



Credit Hours: 3

Contact Hours: This is a 3-credit course, offered in accelerated format. This means that 16 weeks of material is covered in 8 weeks. The exact number of hours per week that you can expect to spend on each course will vary based upon the weekly coursework, as well as your study style and preferences. You should plan to spend 14-20 hours per week in each course reading material, interacting on the discussion boards, writing papers, completing projects, and doing research.

Faculty Information: Faculty contact information and office hours can be found on the faculty profile page.

COURSE DESCRIPTION AND OUTCOMES

Course Description:

This course is an in-depth study of personal computer hardware, peripherals, and interfaces. It prepares students for the Essentials portion of the CompTIA A+ certification exam. It prepares students to diagnose, troubleshoot and maintain personal computer systems. It also provides a detailed overview of common peripheral devices and discusses how to connect them to personal computers. The use of a simulated lab environment will be incorporated into the course learning.

Course Overview:

ITS310 is the first course in a series of courses in computer technology at CSU-Global wherein students learn about computer components, their functions, and troubleshooting. In this course, students are introduced to computer hardware (power supply, system unit containing motherboard, CPU, memory, buses, and ports), communication components and transmission channels (wired and wireless transmission media), and Windows desktop operating systems. Students also learn to assemble and configure hardware, install software and network components, as well as troubleshoot hardware, software, and computer network and security issues.

This computer course prepares the students for CompTIA A+ 220-901 exam, which covers computer technology fundamentals and LabSim PC Pro exam. In addition, the course also equips them with the knowledge and skills to manage helpdesk functions and small to medium business IT operations. Students gain mastery of these skills by performing simulated hands-on exercises in LabSim.

After the successful completion of this course, students will be able to install, manage, repair, and troubleshoot PC hardware and Windows client operating systems. Students will have the real-world skills employed by PC technicians in daily tasks. The course, thus, prepares students for entry-level computer technician jobs.

Course Learning Outcomes:

1. Apply preventative maintenance techniques in given information technology scenarios.
2. Explain operating system problems
3. Identify the causes of operating system problems.
4. Determine solutions for hardware system problems.
5. Implement security features that address viruses, malware, and other threats.
6. Describe basic security concepts and technologies.

PARTICIPATION & ATTENDANCE

Prompt and consistent attendance in your online courses is essential for your success at CSU-Global Campus. Failure to verify your attendance within the first 7 days of this course may result in your withdrawal. If for some reason you would like to drop a course, please contact your advisor.

Online classes have deadlines, assignments, and participation requirements just like on-campus classes. Budget your time carefully and keep an open line of communication with your instructor. If you are having technical problems, problems with your assignments, or other problems that are impeding your progress, let your instructor know as soon as possible.

COURSE MATERIALS

Required:

LabSim Online Labs. (2016). *TestOut PC Pro* [220-901 & 220-902]. Pleasant Grove, UT.

NOTE: All non-textbook required readings and materials necessary to complete assignments, discussions, and/or supplemental or required exercises are provided within the course itself. Please read through each course module carefully.

COURSE SCHEDULE

Due Dates

The Academic Week at CSU-Global begins on Monday and ends the following Sunday.

- **Discussion Boards:** The original post must be completed by Thursday at 11:59 p.m. MT and peer responses posted by Sunday at 11:59 p.m. MT. Late posts may not be awarded points.
- **Opening Exercises:** Take the Opening Exercise before reading each week's content to see which areas you will need to focus on. You may take these exercises as many times as you need. The Opening Exercises will not affect your final grade.
- **Mastery Exercises:** Students may access and retake Mastery Exercises through the last day of class until they achieve the scores they desire.
- **Critical Thinking:** Assignments are due Sunday at 11:59 p.m. MT.
- **Live Classroom:** Although participation is not required, Live Classroom sessions are held during Week 3 and Week 6. There are two total sessions.

WEEKLY READING AND ASSIGNMENT DETAILS

Module 1

Readings

- Chacos, B. (2018). How to build a PC: A step-by-step guide. Retrieved from <https://www.pcworld.com/article/2987057/computers/how-to-build-a-pc-a-step-by-step-comprehensive-guide.html>
- LabSim Online Labs. (2016). *TestOut PC Pro* [220-901 & 220-902]:
 - 1.3 Hardware Basics

- 2.3 PC Tools
- 2.4 PC Maintenance
- 2.5 Troubleshooting Overview
- 3.2 Power Supply
- 3.3 Motherboards and buses
- 3.5 Processors
- 3.7 Memory
- 3.1 BIOS/UEFI
- 4.1 Peripheral Devices

Opening Exercise (0 points)

Discussion (25 points)

Critical Thinking (60 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option 1: 1.3.6 Set up a Computer

You were provided with the LabSim URL and login credentials before the start of the course via CSU-Global email. Use your login credentials to access your LabSim simulation for the Module 1 Critical Thinking assignment.

Complete the following LabSim simulation:

- 1.3.6 Set up a Computer

Each lab simulation will be graded automatically in LabSim. Your instructor will then convert your assignment score in a Critical Thinking Rubric. Refer to the Critical Thinking Grading Rubric, available in the Module 1 Materials Folder, for grading details.

