This course supports the assessments for DQV1. The course covers 10 competencies and represents 3 competency units.

Introduction

The DQV1 requirement can be satisfied by completion of EAV1 or EBV1. Students who satisfy the requirement through completion of EAV1 or EBV1 will receive a RS (Requirement Satisfied) for DQV1. If you are interested in this option please discuss it with your program mentor.

Overview

The CompTIA Strata IT Fundamentals exam is designed to show that the successful candidate has the knowledge to

- identify and explain PC components,
- setup a basic PC workstation,
- conduct basic software installation,
- identify compatibility issues, and
- recognize and prevent basic security risks.

This test also assesses your knowledge in the area of Green IT and the preventative maintenance of computers.

The CompTIA Strata IT Fundamentals exam is intended for candidates who are advanced home users, and who may be considering pursuit of the A+ Certification.

Please view the following video introduction for this course:

Competencies

This course provides guidance to help you demonstrate the following 10 competencies:

- **Competency 417.1.1: Processing and Memory**
  The graduate analyzes how computer processing and memory are foundational components of computers.

- **Competency 417.1.2: Input and Storage Devices**
  The graduate evaluates internal and external storage, and input devices, when setting up a computer.

- **Competency 417.1.3: Peripherals and Networking**
  The graduate evaluates the characteristics and functions of peripheral devices and network compatibility.

- **Competency 417.1.4: Setting Up a Computer**
  The graduate demonstrates the ability to set up a basic PC workstation.

- **Competency 417.1.5: Maintaining a Computer**
  The graduate designs a computer maintenance plan based on specified guidelines and
Competency 417.1.6: Installing and Configuring Software
The graduate conducts basic software installation and configuration.

Competency 417.1.7: Updating and Upgrading Hardware
The graduate evaluates an operating system for updating and upgrading computer hardware.

Competency 417.1.8: Troubleshooting and Operational Problems
The graduate analyzes common operational problems caused by hardware.

Competency 417.1.9: Security and Access Control
The graduate designs a plan to recognize and mitigate basic security risks and breaches.

Competency 417.1.10: Safe, Legal, and Green Computer Usage
The graduate constructs a plan to provide environmentally sound usage of computers including power conservation, preventative maintenance, and building infrastructure.

Course Instructor Assistance
As you prepare to successfully demonstrate competency in this subject, remember that course instructors stand ready to help you reach your educational goals. As subject matter experts, mentors enjoy and take pride in helping students become reflective learners, problem solvers, and critical thinkers. Course instructors are excited to hear from you and eager to work with you.

Successful students report that working with a course instructor is the key to their success. Course instructors are able to share tips on approaches, tools, and skills that can help you apply the content you're studying. They also provide guidance in assessment preparation strategies and troubleshoot areas of deficiency. Even if things don’t work out on your first try, course instructors act as a support system to guide you through the revision process. You should expect to work with course instructors for the duration of your coursework, and you are encouraged to contact them as soon as you begin. Course instructors are fully committed to your success!

Preparing for Success

The information in this section is provided to detail the resources available for you to use as you complete this course.

Learning Resources
The learning resources listed in this section are required to complete the activities in this course. For many resources, WGU has provided automatic access through the course. However, you may need to manually enroll in or independently acquire other resources. Read the full instructions provided to ensure that you have access to all of your resources in a timely manner.

Automatically Enrolled Resources

You can access the learning resources listed in this section by clicking on the links provided throughout the course. You may be prompted to log in to the WGU student portal to access the resources.

SkillSoft and Books 24x7
You will access SkillSoft items at the activity level within this course. For more information on accessing SkillSoft items, please see the “Accessing SkillSoft Learning Resources” page.

The following Books24x7 e-texts will be used in this course:


**Supplemental SkillSoft E-Text**
The following textbook is recommended but is not required reading. This text is supplemental and will not be linked specifically in any of the activities, but you have access to this resource in e-text form by clicking the linked title provided below.


*Note: These e-texts are available to you as part of your program tuition and fees, but you may purchase hard copies at your own expense through a retailer of your choice. If you choose to do so, please use the ISBN listed to ensure that you receive the correct edition.*

**uCertify**
You will access the following resource from uCertify at the activity level within this course:

- FC0-U41 CompTIA Strata - IT Technology

uCertify is an interactive learning resource that contains a textbook, study notes, flash cards, exercises, and practice exams. This resource can be used throughout the course to support the information in the electronic text book for this course, and to help you identify content areas where you need to spend more time.

*Note: The online version of the uCertify learning resource is provided to you by WGU as part of your enrollment. If you wish to use the offline version, you may purchase it from uCertify.*

**LearnKey**
You will access the following LearnKey course within the activities of this course:

- Strata IT Fundamentals

This course includes over 12 hours of interactive training comprised of 3 different sessions. This comprehensive training includes preassessments, video and simulated lab exercises, and postassessment activities for each of the 3 different sessions.

