## CONTENT STANDARD 1.0: PC HARDWARE / MOBILE DEVICES

### Performance Standard 1.1: Students Will Be Able To Identify, Install, and Configure PC Hardware

**General Overview**

1.1.1 Identify and understand motherboards and related components. Explain and demonstrate safety procedures.

1.1.2 Identify and understand RAM types and features. Understand and explain proper disposal of mobile devices.

1.1.3 Identify and understand expansion card uses and differences.

1.1.4 Identify and understand differences. Compare and use contrast characteristics of storage various types of other mobile devices and media types features.

1.1.5 Identify, understand and understand CPU types and explain how to use appropriate mobile device features.

1.1.6 Learn about Power Supply Units. Configure basic mobile device network connectivity and application support.

1.1.7 Demonstrate custom configurations per customer needs.

### Performance Standard 1.2: Mobile Device Security

1.2.1 Configure secure wireless connection.

1.2.2 Understand and explain the application and usage of common security protection methods.

1.2.3 Understand and explain the differences in common security threats.

1.2.4 Demonstrate the implementation of best practices and methods for securing mobile devices.

1.2.5 Understand and explain appropriate data destruction and disposal methods.

1.2.6 Understand and demonstrate how to connect a mobile device to a secure wired and wireless network.

### Performance Standard 1.3: Mobile Device Hardware

1.3.1 Compare and contrast components within mobile devices.

1.3.2 Understand and demonstrate how to configure accessories and ports.

1.3.3 Troubleshoot common mobile device hardware issues.

### Performance Standard 1.4: Mobile Device Software

1.4.1 Understand the basic network connectivity and configuring email.

1.4.2 Understand the configuration of mobile device synchronization.

1.4.3 Compare and contrast mobile operating systems.

1.4.4 Troubleshoot mobile operating system (OS) and application issues.

## CONTENT STANDARD 2.0: NETWORKING TECHNOLOGIES

### Performance Standard 2.1: Students Will Be Able To Identify and Explain General Networking Technologies

2.1.1 Identify network cables and connectors and their characteristics.

2.1.2 Explain TCP/IP characteristics and properties.

2.1.3 Identify and understand the use of common TCP / UDP ports, protocols, and their characteristics.
2.1.43 Understand Given a scenario, install and configure a basic wired/wireless networking standards and encryption types. Demonstrate installation, configuration, Compare and deployment of a Home office network protocols.

2.1.54 Understand Compare and explain different Internet connection types. Contrast wireless security protocols and features. Authentication methods.

2.1.65 Understand different and explain the importance of physical security of network devices, their functions, and features.

2.1.76 Compare and contrast common networking hardware devices.

2.1.87 Understand different and explain the importance of physical security of network devices, their functions, and features.

2.1.98 Identify and understand the use of connector types and associated cables. Summarize properties and services provided by networked hosts.

2.1.10 Compare and contrast internet connection types, network types and their features.

2.1.11 Explain common network configuration concepts.

2.1.12 Understand and explain remote access technology.

### CONTENT STANDARD 3.0: Laptops Hardware

#### Performance Standard 3.1: Students Will Be Able To Identify, Install, and Configure Laptop and Related General Hardware

3.1.1 Explain basic cable types, features, and their purposes, common connector types.

3.1.2 Demonstrate Understand and explain how to select and configure appropriate components for a custom configuration per PC configuration to meet customer specifications or needs.

3.1.3 Install Identify and configure laptop hardware understand RAM types and components features.

3.1.4 Identify and understand expansion card uses and differences.

3.1.5 Understand and explain differences and use of storage devices and media types.

3.1.6 Identify and understand CPU types and features.

3.1.7 Summarize power supply types and features.

3.1.8 Understand and explain various peripheral types.

#### Performance Standard 3.2: Printers

3.2.1 Install and maintain various print technologies.

3.2.2 Understand and explain how to configure multifunction devices.

### CONTENT STANDARD 4.0: Virtualization and Cloud Computing

#### Performance Standard 4.1: General Concepts

4.1.1 Compare and contrast the components within the display of a laptop cloud computing concepts.

4.1.2 Understand and explain how to set up and configure client-side virtualization.

4.1.3 Compare and contrast laptop features different cloud computing platforms.

#### Performance Standard 45.1: Students Will Be Able To Explain The Differences
Between The Various Printer Types and Understand The Associated Imaging Process Hardware

5.1.1 Explain and demonstrate safety procedures.
5.1.2 Explain and demonstrate best practice methodology to resolve problems.
5.1.3 Demonstrate the installation and configuration of various printers and associated hardware. Troubleshoot common hardware problems with the appropriate tools.
5.1.4 Troubleshoot storage devices and RAID with appropriate tools.
5.1.5 Troubleshoot video and displays.
5.1.6 Troubleshoot common mobile device issues with appropriate tools.
45.1.27 Given a scenario, install and configure Troubleshoot printers with appropriate tools.
5.1.8 Troubleshoot common security issues with appropriate tools and best practices.