When you have finished LabSim simulation, take a screenshot of the final screen of each Simulation to certify that you have completed all tasks. Paste the final screen images into a Word document with your name, date, school name, section, course name, and instructor name and submit the assignment.

Format your document according to the *CSU-Global Guide to Writing & APA*. You may use the following browsers to complete the LabSim assignments: Internet Explorer, Chrome, Firefox, Safari, or Edge.

Option 2: 1.3.8 LabSim Exam

You were provided with the LabSim URL and login credentials before the start of the course via CSU-Global email. Use your login credentials to access your LabSim exam for the Module 1 Critical Thinking assignment.

Complete the following in the LabSim exam:

- 1.3.8 LabSim Exam Questions

Each lab simulation will be graded automatically in LabSim. Your instructor will then convert your assignment score in a Critical Thinking Rubric. Refer to the Critical Thinking Rubric, available in the Module 1 Materials Folder, for grading details.

When you have finished the LabSim exam questions, take a screen shot of the final score screen (exam report) to certify that you have completed the exam. Paste the final screen images into a Word document with your name, date, school name, section, course name, and instructor name and submit the assignment.

Format your document according to the *CSU-Global Guide to Writing & APA*. You may use the following browsers to complete the LabSim assignments: Internet Explorer, Chrome, Firefox, Safari, or Edge.

Mastery Exercise (10 points)

Portfolio Reminder--Important

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option 1: Phase 1 of IT Infrastructure for a Small Firm

For the Portfolio Project, you will have one of two projects from which to choose. For Option #1, you will develop a technology project proposal that outlines a technology plan for a small firm. In Option #1, you have been hired as an IT expert by a small firm to set up an office for 20 staff members, half of whom will work with desktop computers and the remaining with laptop computers using wireless networks. The office would use one networked laser printer, accessible from both the desktop and laptop computers. The desktop computers will use a wired network, while the laptop computers will employ a wireless network to print and access the internet.

In Modules 1, 4, and 7 you will have reminders regarding what you should work on, and in Modules 3, 6, and 8 you will submit work and receive feedback from your instructor.

In Module 1, start making a list of computer hardware (desktop and laptop computers), peripherals, and network components (wired and wireless) with specifications required to set up the proposed business office. Include the following:

- Type of power supply
- Type of motherboard
- Type of CPU and memory
- Types of storage and their capacities
- Types of network interface cards (wired and wireless)
- Type and specifications for laser printers
- Types of expansion cards (if needed) for expanding ports
- Types of monitors (CRT, LCD) and specifications
- Specifications for laptop computers
- Any other required hardware component(s).

Save this list and use it when you develop and submit your Portfolio Project Milestone in Module 3.

Option 2: Phase 1 of IT Infrastructure for an Educational Institution

For the Portfolio Project, you will have one of two projects from which to choose. For Option #2, you have been hired as an IT manager for a new campus to set up the IT infrastructure over a six-month period in four phases. An educational institution is setting up a new campus which will house classrooms, offices, a library, a student lounge, registrar's office, and an academic support center for students.

In Modules 1, 4 and 7 you will have reminders regarding what you should work on, and in Modules 3, 6, and 8 you will submit work and receive feedback from your instructor.

In Module 1, start making a list of computer hardware (desktop and laptop computers), peripherals, and network components (wired and wireless) with specifications required to set up the proposed campus. Include the following:

- Type of power supply
- Type of motherboard
- Type of CPU and memory
- Types of storage and capacities
- Types of network interface cards (wired and wireless)
- Type and specifications of laser printers
- Types of expansion cards (if needed) for expanding ports
- Types of monitors (CRT, LCD) and specifications
- Specifications of laptop computers
- Any other required hardware component(s).

Save this list and use it when you develop and submit your Portfolio Project Milestone in Module 3.

Module 2

Readings

- LabSim Online Labs. (2016). *TestOut PC Pro* [220-901 & 220-902]:
 - 1.4.1 Windows Operating Systems
 - 1.4.2 Windows Operating System Facts
 - 1.5.1 Linux Operating Systems
 - 1.5.3 Linux Operating Systems Facts
 - 1.6.1 Mac OS introduction
 - 1.6.4 Mac OS Facts
 - 2.5.1 Troubleshooting Process
 - 2.5.2 Troubleshooting Process Facts
 - 10.2 Windows Pre-Installation
 - 10.3 Windows Installation
 - 10.4 Windows Post-Installation
 - Petro, N. J., & Sims, B. M. (2016). Windows 10: Is it time to upgrade? *GPSolo*, 33(2), 48-55.

Opening Exercise (0 points)

Discussion (25 points)

Critical Thinking (60 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option 1: 1.4.7 LabSim Exam

You were provided with the LabSim URL and login credentials before the start of the course via CSU-Global email. Use your login credentials to access your LabSim exam for the Module 2 Critical Thinking assignment.

Complete the following in the LabSim exam:

- 1.4.7 LabSim Exam Questions

Each lab simulation will be graded automatically in LabSim. Your instructor will then convert your assignment score in a Critical Thinking Rubric. Refer to the Critical Thinking Rubric, available in the Module 2 Materials Folder, for grading details.

When you have finished the LabSim exam questions, take a screen shot of the final score screen (exam report) to certify that you have completed the exam. Paste the final screen images into a Word document with your name, date, school name, section, course name, and instructor name and submit the assignment.