**Pacing Guide**
The pacing guide suggests a weekly structure to pace your completion of learning activities. It is provided as a suggestion and does not represent a mandatory schedule. Follow the pacing guide carefully to complete the course in the suggested timeframe.
Pacing Guide: Information and Communication Technologies and Foundations

Note: This pacing guide does not replace the course. Please continue to refer to the course for a comprehensive list of the resources and activities.

Processing and Memory

Every computer has a processor and some type of random access memory (RAM). A processor is the component that functions to perform mathematical calculations. The computer uses RAM for temporary data storage.

Processor Speed and Cores

A computer processor’s instruction-set dictates the math calculations it can perform. Intel and AMD are the two major processor makers. PGA and LGA are the two types of processor sockets. Caches and multicore processors improve system performance.

Every type of computer, from a hand-held device to a supercomputer, has a processor.

This topic addresses the following competency:

- **Competency 417.1.1: Processing and Memory**
  The graduate analyzes how computer processing and memory are foundational components of computers.

This topic highlights the following objectives:

- List the most popular model names of Intel and AMD processors.
- Explain CPU speed measurements.
- Identify the type of processor caches.
- Outline the problems involved in upgrading a processor.

Processing

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:

- “Processors” of chapter 1 (“Processing and Memory”)

Static and Dynamic Memory

A computer’s memory has static and dynamic memory. Data is stored inside a memory chip, and virtual memory takes data in and out of physical memory. High performance memory can perform multiple operations.

This topic addresses the following competency:
• **Competency 417.1.1: Processing and Memory**
  
  The graduate analyzes how computer processing and memory are foundational components of computers.

This topic highlights the following objectives:

- Explain RAM data rates.
- Describe the compatibility issues involved in upgrading RAM.
- Identify physical characteristics of RAM.

**Memory**

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:

- “Memory” of chapter 1 (“Processing and Memory”)

**Chapter Review**

Complete the following sections in *CompTIA Strata Study Guide*:

- “Exam Essentials” of chapter 1 (“Processing and Memory”)
- “Review Questions” of chapter 1 (“Processing and Memory”)

**LearnKey**

The LearnKey resource may be used as a supplement to further your understanding.

Complete the following sections of *Strata IT Fundamentals Session 1 Training*:

- Introduction
- Visible PC and How it Works
- Inside the System Unit
- CPU and RAM

**Input and Storage Devices**

Most of us use computer input devices every day; we use keyboards, mice, and touchpads. An input device is any type of computer hardware equipment used to give data and control signals to the computer. We also use storage devices in the form of CD and DVD technologies.

**Core Input Devices**

Input devices are any device used to help you put data into the computer such as a keyboard, touchpad, or mouse.
This topic addresses the following competency:

- **Competency 417.1.2: Input and Storage Devices**
  The graduate evaluates internal and external storage, and input devices, when setting up a computer.

This topic highlights the following objectives:

- Recognize the keys found in a standard keyboard.
- Explain the purpose for pointing devices.
- Identify the parts of a mouse.
- Explain how a touchpad works.
- Describe how touch screens are used.

**Input Devices**

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:

- “Core Input Devices” of chapter 2 (“Input and Storage Devices”)

**Internal and External Storage Devices**

A storage device is a hardware device that stores information in the computer. Primary storage would be the computer’s RAM, and examples of secondary storage are CDs, DVDs, and flash drives.

This topic addresses the following competency:

- **Competency 417.1.2: Input and Storage Devices**
  The graduate evaluates internal and external storage, and input devices, when setting up a computer.

This topic highlights the following objectives:

- List the units of storage measurement.
- Explain how a mechanical hard disk stores data.
- Recognize the factors that govern hard disk performance.
- Differentiate between low level formatting, partitioning, and high level formatting.
- Summarize the various types of optical media.
- Classify types of flash RAM storage.

**Storage Devices**

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:
Peripheral devices are input and output devices not critical to the use of the computer; they add to its capabilities. Some of these devices include

- printers,
- monitors,
- scanners, and
- digital cameras.

The topic of networking includes wired and wireless Ethernet network hardware and its standards and protocols; it also includes Internet connection technologies and protocols.

**Peripheral Devices**

Computer peripherals attach to the computer and enhance its functions. Printers, monitors, speakers, scanners, and digital cameras connect to the computer through peripheral ports.

This topic addresses the following competency:

- **Competency 417.1.3: Peripherals and Networking**
  The graduate evaluates the characteristics and functions of peripheral devices and network compatibility.

This topic highlights the following objectives:

- Compare common input and output peripherals.
- Clarify how scanners and digital cameras capture images.
• Summarize the technology basics of printers, monitor, speakers, scanners, and digital cameras.

**Peripherals**

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:

- “Peripheral Devices” of chapter 3 (“Peripherals and Networking”)

**Networking and Networking Protocols**

Network protocols provide the foundation upon which the Internet is built. This section of the course introduces you to professional jargon and helps you understand the standards used for wireless technologies.

This topic addresses the following competency:

- **Competency 417.1.3: Peripherals and Networking**
  The graduate evaluates the characteristics and functions of peripheral devices and network compatibility.

