Florida CTE

Information Technology (2024-25): Coding Fundamentals (9009200)

Demonstrate proficiency using specialized computer coding software. The student will be able to: 1.0	1 **Use specialized computer coding software to solve problems.** 1.01 2 **Demonstrate proficiency using specialized computer software (e.g., Swift, Python).** 1.02
Develop an awareness of programming languages. The student will be able to: 2.00	1 **Identify programming language design approaches.** 2.01 2 **Explain the components of programming languages.** 2.02 3 **Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions.** 2.03
Demonstrate proficiency of using common software applications. The student will be able to: 3.00	1 **Compare and contrast the appropriate use of various software applications.** 3.01 2 **Demonstrate proficiency in the use of various software applications.** 3.02 3 **Explain why different file types exist (e.g., formats for word processing, images, music, and three-dimensional drawings).** 3.03 4 **Identify the kinds of content associated with different file types.** 3.04
Demonstrate knowledge, skill, and application of information systems to accomplish job objectives and enhance workplace performance. The student will be able to: 4.00	1 **Develop keyboarding skills to enter and manipulate text and data.** 4.01 2 **Describe and use current and emerging computer technology and software to perform personal and business related tasks.** 4.02 3 **04.03 Perform a variety of operations such as sorting, filtering, and searching in a database to organize and display information in a variety of ways such as number formats (e.g., scientific notation, percentages, and exponents) charts, tables and graphs.** 4.03
Demonstrate comprehension and communication. The	1 **Use listening, speaking, telecommunication and nonverbal skills and strategies to communicate effectively.** 5.01

student will be able to: 5.00	**2** Organize ideas and communicate oral and written messages. 5.02
	3 Collaborate with individuals and teams to complete tasks and solve information technology problems. 5.03
	4 Demonstrate an awareness of project management concepts and tools. 5.04
	5 Demonstrate an ability to communicate appropriately through various online tools. 5.05
	6 Recognize that more than one algorithm can solve a given problem. 5.06
	7 Create a program that implements an algorithm to achieve a given goal, individually and collaboratively. 5.07
Demonstrate knowledge of different operating systems. The student will be able to: 6.00	**1** Compare and contrast various operating systems used in a computer and mobile devices (i.e., Windows, OS (Apple), UNIX, Android, iOS). 6.01
	2 Demonstrate proficiency in using gadgets, icons, and task bars and other pre-loaded operating system programs (e.g., calculator, text editor, clock, volume controls, adding icons and shortcuts to task bar and shortcut menus). 6.02
	3 Use iterative development and debugging to explore the problem domain. 6.03
Demonstrate proficiency in basic programming. The student will be able to: 7.00	**1** Describe the structure of a simple program, and explain why sequencing is important. 7.01
	2 Define the term “algorithm,” and explain how it relates to problem-solving. 7.02
	3 Describe iterative programming structures (e.g., while, do/while) and how they are used in programming. 7.03
	4 Describe selection programming structures (e.g., if/then, else) and explain the logic used for if statements. 7.04
	5 Explain the types and use of variables in programming. 7.05
	6 Write a simple program in pseudo-code that used structured programming to solve a problem. 7.06
	7 Troubleshoot and debug errors in code. 7.07
	8 Create, modify, and use a database (e.g., define field formats, adding new records, manipulate data) to analyze data and propose solutions for a task/problem, individually and collaboratively. 7.08