Format your document according to the *CSU-Global Guide to Writing & APA*. You may use the following browsers to complete the LabSim assignments: Internet Explorer, Chrome, Firefox, Safari, or Edge.

Option 2: 1.5.4 Using Shell Commands

You were provided with the LabSim URL and login credentials before the start of the course via CSU-Global email. Use your login credentials to access your LabSim simulation for the Module 2 Critical Thinking assignment.

Complete the following LabSim simulation:

- 1.5.4 Using Shell Commands

Each lab simulation will be graded automatically in LabSim. Your instructor will then convert your assignment score in a Critical Thinking Rubric. Refer to the Critical Thinking Rubric, available in the Module 2 Materials Folder, for grading details.

When you have finished LabSim simulation, take a screenshot of the final screen of each Simulation to certify that you have completed all tasks. Paste the final screen images into a Word document with your name, date, school name, section, course name, and instructor name and submit the assignment.

Format your document according to the *CSU-Global Guide to Writing & APA*. You may use the following browsers to complete the LabSim assignments: Internet Explorer, Chrome, Firefox, Safari, or Edge.

Mastery Exercise (10 points)

Module 3

Readings

- Computer Hope. (2018). How to test a computer motherboard and CPU for failures. Retrieved from <https://www.computerhope.com/issues/ch001089.htm>
- LabSim Online Labs. (2016). *TestOut PC Pro* [220-901 & 220-902]:
 - 2.3.1 PC Toolkits
 - 2.3.2 Tool Facts
 - 3.4.1 Motherboard Troubleshooting
 - 3.4.3 Troubleshooting System Power
 - 3.4.4 Troubleshooting Power Supply Problems
 - 3.6.1 Processor Troubleshooting
 - 3.9.1 Memory Troubleshooting
 - 3.9.3 Memory Troubleshooting Facts
 - 5.10.1 Storage Troubleshooting
 - 5.10.2 Storage Troubleshooting Facts
 - 4.5.1 Video Troubleshooting
 - 4.5.2 Video Troubleshooting Facts

Opening Exercise (0 points)

Discussion (25 points)

Live Classroom (0 points)

Critical Thinking (60 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option 1: 2.3.3 LabSim Exam

You were provided with the LabSim URL and login credentials before the start of the course via CSU-Global email. Use your login credentials to access your LabSim exam for the Module 3 Critical Thinking assignment.

Complete the following in the LabSim exam:

- 2.3.3 LabSim Exam Questions

Each lab simulation will be graded automatically in LabSim. Your instructor will then convert your assignment score in a Critical Thinking Rubric. Refer to the Critical Thinking Rubric, available in the Module 3 Materials Folder, for grading details.

When you have finished the LabSim exam questions, take a screen shot of the final score screen (exam report) to certify that you have completed the exam. Paste the final screen images into a Word document with your name, date, school name, section, course name, and instructor name and submit the assignment.

Format your document according to the *CSU-Global Guide to Writing & APA*. You may use the following browsers to complete the LabSim assignments: Internet Explorer, Chrome, Firefox, Safari, or Edge.

Option 2: 5.10.5 Troubleshoot SATA Devices

You were provided with the LabSim URL and login credentials before the start of the course via CSU-Global email. Use your login credentials to access your LabSim simulation for the Module 3 Critical Thinking assignment.

Complete the following LabSim simulation:

- 5.10.5 Troubleshoot SATA Devices

Each lab simulation will be graded automatically in LabSim. Your instructor will then convert your assignment score in a Critical Thinking Rubric. Refer to the Critical Thinking Rubric, available in the Module 3 Materials Folder, for grading details.

When you have finished LabSim simulation, take a screenshot of the final screen of each Simulation to certify that you have completed all tasks. Paste the final screen images into a Word document with your name, date, school name, section, course name, and instructor name and submit the assignment.

Format your document according to the *CSU-Global Guide to Writing & APA*. You may use the following browsers to complete the LabSim assignments: Internet Explorer, Chrome, Firefox, Safari, or Edge.

Mastery Exercise (10 points)

Portfolio Milestone (75 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission. You must complete the option that corresponds to the option of the final Portfolio Project you wish to complete. See the Module 8 folder for description of the Portfolio Project options, if you have not already done so.

Option 1: Phase 1 of IT Infrastructure for a Small Firm

In Option #1, you have been hired as an IT expert by a small firm to set up an office for 20 staff members, half of whom will work with desktop computers and the remaining with laptop computers using wireless networks. The office will use one networked laser printer, accessible from both the desktop and laptop computers. The desktop computers will use a wired network, while the laptop computers will employ wireless network to print and access the internet.

In Module 3, you will complete Phase 1 of the assignment:

- **Statement of the Problem or Need:** Based on your review of the IT system, write a description of the purpose/need/rationale for the IT project at the business office. What problem(s) are you planning to solve at the business office?
- **Project Deliverables:** Write a description of the necessary hardware components and software to set up computer systems for the business office. Phase 1 of the Portfolio Project is due in Module 3.