This topic highlights the following objectives:

- Identify the hardware involved in networking.
- Classify cable types used for wireless technologies.
- Explain the standards used for wireless technologies.

**Networking**

Read and complete the exercises in the following sections in *CompTIA Strata Study Guide*:

- “Networking” of chapter 3 (“Peripherals and Networking”)
- “Networking Protocols” of chapter 3 (“Peripherals and Networking”)

**Internet Connections and DNS Servers**

Domain Name System (DNS) is a naming system for services and resources connected to the Internet. It associates information with domain names and translates host names into IP addresses.

This topic addresses the following competency:

- **Competency 417.1.3: Peripherals and Networking**
The graduate evaluates the characteristics and functions of peripheral devices and network compatibility.

This topic highlights the following objectives:

- Differentiate the types of IP addresses.
- Explain the purpose of DNS servers.
- Discuss Internet connection technologies and protocols.
- Recognize common protocols used on the Internet.
- Match acronyms with names of Internet protocols.
- Outline how to customize a web browser.

DNS Servers and Internet Connections

Read and complete the exercises in the following sections in *CompTIA Strata Study Guide*:

- “Internet Connections” of chapter 3 (“Peripherals and Networking”)
- “DNS Servers” of chapter 3 (“Peripherals and Networking”)

Chapter Review

Complete the following sections in *CompTIA Strata Study Guide*:

- “Exam Essentials” of chapter 3 (“Peripherals and Networking”)
- “Review Questions” of chapter 3 (“Peripherals and Networking”)

LearnKey

The LearnKey resource may be used as a supplement to further your understanding.

Complete the following section of *Strata IT Fundamentals Session 2 Training*:

- Printers

Complete the following sections of *Strata IT Fundamentals Session 3 Training*:

- Video
- Multimedia
- Networking
- Accessing the Internet

Setting up a Basic PC Workstation
The ability to set up a computer can be a challenge to someone first learning about information systems and technology. Knowing which ports are used for which function can be daunting until you become more familiar with where each piece of technology should go.

**Choosing a Computer Type**

Today, computers come in all sizes, have different purposes, vary in cost, and have different capabilities. Personal computers, laptops, smart phones, personal digital assistants, mainframes, and super computers are examples of the numerous choices we have in today’s technological world.

This topic addresses the following competency:

- **Competency 417.1.4: Setting Up a Computer**
  The graduate demonstrates the ability to set up a basic PC workstation.

This topic highlights the following objectives:

- Classify the various types of computers for portability and ease-of-use.
- List the numerous computer types used today.
- Compare the differences between PC Cases.

**Choosing a Computer**

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:

- “Choosing a Computer Type” of chapter 4 (“Setting up a Computer”)

**Setting up a Computer**

This section of the course covers the different ports for connecting peripherals, how to turn on a PC and its peripherals, and how to begin using the PC and its peripherals.

This topic addresses the following competency:

- **Competency 417.1.4: Setting Up a Computer**
  The graduate demonstrates the ability to set up a basic PC workstation.

This topic highlights the following objectives:

- Describe how to verify voltage and power requirements depending on wall outlets, country, and region.
- Explain how to connect components to common ports on a computer.
- Recognize the function for common ports seen on computers.
Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:

- “Setting Up a Computer” of chapter 4 (“Setting up a Computer”)

**Chapter Review**

Complete the following sections in *CompTIA Strata Study Guide*:

- “Exam Essentials” of chapter 4 (“Setting up a Computer”)
- “Review Questions” of chapter 4 (“Setting up a Computer”)

**LearnKey**

The LearnKey resource may be used as a supplement to further your understanding.

Review the following sections of *Strata IT Fundamentals Session 1 Training*:

- Visible PC and How it Works
- Inside the System Unit

**uCertify**

The uCertify resource may be used as a supplement to further your understanding and to help you prepare for the competency exam. It contains various test modes, quizzes, and reviews.

Access the following uCertify review course:

- **FC0-U41 CompTIA Strata - IT Technology**

Please use the steps listed on following web page to guide your study of this course:

- "Using uCertify"

**Flash Cards**

Review the 126 flashcards.

To navigate to this section, on the home page, click “Flash Cards” and open “Technology and Computer Hardware Basics.”

**Custom Exam**

Complete 167 exam questions in

- TEST mode,
- LEARN mode, and
- REVIEW mode.

To navigate to the exam questions, on the homepage, find the icons at the bottom of the page
and open the Custom Exam section from the drop-down box, select “Technology and Computer Hardware Basics.”

**Pop Quiz**
Complete the 98 pop quiz questions in

- TEST mode,
- LEARN mode, and
- REVIEW mode.

To navigate to this section, on the home page, click “Test Sets,” open the “Pop Quiz” section and select “Technology and Computer Hardware Basics.”

**Table of Contents Review**
Review the information about technology and computer basics.

To navigate to the Table of Contents, on the homepage, find the icons at the bottom of the page and click “TOC,” then select “Technology and Computer Hardware Basics.”

**Computer Maintenance**

Maintenance of a computer includes

- cleaning it,
- backing up files, and
- preventing damage from static electricity and electrical surges.

