

## CompuScholar, Inc.

### Alignment to the Florida **Coding Fundamentals** course

#### Florida Course Details:

<b>Course Name:</b>	Coding Fundamentals (2020-2021)
<b>Primary Cluster:</b>	Information Technology (Middle School)
<b>Course Code:</b>	9009200
<b>Credit:</b>	1
<b>Grade Level:</b>	6th - 8th
<b>Standards Link:</b>	<a href="http://www.fldoe.org/core/fileparse.php/19869/urlt/9009200-2021.rtf">http://www.fldoe.org/core/fileparse.php/19869/urlt/9009200-2021.rtf</a>

#### CompuScholar Course Details:

<b>Course Title:</b>	Digital Savvy
<b>Course ISBN:</b>	978-0-9887070-8-5
<b>Course Year:</b>	2019

<b>Course Title:</b>	Python Programming
<b>Course ISBN:</b>	978-1-946113-00-9
<b>Course Year:</b>	2019

### Syllabus and Pacing Guide to Meet 100% of State Requirements

In order to meet all "Coding Fundamentals" requirements, CompuScholar recommends using the following chapters of our "**Digital Savvy**" course in the first semester, followed by our "**Python Programming**" course in the second semester.

#### Semester 1 - Digital Savvy

#### Semester 2 - Python Programming

Chapter 2	Chapter 1
Chapter 3	Chapter 2
Chapter 4	Chapter 3
Chapter 5	Chapter 4
Chapter 9	Chapter 5
Chapter 10	Chapter 6
Chapter 11	Chapter 7
Chapter 12	Chapter 8
Chapter 13	Chapter 9
Chapter 14	Chapter 10
Chapter 22	Chapter 11
Chapter 23	Chapter 12
Suppl. Chapt. 3, Lessons 1, 3, 4	Chapter 13
Suppl. Chapt. 2, Lessons 1, 2, 3, 5	Suppl. Chapt. 3, Lessons 1, 2, 3

## Course Description

The purpose of this course is to assist Information Technology students in making informed decisions regarding their future academic and occupational goals and to provide information regarding careers in the career cluster. The content includes but is not limited to foundational knowledge and skills related to computer coding and software development.

## Course Standards

**Note 1:** Citation(s) listed may represent a subset of the instances where objectives are met throughout the course.

**Note 2:** Citation(s) for a "Lesson" refer to the "Lesson Text" elements and associated "Activities" within the course, unless otherwise noted. The "Instructional Video" components are supplements designed to introduce or re-enforce the main lesson concepts, and the Lesson Text contains full details.

*To meet all Florida requirements, each line item has **at least one citation** from either course. Sometimes, specific standards are met by both courses, though **duplication from both courses is not necessary**. By completing the recommended chapters in each course, you will cover 100% of all listed Florida requirements.*

<b>01.0 Demonstrate proficiency using specialized computer coding software. – The student will be able to:</b>	<b>DIGITAL SAVVY CITATION(S)</b>	<b>PYTHON PROGRAMMING CITATION(S)</b>
01.01 Use specialized computer coding software to solve problems.	Chapters 22 - 23	Throughout the course
01.02 Demonstrate proficiency using specialized computer software (e.g. Swift, Python).	Chapters 22 - 23	Throughout the course

<b>02.0 Develop an awareness of programming languages. – The student will be able to:</b>	<b>DIGITAL SAVVY CITATION(S)</b>	<b>PYTHON PROGRAMMING CITATION(S)</b>
02.01 Identify programming language design approaches.	Chapt. 13, Lesson 2 Chapt. 22, Lessons 3	Suppl. Chapt. 3, Lesson 3
02.02 Explain the components of programming languages.	Chapt. 22, Lesson 1	Chapt. 1, Lesson 2
02.03 Examine connections between elements of mathematics and computer science including binary numbers, logic, sets, and functions.	Suppl. Chapt. 2, Lessons 1, 3, 5	Chapters 4, 9 Suppl. Chapt. 3, Lessons 1 - 2

