

I. COURSE INFORMATION

- A. Computer Science 275 Computer Repair-Operating Systems
- B. 3 credit hours
- C. Andrews, Shelton and Pierce. *CompTIA A+ Guide to IT Technical Support*. 11th ed. Cengage
- D. Prerequisites: None

II. COURSE DESCRIPTION

This course is designed to provide hands on skills in the area of computer troubleshooting and repair in accordance with the Comp-TIA A+ certification operating systems objectives.

III. LEARNING OUTCOMES

- A. Operating systems
 - a. Identify basic features of Microsoft Windows editions
 - b. Given a scenario, use the appropriate Microsoft command-line tool
 - c. Given a scenario, use features and tools of the Microsoft Windows 10 operating system (OS)
 - d. Given a scenario, use the appropriate Microsoft Windows 10 Control Panel utility
 - e. Given a scenario, use the appropriate Windows settings
 - f. Given a scenario, configure Microsoft Windows networking features on a client/desktop
 - g. Given a scenario, apply application installation and configuration concepts
 - h. Explain common OS types and their purposes
 - i. Given a scenario, perform OS installations and upgrades in a diverse OS environment
 - j. Identify common features and tools of the MAC OS/desktop OS
 - k. Identify common features and tools of the Linux client/desktop OS
- B. Security
 - a. Summarize various security measures and their purposes
 - b. Compare and contrast wireless security protocols and authentication methods
 - c. Given a scenario, detect, remove, and prevent malware using the appropriate tools and methods
 - d. Explain common social-engineering attacks, threats, and vulnerabilities
 - e. Given a scenario, manage and configure basic security settings in the Microsoft Windows OS
 - f. Given a scenario, configure a workstation to meet best practices for security
 - g. Explain common methods for securing mobile and embedded devices
 - h. Given a scenario, use common data destruction and disposal methods
 - i. Given a scenario, configure appropriate security settings on small office/home office (SOHO) wireless and wired networks
 - j. Given a scenario, install and configure browsers and relevant security settings
- C. Software Troubleshooting
 - a. Given a scenario, troubleshoot common Windows OS problems
 - b. Given a scenario, troubleshoot common personal computer (PC) security issues
 - c. Given a scenario, use best practice procedures for malware removal
 - d. Given a scenario, troubleshoot common mobile OS and application issues
- D. Operational Procedures
 - a. Given a scenario, implement best practices associated with documentation and support systems information management
 - b. Explain basic change-management best practices
 - c. Given a scenario, implement workstation backup and recovery methods
 - d. Given a scenario, use common safety procedures
 - e. Summarize environmental impacts and local environmental controls
 - f. Explain the importance of prohibited content/activity and privacy, licensing, and policy concepts

- g. Given a scenario, use proper communication techniques and professionalism
- h. Identify the basics of scripting
- i. Given a scenario, use remote access technologies

IV. MAJOR CONTENT AREAS

- A. Operating systems
- B. Security
- C. Mobile devices
- D. Troubleshooting

I. ASSIGNMENTS (may include but are not limited to)

- A. Chapter examinations
- B. Hand-on labs

II. EVALUATION METHODS (may include but are not limited to)

- A. Examinations
- B. Lab participation