Other maintenance includes keeping the content of the computer orderly, such as moving, copying, renaming, or deleting files. A brief amount of time spent in maintenance may save you significant time when you are searching for important data.

**Cleaning a Computer**

This sections covers

- why it is important to keep your computer clean,
- how to keep your computer clean, and
- how best to store ink and toner cartridges.

This topic addresses the following competency:

- **Competency 417.1.5: Maintaining a Computer**  
  The graduate designs a computer maintenance plan based on specified guidelines and procedures.

This topic highlights the following objectives:

- Describe how to correctly clean all parts of a computer.
• Identify key cleaning equipment for a PC.
• Clarify the guidelines for storing and replacing ink and toner consumables in a printer.

Maintaining a Computer

Read and complete the exercises in the following sections in *CompTIA Strata Study Guide*:

• “Cleaning a Computer” of chapter 5 (“Maintaining a Computer”)
• “Cleaning Supplies” of chapter 5 (“Maintaining a Computer”)

**Prevention**
Part of computer maintenance includes knowing how to prevent data or service loss. This includes battery conservation, back-up solutions, and drive recovery.

This topic addresses the following competency:

• **Competency 417.1.5: Maintaining a Computer**
  The graduate designs a computer maintenance plan based on specified guidelines and procedures.

This topic highlights the following objectives:

• Summarize procedures for preventing electrical and other types of damage to computers.
• Describe processes to prevent service loss.
• Recognize methods for battery conservation.
• Explain how back-ups mitigate the risk of losing data.

Preventative Measures

Read and complete the exercises in the following sections in *CompTIA Strata Study Guide*:

• “Preventing Damage to Equipment” of chapter 5 (“Maintaining a Computer”)
• “Preventing Data or Service Loss” of chapter 5 (“Maintaining a Computer”)

**Managing Files and Folders**
The ability to manage your files and folders will save you significant time by making your data and information easier to locate. Using file management tools is one method to help you to organize your work in today’s world of “big data.”

This topic addresses the following competency:

• **Competency 417.1.5: Maintaining a Computer**
The graduate designs a computer maintenance plan based on specified guidelines and procedures.

This topic highlights the following objectives:

- Explain how to pen a file management interface.
- Construct a process for working with files and folders in different operating systems.
- Summarize the use of wildcards in multifile selection.
- Explain how to assign a folder structure during installation.

**Managing Files and Folders**

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:

- “Managing Files and Folders” of chapter 5 (“Maintaining a Computer”)

**Using Software Tools for PC Maintenance**

There are many maintenance utilities that come with Windows. This section discusses some of the various tools available to you for optimizing computer performance.

This topic addresses the following competency:

- **Competency 417.1.5: Maintaining a Computer**
  
  The graduate designs a computer maintenance plan based on specified guidelines and procedures.

This topic highlights the following objectives:

- Summarize the function and purpose of tools for managing disks and data storage.
- Implement tools for optimizing performance and fixing problems.
- Differentiate tools to be used for customizing the user experience.
- Design a plan to look up event logs and set a folder or drive to compress content to save space.

**Software Tools for Computer Maintenance**

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:

- “Using Software Tools for PC Maintenance” of chapter 5 (“Maintaining a Computer”)

**Chapter Review**
Complete the following sections in *CompTIA Strata Study Guide*:

- “Exam Essentials” of chapter 5 (“Maintaining a Computer”)
- “Review Questions” of chapter 5 (“Maintaining a Computer”)

**LearnKey**

The LearnKey resource may be used as a supplement to further your understanding.

Complete the following sections of *Strata IT Fundamentals Session 2 Training*:

- Windows Basic Training
- Performing System Maintenance

**Software Installation and Configuration Basics**

This section covers

- configuring the operating system,
- installing new software,
- upgrading an application, and
- removing software.

**Configuring the Operating System**

This section covers the basics of

- operating system configuration,
- managing user accounts,
- controlling date and time, and
- changing screen resolution.

This topic addresses the following competency:

- **Competency 417.1.6: Installing and Configuring Software**
  The graduate conducts basic software installation and configuration.

This topic highlights the following objectives:

- Design a process to create and manage user accounts.
- Explain ways to customize the user experience.
- Set permissions to control system access and level of access.

**Installation and Configuration of Software**

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:
“Configuring the Operating System” of chapter 6 (“Installing and Configuring Software”)

**Updating and Upgrading the Operating System**

When you upgrade to a new operating system, it may be stressful. You want to take advantage of new features or applications, but know there are risks involved. Learn how smart planning can help mitigate problems with updates and upgrades.

This topic addresses the following competency:

- **Competency 417.1.6: Installing and Configuring Software**
  The graduate conducts basic software installation and configuration.

This topic highlights the following objectives:

- Compare the risks with the rewards of updating an operating system.
- Create a plan to circumvent problems that may be caused by operating system updates.
- Differentiate among a service pack, a new operating system version, and an operating system edition.
- Analyze how to find information on an upgrade path, based on the components required by the operating system.
- Assess upgrade compatibility of a specific operating system.
- Summarize how to compare system requirements of a new operating system to a current system’s specs, along with gathering information about driver compatibility for hardware.
- Compare the difference between making changes to operating system settings in a Windows PC and in a Mac.