In Week 1 you started making a list of computer hardware (desktop and laptop computers), peripherals, and network components (wired and wireless) with specifications required to set up the proposed business office. Include the following as part of the project deliverables for submission in Module 3:

- Type of power supply
- Type of motherboard
- Type of CPU and memory
- Types of storage and capacities
- Types of network interface cards (wired and wireless)
- Types and specifications for printers and scanners
- Types of expansion cards (if needed) for expanding ports
- Types of monitors (CRT, LCD) and specifications
- Specifications for laptop computers
- Any other required hardware component(s) of the items.

Include the following (at minimum) as part of the project deliverables:

- Type of Windows operating system
- 32-bit or 64-bit version
- Video and printers support
- Network and sharing features
- Windows help and support
- Any other relevant features of the selected COS.

Your Module 3 Portfolio Project Milestone should meet the following requirements:

- Three to four pages in length, not including cover and reference pages.
- Formatted according to the *CSU-Global Guide to Writing & APA*.
- Cite a minimum of three sources, two of which should be academic peer-reviewed scholarly sources to support your responses, in addition to your textbook. The CSU-Global library is a great place to find these resources.

Refer to the Portfolio Project Rubric available in the Module 3 Materials Folder for information on grading details.

Option 2: Phase 1 of IT Infrastructure for an Educational Institution

For Option #2, you have been hired as an IT manager for a new campus to setup the IT infrastructure over a six- month period in four phases. An educational institution is setting up a new campus which would house classrooms, offices, a library, a student lounge, registrar's office, and an academic support center for students.

In Module 3, you will complete Phase 1 of the assignment:

Phase 1:

- **Statement of the Problem or Need:** Based on your review of the IT system, write a description of the purpose/need/rationale for the IT project at the campus. What problem(s) are you planning to solve at the campus?
- **Project Deliverables:** Write a description of the necessary hardware components and software to setup computer systems for the educational institution. Phase 1 of the Portfolio Project is due in Module 3.

In week 1, you started making a list of computer hardware (desktop and laptop computers), peripherals, and network (wired and wireless) components with specifications required to set up the proposed business office. Include the following as part of the project deliverables for submission in Module 3:

- Type of power supply
- Type of motherboard
- Type of CPU and memory
- Types of storage and capacities
- Types of network interface cards (wired and wireless)
- Type and specifications of laser printers
- Types of expansion cards (if needed) for expanding ports
- Types of monitors (CRT, LCD) and specifications
- Specifications of laptop computers
- Any other required hardware component(s)of the items.

Include the following (at minimum) as part of the project deliverables:

- Type of Windows operating system
- 32-bit or 64-bit version
- Video and printers support
- Network and sharing features
- Windows help and support
- Any other relevant features of the selected COS.

Your Module 3 Portfolio Project Milestone should meet the following requirements:

- three to four pages in length, not including cover and reference pages
- formatted according to the *CSU-Global Guide to Writing & APA*
- Citation of a minimum of three sources, two of which should be academic peer-reviewed scholarly sources to support your responses, in addition to your textbook. The CSU-Global library is a great place to find these resources.

Module 4

Readings

- Dargin, M. (2017, June 26). Time to consider a move to IPv6. *Network World*. Retrieved from <https://www.networkworld.com/article/3203708/lan-wan/time-to-consider-a-move-to-ipv6.html>
- LabSim Online Labs. (2016). *TestOut PC Pro* [220-901 & 220-902]:
 - 6.1.1-6.1.3 Network Overview, Facts and Types: Peer-to-Peer Networks, Client-Server Networks
 - 6.1.4-6.1.5 Network Topologies: Bus, Star, Ring, Mesh
 - 6.2.1-6.2.5 Network Hardware: Hub, Switch, Bridge, Router, Network Adapters
 - 6.5.1-6.5.3 IP Addressing and Configuration: TCP/IP protocols, TCP/IP Configuration Methods, IP Settings
 - 6.3.1 -6.3.5 and 6.8.1 - 6.8.8 Networking Wireline and Wireless Media

Opening Exercise (0 points)

Discussion (25 points)

Critical Thinking (60 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option 1: 6.1.6 LabSim Exam Questions

You were provided with the LabSim URL and login credentials before the start of the course via CSU-Global email. Use your login credentials to access your LabSim exam for the Module 4 Critical Thinking assignment.

Complete the following LabSim Exam:

- 6.1.7 LabSim Exam Questions

Each lab simulation will be graded automatically in LabSim. Your instructor will then convert your assignment score in a Critical Thinking Rubric. For more information on grading requirements, refer to the Critical Thinking rubric in the Module 4 Materials folder.

When you have finished the LabSim exam, take a screen shot of the final score screen (exam report) to certify that you have completed the exam. Paste the final screen images into a Word document with your name, date, school name, section, course name, and instructor name and submit the assignment.

Format your document according to the *CSU-Global Guide to Writing & APA*. You may use the following browsers to complete the LabSim assignments: Internet Explorer, Chrome, Firefox, Safari, or Edge.

Option 2: 6.6.5 Configure TCP/IP Settings

You were provided with the LabSim URL and login credentials before the start of the course via CSU-Global email. Use your login credentials to access your LabSim simulation for the Module 4 Critical Thinking assignment.

Complete the following LabSim simulation:

- 6.6.5 Configure TCP/IP Settings

Each lab simulation will be graded automatically in LabSim. Your instructor will then convert your assignment score in a Critical Thinking Rubric. Refer to the Critical Thinking Rubric, available in the Module 4 Materials Folder, for grading details.

