

# Computer Technology/Computer Systems Technology CIP 15.1202

## Personal and Environmental Safety 100

- 1 Identify and prevent common causes of accidents and injuries in the workplace. 101
- 2 Wear personal protective equipment. 102
- 3 Identify safety hazard symbols. 103
- 4 Follow Safety Data Sheets (SDS). 104
- 5 Identify and select the type of fire extinguisher based on the type of fire. 105
- 6 Follow proper procedures when lifting and carrying heavy objects. 106
- 7 Identify and implement proper disposal procedures based upon environmental impact and regulations. 107
- 8 Identify potential hazards when working with power supplies. 108
- 9 Configure a computer's power management settings to maximize energy efficiency. 112
- 10 Prevent electro-static discharge conditions. 114
- 11 Demonstrate proper ergonomic techniques. 115

## Internet Applications 400

- 1 Identify the components of a uniform resource locator (URL). 403
- 2 Identify processes for addressing prohibited content/activity, and privacy, licensing, and policy concepts. 404
- 3 Use web browsers to effectively search and access information on the Internet. 405
- 4 Use collaboration software. 406

---

**5 Identify safe and appropriate manner and the implications of the digital footprint when using social media. 407**

---

**Computer Hardware 500**

**1 Categorize storage devices and backup media. 501**

---

**2 Select motherboard components based on types, and features. 502**

---

**3 Select power supplies based on system requirements. 503**

---

**4 Define the purpose and characteristics of central processor units (CPUs) and their features. 504**

---

**5 Select and install cooling methods and devices. 505**

---

**6 Select and install memory based on type, characteristics, and their purpose. 506**

---

**7 Select and distinguish between different display devices and their characteristics. 507**

---

**8 Install and configure peripherals and input devices. 508**

---

**9 Summarize the function and types of adapter cards. 509**

---

**10 Configure and optimize portable devices, e.g., laptops, tablets, and smart devices. 510**

---

**11 Install, configure, and maintain the components of a desktop computer. 511**

---

**12 Detect problems, troubleshoot, and repair and replace the components of a desktop and laptop computer components. 512**

---

**13 Install, configure, and maintain printers. 513**

---

**14 Calculate voltage, wattage, and capacity of power supply. 514**

---

**15 Categorize different case form factors, their fans, and air flow directions. 515**

---

**16 Differentiate between and describe the characteristics of various types of printers. 516**

---

**17 Explain and categorize the capabilities and limitations of various portable devices. 517**

---

**18 Identify various computer port types and purpose. 518**

---

**Troubleshooting, Repair and Maintenance 600**

**1 Apply troubleshooting methodologies. 601**

---

**2 Troubleshoot and resolve common hardware and operating system symptoms and their causes. 602**

- 
- 3 Use troubleshooting methods and tools for printers. 603**

---

  - 4 Troubleshoot mobile device issues. 604**

---

  - 5 Integrate common preventative maintenance techniques for computers. 605**

---

  - 6 Identify basic computer and networking tools. 606**

---

  - 7 Choose and utilize the appropriate hand tool for a given task. 607**
- 

## **Operating Systems and Software 700**

- 1 Evaluate different operating systems by their features. 701**

---

  - 2 Use various user interfaces. 702**

---

  - 3 Install and configure an operating system. 703**

---

  - 4 Select and use system utilities and tools and evaluate the results. 704**

---

  - 5 Select the appropriate commands and options to troubleshoot and resolve problems. 705**

---

  - 6 Differentiate between various operating system directory structures. 706**

---

  - 7 Troubleshoot common operating system (OS) and software issues. 708**

---

  - 8 Use command-line interface. 709**

---

  - 9 Install, configure, and maintain application suite and system software. 710**

---

  - 10 Implement virtualization technologies. 711**

---

  - 11 Describe the interaction between software and hardware. 712**

---

  - 12 Categorize technologies that support cloud computing. 713**
- 

## **Networking 800**

- 1 Recommend computer network type based on their scope of coverage. 801**

---

- 2 Recommend internet technologies based on clients' requirements. 802**

---

- 3 Identify networking fundamentals, technologies, devices, and protocols. 803**

---

- 4 Fabricate and install test network cables, connectors, and basic network infrastructure. 804**

---

- 5 Compare and contrast various types of wired and wireless networks. 805**

---

- 6 Use computer tools to troubleshoot problems of network connectivity. 806**

---

- 7 Install and configure a small office/home office (SOHO) network. 807**

---

**8 Install and configure network resources. 808**

---

**Security 900**

**1 Follow the ethical, legal and security requirements related to handling data. 901**

---

**2 Implement and identify security features including wireless encryption and malicious software protection. 902**

---

**3 Implement and identify security, password management, locking workstations, and biometrics. 903**

---

**4 Troubleshoot, remove, and prevent viruses and malware. 904**

---

**5 Implement security and troubleshoot common issues. 905**

---

**6 Address the ethical, security, and privacy issues involved in posting information about yourself and others on social networking sites, e.g., blogs. 906**

---

**7 Implement industry standard practices dealing with user account management. 907**

---

**8 Perform basic forensic concepts, e.g., incident response, chain of custody, evidence preservation, and documentation. 908**

---

**9 Explain disaster recovery best practices and implementation. 909**

---

**Communication and Professionalism 1000**

**1 Use effective soft skills such as proper etiquette, active listening, and cultural sensitivity. 1001**

---

**2 Solve customer and client problems. 1002**

---

**3 Utilize the team approach to deliver client service. 1003**

---

**4 Describe an appropriate professional social media and remote workplace presence. 1005**

---

**5 Understand and create industry standard documentation, policies, procedures, and best practices. 1006**

---

**6 Identify appropriate computer equipment and peripheral for a specific situation and budget. 1007**

---

**7 Implement and adhere to acceptable use policies. 1008**

---

**8 Maintain asset inventory. 1009**

---

**9 Evaluate the impact of new and emerging technologies. 1010**

---