**Installing and Configuring Software**

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:

- “Updating and Upgrading the Operating System” of chapter 6 (“Installing and Configuring Software”)

**Applications**

This section covers how applications are

- installed,
- repaired, and
- removed.

You will learn how to assess whether or not an application will work well on your operating system and about preinstallation activities such as

- securing administrative rights,
- checking for Internet access, and
software licensing.

This topic addresses the following competency:

- **Competency 417.1.6: Installing and Configuring Software**
  The graduate conducts basic software installation and configuration.

This topic highlights the following objectives:

- Assess compatibility and minimum requirements for new applications.
- Describe how to secure administrative rights and firewall access.
- Install a new application, repair or reinstall an application, or remove an application.
- Explain licenses and usage permissions.

**Installation, Repair, and Removal**

Read and complete the exercises in the following sections in *CompTIA Strata Study Guide*:

- “Installing Applications” of chapter 6 (“Installing and Configuring Software”)
- “Repairing or Reinstalling an Application” of chapter 6 (“Installing and Configuring Software”)
- “Removing an Application” of chapter 6 (“Installing and Configuring Software”)

**Chapter Review**

Complete the following sections in *CompTIA Strata Study Guide*:

- “Exam Essentials” of chapter 6 (“Installing and Configuring Software”)
- “Review Questions” of chapter 6 (“Installing and Configuring Software”)

**LearnKey**

The LearnKey resource may be used as a supplement to further your understanding.

Complete the following sections of *Strata IT Fundamentals Session 2 Training*:

- Operating Systems
- Managing User Accounts
- Software Installation

**uCertify**

The uCertify resource may be used as a supplement to further your understanding and to help you prepare for the exam. It contains various test modes, quizzes, and reviews.

Access the following uCertify review course:
Flash Cards
Review the 16 flashcards.

To navigate to this section, on the home page, click “Flash Cards” and open “Compatibility Issues and Common Errors.”

Custom Exam
Complete 39 exam questions in
- TEST mode,
- LEARN mode, and
- REVIEW mode.

To navigate to the exam questions, on the homepage, find the icons at the bottom of the page and open the Custom Exam section from the drop-down box, select “Compatibility Issues and Common Errors.”

Pop Quiz
Complete the 20 pop quiz questions in
- TEST mode,
- LEARN mode, and
- REVIEW mode.

To navigate to this section, on the home page, click “Test Sets,” open the “Pop Quiz” section, and select “Compatibility Issues and Common Errors.”

Table of Contents Review
Review the information about technology and computer basics.

To navigate to the Table of Contents, on the homepage, find the icons at the bottom of the page and click “TOC,” then select “Compatibility Issues and Common Errors.”

Updating and Upgrading Hardware

Over time, you may find your computer hardware is inadequate for what you need your computer to do. Rather than replacing the entire computer, you may be able to upgrade one or more components. You will learn how to evaluate an operating system to see if an upgrade would be beneficial.

Evaluating a Computer for Upgrades
Check hardware requirements before you perform a computer upgrade. There are several risks involved with upgrading components, so plan carefully.

This topic addresses the following competency:

- **Competency 417.1.7: Updating and Upgrading Hardware**
  The graduate evaluates an operating system for updating and upgrading computer hardware.

This topic highlights the following objectives:

- Evaluate an operating system for possible upgrades.
- Identify the risks associated with upgrading components.
- Describe reasons why a system may no longer function after an upgrade.

### Upgrade Evaluation

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:

- “Evaluating a Computer for Upgrades” of chapter 7 (" Updating and Upgrading Hardware")

### Installing Upgrades

Learn how to select compatible components of several types including RAM, disk drives, and display adapters, and how to install upgrades safely.

This topic addresses the following competency:

- **Competency 417.1.7: Updating and Upgrading Hardware**
  The graduate evaluates an operating system for updating and upgrading computer hardware.

This topic highlights the following objectives:

- Identify basic compatibility issues.
- Describe how to select upgrade components.
- Explain how to install memory, an internal disk drive, and a circuit board.

### Hardware Upgrades and Updates

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*: 
Chapter Review

Complete the following sections in *CompTIA Strata Study Guide*:

- “Exam Essentials” of chapter 7 (“Updating and Upgrading Hardware”)
- “Review Questions” of chapter 7 (“Updating and Upgrading Hardware”)

**LearnKey**

The LearnKey resource may be used as a supplement to further your understanding.

Review the following sections of *Strata IT Fundamentals Session 2 Training*:

- Performing System Maintenance

**Troubleshooting and Operational Problems**

You will learn how to troubleshoot some common operational problems with personal computers, including:

- how to handle a computer crash, or
- what to do in the case of an “error” message or in a “lock-up.”

**Startup Failure**

The first thing to do when a computer will not start is to make sure it is getting power. That may sound too basic, but checking all connections and cables may take care of the problem quickly.

