**2015 – 2016 Computer Repair & Networking AST Code List**

**CSR1.0 Hardware**

1.1 Categorize storage devices and backup media .

1.2 Explain motherboard components, types and features .

1.3 Classify power supplies types and characteristics .

1.4 Explain the purpose and characteristics of CPUs and their features .

1.5 Explain cooling methods and devices .

1.6 Compare and contrast memory types, characteristics and their purpose.

1.7 Distinguish between the different display devices and their characteristics .

1.8 Install and configure peripherals and input devices.

1.9 Summarize the function and types of adapter cards.

1.10 Install, configure and optimize laptop components and features .

1.11 Install and configure printers .

**CSR2.0 Troubleshooting, Repair and Maintenance**

2.1 Given a scenario, explain the troubleshooting theory .

2.2 Given a scenario, explain and interpret common hardware and operating system symptoms and their causes .

2.3 Given a scenario, determine the troubleshooting methods and tools for printers.

2.4 Given a scenario, interpret common laptop issues and determine the appropriate troubleshooting method .

2.5 Given a scenario, integrate common preventative maintenance techniques .

**CSR3.0 Operating Systems and Software**

3.1 Compare and contrast the different Windows Operating Systems and their features.

3.2 Given a scenario, demonstrate proper use of user interfaces.

3.3 Explain the process and steps to install and configure the Windows OS.

3.4 Explain the basics of boot sequences, methods and startup utilities.

**CSR4.0 Networking**

4.1 Summarize the basics of networking fundamentals, including technologies, devices and protocols.

4.2 Categorize network cables and connectors and their implementations .

4.3 Compare and contrast the different network types .

**CSR5.0 Security**

5.1 Explain the basic principles of security concepts and technologies .

5.2 Summarize security features.

**NET1.0 Network Technologies**

1.1 Explain the function of common networking protocols.

1.2 Identify commonly used TCP and UDP default ports .

1.3 Identify the common address formats.

1.4 Given a scenario, evaluate the proper use of addressing technologies and addressing schemes.

1.5 Identify common IPv4 and IPv6 routing protocols .

1.6 Explain the purpose and properties of routing .

1.7 Compare the characteristics of wireless communication standards .

**NET2.0 Network Media and Topologies**

2.1 Categorize standard cable types and their properties .

2.2 Identify common connector types .

2.3 Identify common physical network topologies .

2.4 Given a scenario, differentiate and implement appropriate wiring standards .

2.5 Categorize WAN technology types and properties.

2.6 Categorize LAN technology types and properties .

2.7 Explain common logical network topologies and their characteristics .

Install components of wiring distribution .

**NET3.0 Network Devices**

3.1 Install, configure, and differentiate between common network devices .

3.2 Identify the functions of specialized network devices .

3.3 Explain the advanced features of a switch .

3.4 Implement a basic wireless network .

**NET4.0 Network Management**

4.1 Explain the function of each layer of the OSI model . 4.2 Identify types of configuration management documentation .

4.3 Given a scenario, evaluate the network based on configuration management documentation .

4.4 Conduct network monitoring to identify performance and connectivity issues .

4.5 Explain different methods and rationales for network performance optimization .

4.6 Given a scenario, implement network troubleshooting methodology.

4.7 Given a scenario, troubleshoot common connectivity issues and select an appropriate solution .

**NET5.0 Network Tools**

5.1 Given a scenario, select the appropriate command line interface tool and interpret the output to verify functionality .

5.2 Explain the purpose of network scanners .

5.3 Given a scenario, utilize the appropriate hardware tools .

**NET6.0 Network Security**

6.1 Explain the function of hardware and software security devices .

6.2 Explain common features of a firewall .

6.3 Explain the methods of network access security .

6.4 Explain methods of user authentication .

6.5 Explain issues that affect device security .

6.6 Identify common security threats and mitigation techniques.