<b>03.0 Demonstrate proficiency of using common software applications. – The student will be able to:</b>	<b>DIGITAL SAVVY CITATION(S)</b>	<b>PYTHON PROGRAMMING CITATION(S)</b>
03.01 Compare and contrast the appropriate use of various software applications.	Chapters 2, 4, 9 - 11	
03.02 Demonstrate proficiency in the use of various software applications.	Chapters 2, 4, 9 - 11	

03.03 Explain why different file types exist (e.g., formats for word processing, images, music, and three-dimensional drawings).	Chapt. 4, Lesson 1 Chapt. 9, Lesson 1 Chapt. 10, Lesson 1	
03.04 Identify the kinds of content associated with different file types.	Chapt. 4, Lesson 1 Chapt. 9, Lesson 1 Chapt. 10, Lesson 1	

<b>04.0 Demonstrate knowledge, skill, and application of information systems to accomplish job objectives and enhance workplace performance. – The student will be able to:</b>	<b>DIGITAL SAVVY CITATION(S)</b>	<b>PYTHON PROGRAMMING CITATION(S)</b>
04.01 Develop keyboarding skills to enter and manipulate text and data.	Suppl. Chapt. 3, Lesson 1	
04.02 Describe and use current and emerging computer technology and software to perform personal and business related tasks.	Suppl. Chapt. 3, Lessons 3, 4	
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.	Chapter 12	

<b>05.0 Demonstrate comprehension and communication. – The student will be able to:</b>	<b>DIGITAL SAVVY CITATION(S)</b>	<b>PYTHON PROGRAMMING CITATION(S)</b>
05.01 Use listening, speaking, telecommunication and nonverbal skills and strategies to communicate effectively.	Chapters 13, 14	Chapter 13
05.02 Organize ideas and communicate oral and written messages.	Chapters 13, 14	Chapter 13
05.03 Collaborate with individuals and teams to complete tasks and solve information technology problems	Chapters 13, 14	Chapter 13
05.04 Demonstrate an awareness of project management concepts and tools.	Chapters 13, 14	Chapter 13
05.05 Demonstrate an ability to communicate appropriately through various online tools.	Chapters 13, 14	Chapter 13
05.06 Recognize that more than one algorithm can solve a given problem.	Chapt. 22, Lesson 3 Suppl. Chapt. 2, Lesson 2	Chapter 13
05.07 Create a program that implements an algorithm to achieve a given goal, individually and collaboratively.	Chapter 23 Activity	Chapters 9 - 13

<b>06.0 Demonstrate knowledge of different operating systems. – The student will be able to:</b>	<b>DIGITAL SAVVY CITATION(S)</b>	<b>PYTHON PROGRAMMING CITATION(S)</b>
06.01 Compare and contrast various operating systems used in a computer and mobile devices (i.e. Windows, OS (Apple), UNIX, Android, iOS).	Chapter 3	
06.02 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).	Chapters 2 - 5	
06.03 Use iterative development and debugging to explore the problem domain.	Chapters 13, 14	Chapters 12, 13

<b>07.0 Demonstrate proficiency in basic programming. – The student will be able to:</b>	<b>DIGITAL SAVVY CITATION(S)</b>	<b>PYTHON PROGRAMMING CITATION(S)</b>
07.01 Describe the structure of a simple program, and explain why sequencing is important.		Chapt. 1, Lesson 3 Chapt. 4, Lesson 2 Chapt. 6, Lessons 3 - 4
07.02 Define the term “algorithm,” and explain how it relates to problem-solving.	Chapt. 22, Lesson 3 Suppl. Chapt. 2, Lesson 2	Suppl. Chapt. 3, Lesson 3
07.03 Describe iterative programming structures (e.g. while, do/while) and how they are used in programming.	Chapt. 23, Lesson 2	Chapt. 6, Lessons 3 - 4
07.04 Describe selection programming structures (e.g. if/then, else) and explain the logic used for if statements	Chapt. 23, Lesson 3	Chapter 4
07.05 Explain the types and use of variables in programming	Chapt. 23, Lesson 1	Chapter 2
07.06 Write a simple program in pseudo-code that used structured programming to solve a problem.	Chapt. 22, Lesson 3 Suppl. Chapt. 2, Lesson 2	Chapt. 3, Lesson 3
07.07 Troubleshoot and debug errors in code.		Chapter 5
07.08 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.	Chapters 12, 14	