This topic addresses the following competency:

- **Competency 417.1.8: Troubleshooting and Operational Problems**
  
The graduate analyzes common operational problems caused by hardware.

This topic highlights the following objectives:

- Describe what will be seen on a monitor screen in the event of a start-up failure.
- Compare what will be seen when Windows or Mac operating systems will not load.

**Troubleshooting Operational Problems**

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:

- “Startup Failure” of chapter 8 (“Troubleshooting Operational Problems”)
Operating System Problems

It’s good to know how to troubleshoot effectively when Internet pop-ups, error messages, or other issues occur. This section covers the management of error messages, slowdowns, and computer lock-ups.

This topic addresses the following competency:

- **Competency 417.1.8: Troubleshooting and Operational Problems**
  The graduate analyzes common operational problems caused by hardware.

This topic highlights the following objectives:

- Identify common reasons for an operating system to lock up.
- Recognize the most common reason for a complete system lock-up.

Operating System Error Messages

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*: “Operating System Error Messages” of chapter 8 (“Troubleshooting Operational Problems”)

Failures

Applications are more likely to cause problems than operating systems. Applications are made by different manufacturers and are expected to work well, although this does not always happen. Learn how to identify and solve computer application problems.

This topic addresses the following competency:

- **Competency 417.1.8: Troubleshooting and Operational Problems**
  The graduate analyzes common operational problems caused by hardware.

This topic highlights the following objectives:

- Analyze why an application will not start and provide solutions.
- Recognize why applications crash and how to recover.
- Summarize hardware and driver incompatibility and accompanying solutions.
- Develop a plan for troubleshooting malfunctioning input devices.
- Describe how to troubleshoot network connection problems.

Application Failures

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*: 
Chapter Review

Complete the following sections in *CompTIA Strata Study Guide*:

- “Exam Essentials” of chapter 8 (“Troubleshooting Operational Problems”)
- “Review Questions” of chapter 8 (“Troubleshooting Operational Problems”)

**uCertify**

The uCertify resource may be used as a supplement to further your understanding and to help you prepare for the exam. It contains various test modes, quizzes, and reviews.

Access the following uCertify review course:

- **FC0-U41 CompTIA Strata - IT Technology**

Please use the steps listed on following web page to guide your study of this course:

- "Using uCertify"

**Flash Cards**

Review the 26 flashcards.

To navigate to this section, on the home page, click “Flash Cards” and open “Software Installation and Functions.”

**Custom Exam**

Complete 27 exam questions in

- TEST mode,
- LEARN mode, and
- REVIEW mode.

To navigate to the exam questions, on the homepage, find the icons at the bottom of the page and open the Custom Exam section from the drop-down box, select “Software Installation and Functions.”

**Pop Quiz**

Complete the 20 pop quiz questions in

- TEST mode,
- LEARN mode, and
- REVIEW mode.
To navigate to this section, on the home page, click “Test Sets,” open the “Pop Quiz” section, and select “Software Installation and Functions.”

Table of Contents Review
Review the information about technology and computer basics.

To navigate to the Table of Contents, on the homepage, find the icons at the bottom of the page and click “TOC,” then select “Software Installation and Functions.”

Security and Access Control

In a perfect world, computer security is established to allow the right people access without problems. Unfortunately, security systems do not always work that way. There needs to be a balance between safety and convenience.

Physical Security and Access Control
Organizations spend significant resources on maintaining the security and privacy of their information. With the right training, all employees can develop work habits to keep data secure.

This topic addresses the following competency:

- **Competency 417.1.9: Security and Access Control**
  The graduate designs a plan to recognize and mitigate basic security risks and breaches.

This topic highlights the following objectives:

- Describe how hacking occurs and provide methods for prevention.
- Identify common access control methods.
- Distinguish the components of an effective password.
- Implement processes to prevent hardware theft.
- Analyze various methods for preventing data theft.
- Explain how to secure back-up media.
- Summarize ways to make a web browser more secure.

Access Control and Physical Security

Read and complete the exercises in the following sections in *CompTIA Strata Study Guide*:

- “Physical Security” of chapter 9 (“Security and Access Control”)
- “Access Control” of chapter 9 (“Security and Access Control”)

Network Control
Learn about the risks of using unsecure wireless networks and the importance of using firewalls to block attacks on unused ports. The prevention of security breaches is critical to the safe management of information at any organization.
This topic addresses the following competency:

- **Competency 417.1.9: Security and Access Control**
  The graduate designs a plan to recognize and mitigate basic security risks and breaches.

This topic highlights the following objectives:

- Explain ways to prevent security breaches.
- Identify one of the most important prevention methods.

**Security and Access Control**

Read and complete the exercises in the following sections in *CompTIA Strata Study Guide*:

- “Network Control” of chapter 9 (“Security and Access Control”)

**Internet Privacy and Security**

You hear a great deal today about Internet fraud and how law enforcement and regulatory agencies are addressing this problem. This can be a serious issue when it involves government information or other sensitive data such as protected health information.