Performance Standard 5.2: Software

5.2.1 Troubleshoot operating systems with appropriate tools.
5.2.2 Troubleshoot Microsoft Windows operating system problems.
5.2.3 Troubleshoot and resolve device security issues. Demonstrate Understand and explain perform printer maintenance best practice procedures for malware and virus removal.

Performance Standard 5.3: Networks

5.3.1 Troubleshoot wired and wireless networks with appropriate tools.

CONTENT STANDARD 6.0: OPERATING SYSTEMS (OS)

Performance Standard 6.1: Windows Operating System

6.1.1 Understand and explain the features and requirements of Windows operating systems.
### CONTENT STANDARD 5.0: WORKPLACE READINESS

**Performance Standard 5.1: Students Will Learn and Demonstrate Workplace Readiness Skills**

- **5.1.1** Understand and demonstrate appropriate safety procedures.
- **5.1.2** Understand and explain the impact of environmental controls.
- **5.1.3** Understand and demonstrate proper communication and professionalism.
- **5.1.4** Understand the fundamentals of dealing with prohibited content/activity.

### CONTENT STANDARD 6.0: OPERATING SYSTEMS

**Performance Standard 6.1: Students Will Develop an Understanding of Microsoft Windows Operating Systems**

- **6.1.1** Understand the features and requirements of various Microsoft operating systems.
- **6.1.2** Demonstrate how to install, upgrade, and configure the operating system.
- **6.1.3** Understand and demonstrate the use of command line tools.
- **6.1.4** Understand and demonstrate Control Panel utilities and other operating system tools.
- **6.1.5** Understand Windows networking and configuration.
- **6.1.6** Understand and explain the differences in basic OS security settings.
- **6.1.7** Understand and demonstrate the basics of client-side virtualization and scripting.

### CONTENT STANDARD 7.0: SECURITY

**Performance Standard 7.1: Students Will Understand and Demonstrate How To Secure A Network and A Workstation**

**6.2: Other Operating Systems**

- **7.1.1** Understand the application and usage of common prevention methods.
- **7.1.2** Understand the differences in common security threats.
- **7.1.3** Demonstrate the implementation of best practices to secure a workstation.
- **7.1.4** Understand appropriate data destruction and disposal methods.
- **7.1.5** Understand and demonstrate how to secure a Home office wired and wireless network.
- **7.1.6** Explain and use basic features and tools of other operating systems (Linux, Mac operating system, etc.).

### CONTENT STANDARD 8.0: MOBILE DEVICES PROFESSIONALISM

**Performance Standard 8.1: Students Will Develop an Understanding of Mobile Devices Workplace Readiness**

- **8.1.1** Understand the basic features of mobile operating systems and demonstrate appropriate safety procedures.
- **8.1.2** Understand and explain the basic network connectivity and configuring email impact of environmental controls.
- **8.1.3** Demonstrate the implementation of best practices to secure a workstation.
- **8.1.4** Understand how to secure mobile devices.
- **8.1.5** Understand and recognize differences in tablets and laptops professionalism.
- **8.1.6** Understand the configuration fundamentals of mobile device synchronization dealing with prohibited content/activity.

### CONTENT STANDARD 9.0: TROUBLESHOOTING TECHNIQUES
### Performance Standard **9.1: Students Will Demonstrate Proper OS and Workstation Troubleshooting Techniques**

<table>
<thead>
<tr>
<th>9.1.1</th>
<th>Troubleshoot common problems with PC Hardware with the appropriate tools. Compare and contrast best practices associated with types of documentation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1.2</td>
<td>Troubleshoot hard drives and RAID with appropriate tools. Implement basic change management best practices.</td>
</tr>
<tr>
<td>9.1.3</td>
<td>Implement basic disaster prevention and recovery methods. Troubleshoot video and displays.</td>
</tr>
<tr>
<td>9.1.4</td>
<td>Explain the processes for addressing prohibited content/activity, and privacy, licensing, and policy concepts. Troubleshoot wired and wireless networks with appropriate tools.</td>
</tr>
<tr>
<td>9.1.5</td>
<td>Troubleshoot operating systems. Understand and explain the importance of keeping systems current with appropriate tools, updates and patches.</td>
</tr>
<tr>
<td>9.1.6</td>
<td>Troubleshoot common laptop issues with appropriate tools.</td>
</tr>
<tr>
<td>9.1.7</td>
<td>Troubleshoot printers with appropriate tools.</td>
</tr>
<tr>
<td>9.1.8</td>
<td>Troubleshoot common security issues with appropriate tools and best practices.</td>
</tr>
</tbody>
</table>

### Performance Standard **10.8.1: Students Will Understand Current and Emerging Computer Based Technologies**

| 10.8.1.1 | Demonstrate an understanding of the constant change of emerging technologies.                                                        |