When you have finished LabSim simulation assigned for this Critical Thinking assignment, take a screenshot of the final screen of each Simulation to certify that you have completed all tasks. Paste the

final screen images into a Word document with your name, date, school name, section, course name, and instructor name and submit the assignment.

Format your document according to the *CSU-Global Guide to Writing & APA*. You may use the following browsers to complete the LabSim assignments: Internet Explorer, Chrome, Firefox, Safari, or Edge.

Mastery Exercise (10 points)

Module 5

Readings

- LabSim Online Labs. (2016). *TestOut PC Pro* [220-901 & 220-902]:
 - 12.3.1 Physical Security
 - 12.3.5 Physical Security Facts
 - 12.3.2 Data Disposal and Destruction
 - 12.3.3 Wiping a Disk
 - 12.3.4 Configuring a Screen Saver Password
 - 12.3.6 Require a Screen Saver Password
 - 12.5.1 BIOS/UEFI Security
 - 12.5.2 Configuring BIOS/UEFI Security Settings
 - 12.5.3 BIOS/UEFI Security Facts
 - 12.5.4 Configure BIOS/UEFI Security
 - 12.6.1 Malware
 - 12.6.4 Implementing Malware Protection on Windows
 - 12.6.2 Malware Facts
 - 12.6.3 Malware Protection
 - 12.6.4 Implementing Malware Protection on Windows
 - 12.6.7 Malware Protection Facts
 - 12.7.1 Authentication
 - 12.7.4 Password Facts
 - 12.7.3 Configuring Password Policies on Windows
 - 12.7.5 Enforce Password Settings
 - 12.7.8 Using a Biometric Scanner
 - 12.7.7 Managing Authentication on Windows
 - 12.7.9 Using a Smart Card Reader
 - 12.7.10 Authentication Management Facts
 - 12.8.4 Encrypt Files
 - 12.8.6 Bitlocker facts
- Miedema, T. E. (2018). Engaging consumers in cyber security. *Journal of Internet Law*, 21(8), 3-15.

Opening Exercise (0 points)

Discussion (25 points)

Critical Thinking (70 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option 1: 12.9.5 LabSim Exam Questions

You were provided with the LabSim URL and login credentials before the start of the course via CSU-Global email. Use your login credentials to access your LabSim exam for the Module 5 Critical Thinking Assignment.

Complete the following in the LabSim Exam:

- 12.9.5 LabSim Exam Questions

Each lab simulation will be graded automatically in LabSim. Your instructor will then convert your assignment score in a Critical Thinking Rubric. Refer to the Critical Thinking Rubric, available in the Module 5 Materials Folder, for grading details.

When you have finished the LabSim exam questions, take a screen shot of the final score screen (exam report) to certify that you have completed the exam. Paste the final screen images into a Word document with your name, date, school name, section, course name, and instructor name and submit the assignment.

Format your document according to the *CSU-Global Guide to Writing & APA*. You may use the following browsers to complete the LabSim assignments: Internet Explorer, Chrome, Firefox, Safari, or Edge.

Option 2: 12.5.4 Configure BIOS/EUFI Security

You were provided with the LabSim URL and login credentials before the start of the course via CSU-Global email. Use your login credentials to access your LabSim simulation for the Module 5 Critical Thinking assignment.

Complete the following LabSim simulation:

- 12.5.4 Configure BIOS/EUFI Security

Each lab simulation will be graded automatically in LabSim. Your instructor will then convert your assignment score in a Critical Thinking Rubric. Refer to the Critical Thinking Rubric, available in the Module 5 Materials Folder, for grading details.

When you have finished LabSim simulation, take a screenshot of the final screen of each Simulation to certify that you have completed all tasks. Paste the final screen images into a Word document with your name, date, school name, section, course name, and instructor name and submit the assignment.

Format your document according to the *CSU-Global Guide to Writing & APA*. You may use the following browsers to complete the LabSim assignments: Internet Explorer, Chrome, Firefox, Safari, or Edge.

Mastery Exercise (10 points)

Module 6

Readings

- Jaffee, L. (2017). Always connected comes with risks. *SC Magazine*, 28(1) 20-23.
- LabSim Online Labs. (2016). *TestOut PC Pro* [220-901 & 220-902]:
 - 8.1.1 – 8.1.3 Notebook Computers
 - 8.2.1 - 8.2.6 Notebook Components
 - 8.3.1 - 8.3.5 Notebook Power Management
 - 8.5.1 Mobile Device Overview
 - 8.5.2 Mobile Device Facts
 - 8.5.3 Mobile Communication Facts
 - 8.6.1 Networking Mobile Devices
 - 8.6.2 Mobile Device Connection Facts
 - 8.6.3 Synchronizing Mobile Devices
 - 8.6.4 Data Synchronization Facts
 - 8.6.5 Configuring Email on Mobile Devices
 - 8.6.6 Mobile Email Configuration Facts
 - 8.6.7 Manage Mobile Devices
 - 8.7.3 Securing Mobile Devices

- 8.8.2 Maintaining Mobile Devices

Opening Exercise (0 points)

Discussion (25 points)

Live Classroom (0 points)

Critical Thinking (60 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option 1: 8.2.7 LabSim Exam

You were provided with the LabSim URL and login credentials before the start of the course via CSU-Global email. Use your login credentials to access your LabSim exam for the Module 6 Critical Thinking assignment.

