Florida CTE

Information Technology (2023-24): Computer Fundamentals (9003410)

Demonstrate knowledge, skill, and application of information systems to accomplish job objectives and enhance workplace performance. The student will be able to: CTE1.00	**1.01** Describe and use current and emerging computer technology and software to perform personal and business related tasks. CTE1.01
	1.02 Identify and describe communications and networking systems used in workplace environments. CTE1.02
	1.03 Locate and apply reference materials such as on-line help, vendor bulletin boards, tutorials, and manuals available for application software. CTE1.03
	1.04 Troubleshoot problems with computer hardware peripherals and other office equipment. CTE1.04
	1.05 Describe ethical, privacy, and security issues and problems associated with computers and information systems. CTE1.05
	1.06 Demonstrate proficiency in using the basic features of GUI browsers. CTE1.06
Practice quality performance. The student will be able to: CTE2.00	**2.01** Assess personal, peer and group performance and identify and implement strategies for improvement (e.g., organizational skills, note taking/outlining, advance organizers, reasoning skills, problem-solving skills, and decision-making skills). CTE2.01
	2.02 Develop criteria for assessing products and processes that incorporate effective business practices (e.g., time management, productivity, total quality management). CTE2.02
Demonstrate knowledge of different operating systems. The student will be able to: CTE3.00	**3.01** Identify operating system file naming conventions. CTE3.01
	3.02 Demonstrate proficiency with file management and structure (e.g., folder creation, file creation, backup, copy, delete, open, save). CTE3.02
	3.03 Demonstrate a working knowledge of standard file formats. CTE3.03
	4 Differentiate between different operating systems and applications. CTE3.04
	5 Compare and contrast open source and proprietary software. CTE3.05

Skip to main content

	3.06	Display understanding of how system utilities help maintain a computer. CTE3.06
Develop a familiarity with the information technology industry. The student will be able to: CTE4.00	4.01	Explain how information technology impacts the operation and management of business and society. CTE4.01
	4.02	Identify and describe the various ways of segmenting the IT industry (e.g., hardware vs. software, server vs. client, business vs. entertainment, stable vs. mobile). CTE4.02
	4.03	Describe how digital technologies (social media) are changing both work and personal lifestyles. CTE4.03
Develop an awareness of microprocessors and digital computers. The student will be able to: CTE5.00	5.01	Explain software hierarchy and its impact on microprocessors. CTE5.01
	5.02	Explain the need for and use of peripherals. CTE5.02
	5.03	Demonstrate proficiency installing and using plug-and-play peripherals. CTE5.03
	5.04	Identify the basic concepts of computer maintenance and upgrades. CTE5.04
Develop an awareness of programming languages. The student will be able to: CTE6.00	6.01	Compare and contrast the various categories of programming languages how they evolved and how they are used (e.g., Assembler, Java, JavaScript and SQL). CTE6.01
	6.02	Explain the need for and use of compilers. CTE6.02
	6.03	Identify the three types of programming design approaches (e.g., top-down, structured, object-oriented). CTE6.03
	6.04	Differentiate among source code, machine code, interpreters, and compilers. CTE6.04
	6.05	Characterize the major categories of programming languages and how they are used. CTE6.05
	6.06	Create a model flowchart for a computer program. CTE6.06
	6.07	Create a simple computer application program using JavaScript and HTML. CTE6.07
	6.08	Describe the stages in the software development life cycle and explain how to successfully implement them. CTE6.08
De en	7.01	Compare and contrast emerging technologies and describe how they impact business in the global marketplace (e.g., wireless, wireless web, cell phones,

Skip to main content

The student will be able to: CTE7.00		**portables/handhelds, smart appliances, home networks, peer-to-peer).** CTE7.01
	7.02	**Adhere to published best practices for protecting personal identifiable information when using the Internet.** CTE7.02
	7.03	**Identify trends related to the use of information technology in people's personal and professional lives.** CTE7.03
	7.04	**Characterize how the rapid pace of change in information technology impacts our society.** CTE7.04
Demonstrate an understanding of the seven layers of the Open Systems Interface (OSI) model. The student will be able to: CTE8.00	**8.01**	**Explain the interrelations of the seven layers of the Open Systems Interface (OSI) as it relates to hardware and software.** CTE8.01
	8.02	**Describe the purpose of the OSI model and each of its layers.** CTE8.02
	8.03	**Explain specific functions belonging to each OSI model layer.** CTE8.03
	8.04	**Understand how two network nodes communicate through the OSI model.** CTE8.04
	8.05	**Discuss the structure and purpose of data packets and frames.** CTE8.05
	8.06	**Describe the two types of addressing covered by the OSI model.** CTE8.06
Demonstrate an awareness of specialized software. The student will be able to: CTE9.00	**9.01**	**Compare and contrast the appropriate use of specialized software (e.g., OLTP, Computer Aided Design, Computer Aided Manufacturing, 3D animation, process control, materials management).** CTE9.01
	9.02	**Research and report on the current state of specialized software (e.g., OLTP, Computer Aided Design, Computer Aided Manufacturing, 3D animation, process control, materials management).** CTE9.02
	9.03	**Describe the hardware implications of using specialized software (e.g., RAM, hard drive size, CPU, storage devices).** CTE9.03
Identify computer components and their functions. The student will be able to: CTE10.00	**10.01**	**Identify the internal components of a computer (e.g., power supply, hard drive, mother board, I/O cards/ports, cabling).** CTE10.01
	10.02	**Identify generic computer and programming terminology.** CTE10.02
Demonstrate proficiency using the Internet to locate information. The student will be able to:	**11.01**	**Identify and describe web terminology.** CTE11.01
	11.02	**Define Universal Resource Locators (URLs) and associated protocols (e.g., http, ftp, telnet, mailto).** CTE11.02

