Pennsylvania CTE

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
	Use collaboration software. 406

Skip to main content

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

'roubleshoot and resolve common hardware and operating system symptoms and heir causes. 602

Skip to main content

	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
	nstall and configure a small office/home office (SOHO) network. 807

Skip to main content

	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