Complete the following in the LabSim Exam:

- 8.2.7 LabSim Exam Questions

Each lab simulation will be graded automatically in LabSim. Your instructor will then convert your assignment score in a Critical Thinking Rubric. Refer to the Critical Thinking Rubric available in the Module 6 Materials Folder for grading details.

When you have finished the LabSim exam questions, take a screen shot of the final score screen (exam report) to certify that you have completed the exam. Paste the final screen images into a Word document with your name, date, school name, section, course name, and instructor name and submit the assignment.

Format your document according to the *CSU-Global Guide to Writing & APA*. You may use the following browsers to complete the LabSim assignments: Internet Explorer, Chrome, Firefox, Safari, or Edge.

Option 2: 8.6.7 Manage Mobile Devices

You were provided with the LabSim URL and login credentials before the start of the course via CSU-Global email. Use your login credentials to access your LabSim simulation for the Module 6 Critical Thinking assignment.

Complete the following LabSim simulation:

- 8.6.7 Manage Mobile Devices

Each lab simulation will be graded automatically in LabSim. Your instructor will then convert your assignment score in a Critical Thinking Rubric. Refer to the Critical Thinking Rubric, available in the Module 6 Materials Folder, for grading details.

When you have finished LabSim simulation, take a screenshot of the final screen of each Simulation to certify that you have completed all tasks. Paste the final screen images into a Word document with your name, date, school name, section, course name, and instructor name and submit the assignment.

Format your document according to the *CSU-Global Guide to Writing & APA*. You may use the following browsers to complete the LabSim assignments: Internet Explorer, Chrome, Firefox, Safari, or Edge.

Mastery Exercise (10 points)

Portfolio Milestone (75 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option 1: Phase 2 of IT Infrastructure for a Small Firm

In Option #1 you have been hired as an IT expert by a small firm to set up an office for 20 staff members, half of whom will work with desktop computers, and the remaining with laptop computers using wireless networks. The office will use one networked laser printer accessible both from the desktop and laptop computers. The desktop computers will use a wired network, while the laptop computers will employ a wireless network to print and access the internet.

In Module 6 you will submit Phase 2 of the assignment. **Phase 2** should include the following:

- **Project Beneficiaries:** Write a description of who will derive direct benefit from the project and how they will benefit.
- **Project Deliverables:** Write a description of the computer network hardware necessary to set up the computer networks and the necessary software and protocols.

Update your project deliverables section by adding the following features:

- Routers or Wireless Access Points or both
- Cables and connectors to implement a physical network
- Any other needed network hardware
- Physical and logical network topologies
- IP versions (IPv4 or IPv6) and why
- IP address pool for the network
- DNS and DHCP
- Any other network software component.
- Physical security measures
- Firewalls (hardware and software options)
- Network Intrusion Detection Systems
- Antivirus software
- Windows built-in security features
- Any other network security hardware or software.

Describe the security practices for the new campus. Include the following:

- Security policies for your business
- Password use policies
- Authentication technologies
- Encryption technologies
- Social engineering awareness
- Updating security software and installing security patches.
- Data disposal and destruction
- Wireless security measures.

Your paper should meet the following requirements:

- three to four pages in length, not including cover and reference pages.
- formatted according to the *CSU-Global Guide to Writing & APA*
- citation of a minimum of three sources, two of which should be academic, peer-reviewed scholarly sources to support your responses, in addition to your textbook. The CSU-Global library is a great place to find these resources.

Refer to the Portfolio Rubric in the Module 6 Materials folder for information on grading details.

Option 2: Phase 2 of IT Infrastructure for a Small Firm

For Option #2, you have been hired as an IT manager by an educational institution to setup the IT infrastructure for a new campus over a six-month period in four phases. This new campus will house

classrooms, offices, a library, a student lounge, registrar's office, and an academic support center for students.

In Module 6 you will submit Phase 2 of the assignment. **Phase 2** should include the following:

- **Project Beneficiaries:** Write a description of who will derive direct benefit from the project and how they will benefit.
- **Project Deliverables:** Write a description of the computer network hardware necessary to set up the computer networks and the necessary software and protocols.

Update your project deliverables section by adding the following features:

- Routers or Wireless Access Points or both
- Cables and connectors to implement a physical network
- Any other needed network hardware
- Physical and logical network topologies
- IP versions (IPv4 or IPv6) and why
- IP address pool for the network
- DNS and DHCP
- Any other network software component.
- Physical security measures
- Firewalls (hardware and software options)
- Network Intrusion Detection Systems
- Antivirus software
- Windows built-in security features
- Any other network security hardware or software.

Describe the security practices for the new campus. Include the following:

- Security policies for your business
- Password use policies
- Authentication technologies
- Encryption technologies
- Social engineering awareness
- Updating security software and installing security patches.
- Data disposal and destruction
- Wireless security measures.

Your paper should meet the following requirements:

- three to four pages in length, not including cover and reference pages.
- formatted according to the *CSU-Global Guide to Writing & APA*
- citation of a minimum of three sources, two of which should be academic, peer-reviewed scholarly sources to support your responses, in addition to your textbook. The CSU-Global library is a great place to find these resources.