Skip to main content

	11.03 Compare and contrast the types of Internet domains (e.g., .com, .org, .edu, .gov, .net, .mil). CTE11.03
	11.04 Describe and observe Internet/Intranet ethics and copyright laws and regulatory control. CTE11.04
	11.05 Demonstrate proficiency using search engines, including Boolean search strategies. CTE11.05
	11.06 Demonstrate proficiency using various web tools (e.g., downloading of files, transfer of files, telnet, PDF). CTE11.06
	11.07 Compare and contrast the roles of web servers and web browsers. CTE11.07
Demonstrate proficiency using common software applications. The student will be able to: CTE12.00	**12.01** Compare and contrast the appropriate use of various software applications (e.g., word processing, desktop publishing, graphics design, web browser, e-mail, presentation, database, scheduling, financial management, Java applet, music). CTE12.01
	12.02 Demonstrate proficiency in the use of various software applications (e.g., word processing, desktop publishing, graphics design, web browser, e-mail, presentation, database, scheduling, financial management, Java applet, music). CTE12.02
Develop an awareness of management functions and organizational structures as they relate to today's workplace and employer/employee roles. The student will be able to: CTE13.00	**13.01** Explore, design, implement, and evaluate organizational structures and cultures. CTE13.01
	13.02 Explore and demonstrate an awareness of current trends in business and the employee's role in maintaining productive business environments in today's global workplace. CTE13.02
	13.03 Collaborate with individuals and teams to complete tasks and solve business related problems and demonstrate initiative, courtesy, loyalty, honesty, cooperation, and punctuality as a team member. CTE13.03
Perform e-mail activities. The student will be able to: CTE14.00	**14.01** Describe e-mail capabilities and functions. CTE14.01
	14.02 Identify components of an e-mail message. CTE14.02
	14.03 Identify the components of an e-mail address. CTE14.03
	14.04 Identify when to use different e-mail options. CTE14.04
	14.05 Attach a file to an e-mail message. CTE14.05
	14.06 Forward an e-mail message. CTE14.06
	14.07 Use an address book. CTE14.07

Skip to main content

	14.08 Reply to an e-mail message. CTE14.08
	14.09 Use the Internet to perform e-mail activities. CTE14.09
	14.10 Identify the appropriate use of e-mail and demonstrate related e-mail etiquette. CTE14.10
	14.11 Identify when to include information from an original e-mail message in a response. CTE14.11
	14.12 Identify common problems associated with widespread use of e-mail. CTE14.12
Demonstrate proficiency in using presentation software and equipment. The student will be able to: CTE15.00	**15.01** Produce a presentation that includes music, animation, and digital photography and present it using appropriate technologies. CTE15.01
	15.02 Using presentation software, create a multimedia presentation that incorporates shot and edited video, animation, music, narration and adheres to good design principles, use of transitions, and effective message conveyance. CTE15.02
	15.03 Demonstrate knowledge of the roles and responsibilities of a multimedia production team (e.g. project manager, creative or design director, content experts, writers, graphic designers, animators, sound designers, videographer, interface designers/programmers). CTE15.03
	15.04 Collaborate with team members to plan, edit, evaluate, and present a multimedia presentation where individuals on the team function in specific production roles. CTE15.04
	15.05 Create a self-running presentation with synchronized audio, convert presentation slides (e.g. PowerPoint) into streaming ASF files for use on the web. CTE15.05
Perform decision-making activities in a multimedia environment. The student will be able to: CTE16.0	**16.01** Determine work priorities, the audience, project budgets, project specifications, and the production schedule. CTE16.01
	16.02 Evaluate and select appropriate software packages and multimedia tools to complete assigned tasks. CTE16.02
	16.03 Present and defend design projects. CTE16.03
Demonstrate language arts knowledge and skills. The student will be able to: CTE17.0	**17.01** Locate, comprehend and evaluate key elements of oral and written information. CTE17.01
	17.02 Draft, revise, and edit written documents using correct grammar, punctuation and vocabulary. CTE17.02

Skip to main content

	17.03 Present information formally and informally for specific purposes and audiences. CTE17.03
Demonstrate mathematics knowledge and skills. The student will be able to: CTE18.0	**18.01** Demonstrate knowledge of arithmetic operations. CTE18.01
	18.02 Analyze and apply data and measurements to solve problems and interpret documents. CTE18.02
	18.03 Construct charts/tables/graphs using functions and data. CTE18.03
Demonstrate science knowledge and skills. The student will be able to: CTE19.0	**19.01** Discuss the role of creativity in constructing scientific questions, methods and explanations. CTE19.01
	19.02 Formulate scientifically investigable questions, construct investigations, collect and evaluate data, and develop scientific recommendations based on findings. CTE19.02
Demonstrate an understanding of the implications of storing sensitive information. The student will be able to: CTE20.0	**20.01** Understand what data should be encrypted. CTE20.01
	20.02 Explain HIPAA. CTE20.02
	20.03 List password security vulnerabilities. CTE20.03
	20.04 Compare and contrast the levels of data classification. (e.g., restricted, confidential/private, public). CTE20.04
	20.05 Discuss cloud vulnerabilities. CTE20.05