This topic addresses the following competency:

- **Competency 417.1.9: Security and Access Control**
  The graduate designs a plan to recognize and mitigate basic security risks and breaches.

This topic highlights the following objectives:

- Explain fraud and social engineering on the Internet.
- Differentiate among the numerous malware attacks.
- Describe how malware infections in a computer are diagnosed and corrected.
- Recognize basic security risks and procedures to counteract or prevent them.

**Privacy and Security**

Read and complete the exercises in the following sections in *CompTIA Strata Study Guide*:

- “Internet Privacy and Security” of chapter 9 (“Security and Access Control”)

**Chapter Review**
Complete the following sections in *CompTIA Strata Study Guide*:

- “Exam Essentials” of chapter 9 ("Security and Access Control")
- “Review Questions” of chapter 9 ("Security and Access Control")

**LearnKey**

The LearnKey resource may be used as a supplement to further your understanding.

Complete the following sections of *Strata IT Fundamentals Session 3 Training*:

- Security
- Wireless

**uCertify**

The uCertify resource may be used as a supplement to further your understanding and to help you prepare for the exam. It contains various test modes, quizzes, and reviews.

Access the following uCertify review course:

- **FC0-U41 CompTIA Strata - IT Technology**

Please use the steps listed on following webpage to guide your study of this course:

- "Using uCertify"

**Flash Cards**

Review the 50 flashcards.

To navigate to this section, on the home page, click “Flash Cards” and open “Security.”

**Custom Exam**

Complete 55 exam questions in

- TEST mode,
- LEARN mode, and
- REVIEW mode.

To navigate to the exam questions, on the homepage, find the icons at the bottom of the page and open the "Custom Exam" section from the drop-down box, select “Security.”

**Pop Quiz**

Complete the 31 pop quiz questions in

- TEST mode,
• LEARN mode, and
• REVIEW mode.

To navigate to this section, on the home page, click “Test Sets,” open the “Pop Quiz” section, and select “Security.”

Table of Contents Review
Review the information about technology and computer basics.

To navigate to the Table of Contents, on the homepage, find the icons at the bottom of the page and click “TOC,” then select “Security.”

Safe, Legal, and Green Computer Usage

This section covers legal issues involving computer usage and disposal.

Safe and Legal Disposal of Hazardous Substances
There are large amounts of computers, batteries, cleaning supplies, and other hazardous substances being disposed of today. Learn about safe ways to be environmentally conscious and dispose of hazardous substances related to workplace technology.

This topic addresses the following competency:

• **Competency 417.1.10: Safe, Legal, and Green Computer Usage**
  The graduate constructs a plan to provide environmentally sound usage of computers including power conservation, preventative maintenance, and building infrastructure.

This topic highlights the following objectives:

• Evaluate a plan for the proper disposal of hazardous substances, including batteries.
• Describe how computers are recycled or legally disposed of.
• Summarize safe and legal techniques for disposing of monitors, toner, and cleaning supplies.

Safe, Legal, and Green Computer Use

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:

• “Safe and Legal Disposal of Hazardous Substances” of chapter 10 (“Safe, Legal, and Green Computer Usage”)

IT Related Laws
There are laws and guidelines related to information technology and the protection of shared information. This section includes brief summaries of laws in both the United Kingdom and the United States.

This topic addresses the following competency:
• **Competency 417.1.10: Safe, Legal, and Green Computer Usage**  
The graduate constructs a plan to provide environmentally sound usage of computers including power conservation, preventative maintenance, and building infrastructure.

This topic highlights the following objectives:

- Summarize IT-related laws and guidelines.
- Explain the rationale and application of the Freedom of Information Act.
- Interpret how the Copyright Act protects information shared on the Internet.
- Summarize the criminal offenses listed in the Computer Misuse Act.

**Laws Related to IT**

Read and complete the exercises in the following section in *CompTIA Strata Study Guide*:

- “IT-Related Laws” of chapter 10 (“Safe, Legal, and Green Computer Usage”)

**Energy Efficiency**

You can make your personal computer more energy efficient by using power management techniques. Businesses today are forward thinking in approaching how green information technology can save money and energy through cloud computing, VoIP, and telecommuting.

This topic addresses the following competency:

- **Competency 417.1.10: Safe, Legal, and Green Computer Usage**  
The graduate constructs a plan to provide environmentally sound usage of computers including power conservation, preventative maintenance, and building infrastructure.

This topic highlights the following objectives:

- Describe power-saving and power-management techniques for computers and peripherals.
- Identify green equipment, techniques, and procedures.
- Explain how a company can save energy and money through its IT policies.
- Summarize how business infrastructure affects energy usage.

**Energy Efficient Computer Usage**

Read and complete the exercises in the following sections in *CompTIA Strata Study Guide*:

- “Energy-Efficient Personal Computing” of chapter 10 (“Safe, Legal, and Green Computer Usage”)
• “Energy-Efficiency in Server Usage” of chapter 10 (“Safe, Legal, and Green Computer Usage”)
• “Energy Conservation in Business IT” of chapter 10 (“Safe, Legal, and Green Computer Usage”)

Chapter Review

Complete the following sections in CompTIA Strata Study Guide:

• “Exam Essentials” of chapter 10 (“Safe, Legal, and Green Computer Usage”)
• “Review Questions” of chapter 10 (“Safe, Legal, and Green Computer Usage”)

LearnKey

The LearnKey resource may be used as a supplement to further your understanding.