Module 7

Readings

- Chacos, B. (2015, May). 9 compelling reasons not to upgrade your old PC. *PC World* (Online), 39-44.
- LabSim Online Labs. (2016). *TestOut PC Pro* [220-901 & 220-902]:
 - 9.1.1-9.1.8 Windows System Tools
 - 9.3.1-9.3.3 Performance Monitors
 - 9.6.6 Scheduling Tasks
 - 9.10.1 System Backup

- 9.10.2 Backup Facts
- 9.10.3 Creating Backups in Windows
- 9.10.6 Back Up the Computer
- 9.11.2 Using Restore Points
- 9.11.3 Using Previous Versions
- 9.11.5 Create a Restore Point

Opening Exercise (0 points)

Discussion (25 points)

Mastery Exercise (10 points)

Module 8

Readings

- Kim, B. (2013). Knorr, E. (2017) Which Windows 10 should your business install? This one. *InfoWorld.com*.
- LabSim Online Labs. (2016). *TestOut PC Pro* [220-901 & 220-902]:
 - 9.12.2 Windows 8.x and 10 System Recovery
 - 9.12.3 Using Windows System Recovery Tools
 - 9.12.4 Using File Recovery Tools
 - 9.12.8 System Recovery Facts
 - 9.14.1 Windows Operating System Issues
 - 9.14.2 Troubleshooting Windows Applications
 - 9.14.4 Application Troubleshooting Facts
 - 9.14.5 System Lockups
 - 9.14.6 System Errors Facts
 - 9.15.1 Windows Boot Process
 - 9.15.2 Boot Process Facts
 - 9.15.3 Modifying the Boot Order
 - 9.15.4 Configure the Boot Order
 - 9.15.5 Using Advanced Boot Options
 - 9.15.6 Windows Boot Options
 - 9.15.8 Startup Error Facts
 - 9.15.9 Troubleshoot System Startup 1
 - 9.15.10 Troubleshoot System Startup 2
 - 9.15.11 Troubleshoot System Startup 3
 - 9.15.12 Troubleshoot System Startup 4

Opening Exercise (0 points)

Discussion (25 points)

Mastery Exercise (10 points)

Portfolio Project (200 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option 1: IT Infrastructure for a Small Firm

For the Portfolio Project, you will have one of two projects from which to choose. For Option #1, you will develop a technology project proposal that outlines a technology plan for a small firm. In Option #1, you have been hired as an IT expert by a small firm to set up an office for 20 staff members, half of whom will work with desktop computers, and the remaining with laptop computers using wireless networks. The office will use one networked laser printer, accessible both from the desktop and laptop computers. The desktop computers will use a wired network, while the laptop computers will employ a wireless network to print and access the internet.

You will incorporate Phases 1-2 in your Portfolio Project as a technological proposal. These are due in Modules 3 and 6, respectively. Phases 1-2 serve as the basis of the project deliverable section in the technological proposal, which you will submit as a full project (Phase 3) in Module 8.

Keep in mind that you will update the project deliverable section as you complete different phases.

Phase 1:

- **Statement of the Problem or Need:** Write a description of the purpose/need/rationale for a small firm. What problem(s) are you planning to solve for a small firm?
- **Project Deliverables:** Write a description of the necessary hardware components and software to set up computer systems for the business/firm. Phase 1 of the Portfolio Project is due in Module 3.

Phase 2:

- **Project Deliverables:** Write a description of the computer network hardware necessary to set up the computer networks and the necessary software and protocols. Phase 2 is due in Module 6.

In Phase 3 you will include revisions based on feedback from your instructor, and you will incorporate what you have learned throughout the term. Your technological proposal should include the following:

- **Statement of the Current Problem:** Describe the purpose/need/ rationale for the IT project. What problem is this IT project designed to address?
- **Project Deliverables and Beneficiaries:** Describe the objective of the IT project; what is the IT project to achieve, create, or deliver? Please identify who will derive a direct benefit from the expected outcome.
- **Time Factors:** Are there any time factors, such as deadlines, that should be considered in your IT implementation proposal? Create a timeline for implementation.
- **Qualifications:** Write a short description of your qualifications.
- **Project Assumptions and Constraints:** Are there any assumptions made so far or constraints identified in the project? Are there any constraints or anything that would restrict the ability to achieve the IT project objectives successfully?
- **Project Risks:** Are there any risks associated with the IT project? For instance, will there be data that should not be available to the public? Are there any risks that might prevent a successful project outcome?
- **Project Expenses:** Please indicate what IT expenses will be associated with this project as well as the sources for funding. Provide the most accurate estimates that you can, which includes the cost to complete the project and maintenance after the project.

The Portfolio Project should meet the following requirements:

- 10-12 pages (minimum) in length, not including the cover and reference pages
- formatted according to the *CSU-Global Guide to Writing & APA*

- Citation of a minimum of five to seven sources, five of which should be academic peer-reviewed scholarly sources and in-text citations to support your responses, in addition to your textbook. The CSU-Global library is a great place to find these resources.

Refer to the Portfolio Project grading rubric available in the Module 8 Material folder for information on grading. The grading rubrics for phases 1 and 2 can be found in the folders during the modules in which the assignments are due.

