types, classes, and characteristics of IP addresses.</i>	Lesson
4 days: 40–43	<b>Network Hardware</b> <i>Describe the hardware used for networking.</i>	Lesson
3 days: 44–46	<b>Wireless and SOHO Networks</b> <i>Describe how to install a wireless small office home office (SOHO) network.</i>	Lesson
4 days: 47–50	<b>Unit Activity and Discussion—Unit 2</b>	Unit Activity Discussion
1 day: 51	<b>Posttest—Unit 2</b>	Assessment

## Unit 3: Laptop and Mobile Devices

### Summary

In this unit, you will describe how to replace hardware components of a laptop. You will describe laptop features such as special function keys, locks, and screen types. Finally, you will describe features of mobile devices and their accessories.

Day	Activity/Objective	Type
4 days: 52–55	<b>Laptop Hardware</b> <i>Describe the hardware components of a laptop.</i>	Lesson
3 days: 56–58	<b>Laptop Features</b> <i>Describe and use laptop features.</i>	Lesson
4 days: 59–62	<b>Mobile Devices</b> <i>Describe the characteristics of mobile devices and the accessories available with these devices.</i>	Lesson
4 days: 63–66	<b>Unit Activity and Discussion—Unit 3</b>	Unit Activity Discussion
1 day: 67	<b>Posttest—Unit 3</b>	Assessment

## Unit 4: Troubleshooting

### Summary

In this unit, you will identify and troubleshoot hardware issues. You will also troubleshoot storage and display issues and describe the use of recovery tools. You will identify network issues and describe the use of command line tools. Finally, you will identify and troubleshoot mobile device and printer issues.

Day	Activity/Objective	Type
4 days: 68–71	<b>Troubleshooting Hardware Problems</b> <i>Identify and troubleshoot hardware issues related to RAM, CPU, motherboard, and power.</i>	Lesson
4 days: 72–75	<b>Troubleshooting Storage and Display Problems</b> <i>Identify and troubleshoot issues related to storage devices and display.</i>	Lesson
4 days: 76–79	<b>Troubleshooting Networking Problems</b>	Lesson

Day	Activity/Objective	Type
	<i>Identify and troubleshoot issues related to wired and wireless networks.</i>	
4 days: 80–83	<b>Troubleshooting Mobile Device and Printer Problems</b> <i>Identify and troubleshoot common issues related to mobile devices and printers.</i>	Lesson
4 days: 84–87	<b>Unit Activity and Discussion—Unit 4</b>	Unit Activity Discussion
1 day: 88	<b>Posttest—Unit 4</b>	Assessment
1 day: 89	<b>Semester Review</b>	
1 day: 90	<b>CompTIA A+ 220-901 Practice Test</b>	Assessment