Complete the following section of Strata IT Fundamentals Session 3 Training:

• Green IT

uCertify

The uCertify resource may be used as a supplement to further your understanding and to help you prepare for the exam. It contains various test modes, quizzes, and reviews.

Access the following uCertify review course:

• FC0-U41 CompTIA Strata - IT Technology

Please use the steps listed on following web page to guide your study of this course:

• "Using uCertify"

Flash Cards

Review the 36 flashcards.

To navigate to this section, on the home page, click “Flash Cards” and open “Green IT.”

Custom Exam

Complete 58 exam questions in

• TEST mode,
• LEARN mode, and
• REVIEW mode.

To navigate to the exam questions, on the homepage, find the icons at the bottom of the page and open the Custom Exam section from the drop-down box, select “Green IT.”
Pop Quiz
Complete the 28 pop quiz questions in

- TEST mode,
- LEARN mode, and
- REVIEW mode.

To navigate to this section, on the home page, click “Test Sets,” open the “Pop Quiz” section, and select “Green IT.”

Additional Exam Preparation

This section will guide you through a comprehensive, final review process in order to prepare for your exam.

uCertify Preparation
You will be using the uCertify resource to prepare for your final exam.

uCertify

The following activities will help you assess your own readiness and review the course material in preparation for the CompTIA Strata IT Fundamentals exam.

Complete the following uCertify review course:

- FC0-U41 CompTIA Strata - IT Technology

Complete the courseware in the following order:

1. Start with taking the Pre-Assessment (to get a baseline score).
2. Review each of the 10 Chapters and Lessons.
3. Reinforce what you learned in step 2 with exercises, flashcards, and quizzes.
4. Take all 5 Practice Tests:
   - Complete tests A–E (Five tests, 45 questions each) in “TEST” mode.
   - For those questions you scored incorrect, read the “LEARN” mode to determine what you still need to study; you should be scoring in the 90% range to ensure test readiness.
5. Take the 45 question Post-Assessment

Please use the steps listed on following web page to guide your study of this course:

- "Using uCertify"

Final Steps

Congratulations on completing the activities in this course! This course has prepared you to complete the assessments associated with this course. If you have not already been directed to
complete the assessments, schedule and complete your assessments now.

**1st Attempt Checklist**

One of the many things that makes WGU unique is its competency-based education model. If you know the material, all you have to do is prove it by passing the exam. If you can do this, you can accelerate the receipt of your degree.

To make sure you have the best chance possible to pass the exam on your first attempt, the following steps should be completed successfully before you take it:

1. **Follow The Course Material Step-By-Step**

   Complete all check-marked steps; this includes all links to the content presented in the book and Learnkey. Do not skip anything.

2. **Gauge Your Preparation**

   Take all five (A—E) of the Practice Tests in uCertify. If you score 90% or higher on all five uCertify tests in “Test” mode during your first attempt (5 tests, 45 questions each), then you are likely ready for the exam. Do not take the exams multiple times; this can cause the memorization of answers that may not be on your actual test.

3. **If You Score Below 90% During Your First Attempt On Any Of The Five Exams, Complete The Following Additional Steps:**

   - Review all ten major chapters of the interactive book in uCertify.
   - Review items you missed on the five uCertify Practice Exams in “Learn” mode to help reinforce any concepts you missed.
   - Study the Flash Cards, exercises, and quizzes listed in uCertify; focus on the areas you missed during the practice exams.

??If you are still scoring below 90%, complete the above-listed bullet points again!

If you have completed the steps above and you feel comfortable with all of the concepts presented, you are most likely ready to attempt the exam.

If you fail your first attempt, you will be required to contact the course instructor to see what went wrong and how you can prepare to ensure a successful second attempt. After determining you are ready, your course instructor will approve your request once to make another exam attempt.

**Assessment Information**

The activities in this course of study have prepared you to complete the CompTIA Strata IT
Fundamentals assessment. If you have not already completed the assessment, you will do so now.

**Accessing Outside Vendor Assessments**

Complete the following outside vendor assessment:

- CompTIA Strata IT Fundamentals

For directions on how to receive access to outside vendor assessments, see the “Accessing Objective and Outside Vendor Assessments” page.

**Submitting Outside Vendor Assessment Scores**

After completing an outside vendor assessment, follow the directions for submitting a score report on the “Following Outside Vendor Assessments” page.

**The WGU Library**

The WGU Library is available online to WGU students 24 hours a day.

For more information about using the WGU Library, view the following videos on The WGU Channel:

Introducing the WGU library

*Note: To download this video, right-click the following link and choose "Save as...":*[download video]

Searching the WGU library

*Note: To download this video, right-click the following link and choose "Save as...":*[download video]