Option 2: IT Infrastructure for an Educational Institution

For the Portfolio Project, you will have one of two projects from which to choose. For Option #2, you have been hired as an IT manager for a new campus to set up the IT infrastructure over a six-month period in four phases. An educational institution is setting up a new campus which will house classrooms, offices, a library, a student lounge, registrar's office, and an academic support center for students.

You will incorporate Phases 1-2 in your Portfolio Project as a technological proposal. These are due in modules 3 and 6 respectively. Phases 1-2 serve as the basis of the project deliverable section in the technological proposal, which you will submit as a full project (Phase 3) in Module 8.

Keep in mind that you will update the project deliverable section as you complete different phases.

Phase 1:

- **Statement of the Problem or Need:** Write a description of the purpose/need/rationale for the IT project at the campus. What problem(s) are you planning to solve at the campus?
- **Project Deliverables:** Write a description of the necessary hardware components and software to set up computer systems for the educational institution. Phase 1 of the Portfolio Project is due in Module 3.

Phase 2:

- **Project Beneficiaries:** Write a description of who will derive direct benefit from the project and how they will benefit.
- **Project Deliverables:** Write a description of the computer network hardware necessary to set up the computer networks and the necessary software and protocols. Phase 2 is due in Module 6.

In Phase 3 you will include revisions based on feedback from your instructor and you will incorporate what you have learned throughout the term. Your technological proposal should include the following:

- **Statement of the Current Problem:** Describe the purpose/need/ rationale for the IT project. What problem is this IT project designed to address?
- **Project Deliverables and Project Beneficiaries:** Describe the objective of the IT project; what is the IT project is to achieve, create, or deliver. Please identify who will derive a direct benefit from the expected outcome and how they will benefit from the project.
- **Time Factors:** Are there any time factors, such as deadlines, that should be considered in your IT implementation proposal? Create a timeline for implementation.
- **Qualifications:** Write a short description of your qualifications.
- **Project Assumptions and Constraints:** Are there any assumptions made so far or constraints identified in the project? Are there any constraints or anything that would restrict the ability to achieve the IT project objectives successfully?

- **Project Risks:** Are there any risks associated with the IT project? For instance, will there be data that should not be available to the public? Are there any risks that might prevent a successful project outcome?
- **Project Expenses:** Please indicate what IT expenses will be associated with this project as well as the sources for funding. Provide the most accurate estimates that you can, which includes the cost to complete the project and maintenance after the project.

The Portfolio Project should meet the following requirements:

- 10-12 pages (minimum) in length, not including the cover and reference pages.
- formatted according to the *CSU-Global Guide to Writing & APA*
- citation of a minimum of five to seven sources, five of which should be academic peer-reviewed scholarly sources and in-text citations to support your responses, in addition to your textbook. The CSU-Global library is a great place to find these resources.

Refer to the Portfolio Project grading rubric available in the Module 8 Materials folder for information on grading. Phase 1-2 rubrics are in the respective Module folders.

COURSE POLICIES

Grading Scale	
A	95.0 – 100
A-	90.0 – 94.9
B+	86.7 – 89.9
B	83.3 – 86.6
B-	80.0 – 83.2
C+	75.0 – 79.9
C	70.0 – 74.9
D	60.0 – 69.9
F	59.9 or below

Course Grading

20% Discussion Participation
0% Opening Exercises
0% Live Classroom
8% Mastery Exercises
37% Critical Thinking Assignments
35% Final Portfolio Project

IN-CLASSROOM POLICIES

For information on late work and incomplete grade policies, please refer to our [In-Classroom Student Policies and Guidelines](#) or the Academic Catalog for comprehensive documentation of CSU-Global institutional policies.

Academic Integrity

Students must assume responsibility for maintaining honesty in all work submitted for credit and in any other work designated by the instructor of the course. Academic dishonesty includes cheating, fabrication, facilitating academic dishonesty, plagiarism, reusing /repurposing your own work (see CSU-Global Guide to Writing & APA for percentage of repurposed work that can be used in an assignment), unauthorized possession of academic materials, and unauthorized collaboration. The CSU-Global Library provides information on how students can avoid plagiarism by understanding what it is and how to use the Library and internet resources.

Citing Sources with APA Style

All students are expected to follow the CSU-Global Guide to Writing & APA when citing in APA (based on the most recent APA style manual) for all assignments. A link to this guide should also be provided within most assignment descriptions in your course.

Disability Services Statement

CSU-Global is committed to providing reasonable accommodations for all persons with disabilities. Any student with a documented disability requesting academic accommodations should contact the Disability Resource Coordinator at 720-279-0650 and/or email ada@CSUGlobal.edu for additional information to coordinate reasonable accommodations for students with documented disabilities.

Netiquette

Respect the diversity of opinions among the instructor and classmates and engage with them in a courteous, respectful, and professional manner. All posts and classroom communication must be conducted in accordance with the student code of conduct. Think before you push the Send button. Did you say just what you meant? How will the person on the other end read the words?

Maintain an environment free of harassment, stalking, threats, abuse, insults, or humiliation toward the instructor and classmates. This includes, but is not limited to, demeaning written or oral comments of an ethnic, religious, age, disability, sexist (or sexual orientation), or racist nature; and the unwanted sexual advances or intimidations by email, or on discussion boards and other postings within or connected to the online classroom. If you have concerns about something that has been said, please let your instructor know.