CompuScholar, Inc.

Correlations to the Nevada Academic Content Standards (NVACS):
CET SCED 10049, Half-credit Graduation Requirement
"**Digital Savvy**" and "**Python Programming**"

Nevada Course Details:

Content Area	Computer Education and Technology
Course Code	SCED 10049, Half-credit Graduation Requirement
Grade Range	6 - 12 (These high school standards may be taught in middle or high school)
Standards Documents	Nevada Academic Content Standards for CS and IT (August 2019)
Course Requirements	CET Half-Credit Graduation Requirement (October 2019)

CompuScholar Course Details:

Course Title:	Digital Savvy
Course ISBN:	978-0-9887070-8-5
Course Year:	2022

Course Title:	Python Programming
Course ISBN:	978-1-946113-00-9
Course Year:	2022

Syllabus and Pacing Guide to Meet State Requirements

In order to meet all half-credit graduation requirements, CompuScholar recommends using the following chapters or lessons of our "**Digital Savvy**" and "**Python Programming**" courses. Additional material can be used from both courses to extend the experience to a full school year, if desired.

Digital Savvy	**Python Programming**
Chapter 1, Lessons 1 - 3	Chapter 1, Lessons 1 - 3, Activity
Chapter 2, Lessons 1 - 2	Chapter 2, Lessons 1 - 3, Activity
Chapter 6, Lessons 1 - 3	Chapter 3, Lessons 1 - 3, Activity
Chapter 7, Lessons 1 - 3, Activity	Chapter 4, Lessons 1 - 4, Activity
Chapter 8, Lessons 1 - 5	Chapter 5, Lessons 1 - 3, Activity
Chapter 9, Lessons 1 - 3, Activity #1	Chapter 6, Lessons 1 - 4, Activity
Chapter 10, Lessons 1 - 4, Activity #1	Chapter 7, Lessons 3 - 4
Chapter 11, Lessons 1 - 5, Activity #1	Chapter 8, Lessons 1 - 2
Chapter 13, Lessons 1 - 3, Activity	Chapter 9, Lessons 1 - 2
Chapter 14, Activities 1 - 3	
Chapter 16, Lessons 1 - 3, Activity	
Chapter 17, Lessons 1 - 3, Activity	
Chapter 18, Lessons 1 - 4, Activity	
Chapter 24, Lesson 1	
Supplemental Chapter 1, Lessons 1, 3, 4	
Supplemental Chapter 2, Lessons 1, 2, 3, 5	
Supplemental Chapter 3, Lessons 2, 4	

Course Description

This course brings together a subset of the Nevada K-12 Computer Science Standards and the entire K-12 Integrated Technology Standards (formally known as Educational Technology standards that were used in the former Digital Literacy/Computer Literacy courses) for a complete blend of skills that all students should have and know how to do in this CET subject area.

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.

Note 3: Citation(s) to "Supplemental" lessons or chapters can be found in Supplemental chapters at the end of each course.

*To meet all Nevada 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 or lessons in the Syllabus and Pacing Guide, you will cover all listed Nevada requirements.*

Integrated Technologies Concepts

Empowered Learner		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
9-12.EL.A.1 - Actively assimilate and revise personal and career goals, select and manage current and emerging technologies to achieve them, and reflect on their successes and areas of improvement in working toward their goals.	Chapter 24, Lesson 1 Chapters 9 - 11 Suppl. Ch. 3, Lesson 2	Suppl. Ch. 3, Lessons 4-5
9-12.EL.B.1 - Consistently engage in online social networks as a means to access and promote lifelong learning in collaboration with global peers.	Chapters 17 - 18 Suppl. Ch. 3, Lesson 2	Suppl. Ch. 3, Lesson 5
9-12.EL.C.1 - Regularly revise their work habits and attitudes based on feedback from others and from functionalities embedded in digital tools to improve their learning process, and they select or creatively use technologies to share their learning in ways that are useful to others.	Chapter 13, Lessons 1,3 Chapter 14	Chapter 13
9-12.EL.D.1 - Successfully use a variety of existing technologies to develop criteria and identify new digital tools and resources from emerging technologies to accomplish a defined task with fluency and ease.	Chapters 3 - 6 Chapters 9 - 11, 14	Chapter 1, Lesson 1

Digital Citizen		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
9-12.DC.A.1 - Analyze their digital identities and reputations within school policy to consider social media's impact on society, including demonstrating an understanding of how digital actions may have positive or negative implications for their future.	Chapter 8, Lesson 1 Chapters 17 - 18 Suppl. Ch. 1, Lesson 2	Suppl. Ch. 2
9-12.DC.B.1 - Demonstrate and advocate for positive, safe, legal, and ethical habits when using technology and when interacting with others online.	Chapter 8, Lessons 4-5 Chapters 17 - 18 Suppl. Ch. 1, Lesson 2	Suppl. Ch. 2
9-12.DC.B.2 - Distinguish potential dangers while online (e.g., malicious actors, phishing, impersonation) to prevent, detect, and combat cybersecurity threats while practicing safe and secure techniques, tactics, and practices recognizing cybersecurity is everyone's responsibility.	Chapter 8, Lessons 1-3 Chapters 17 - 18 Suppl. Ch. 1, Lesson 2	Suppl. Ch. 2
9-12.DC.C.1 - Advocate and demonstrate a respect for intellectual property with both print and digital media—including copyright, permission and fair use—by creating a variety of media products that include appropriate citation and attribution elements.	Chapter 7, Lesson 3 Chapter 8, Lesson 5 Chapter 14	Suppl. Ch. 2, Lesson 2
9-12.DC.D.1 - Demonstrate an understanding of what personal data is and how to keep it private and secure, including the awareness of terms such as encryption, HTTPS, password strength, cookies, phishing, and computer viruses; understand the limitations of data management and how data-collection technologies work.	Chapter 8, Lessons 1-3 Chapters 17 - 18 Suppl. Ch. 1, Lesson 2	Suppl. Ch. 2

Knowledge Constructor		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
9-12.KC.A.1 - Plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.	Chapter 7 Chapter 14	Chapter 13
9-12.KC.B.1 - Evaluate the accuracy, perspective, credibility, and relevance of information, media, data, or other resources in the school and career setting.	Chapter 7, Lesson 3 Chapter 14	
9-12.KC.C.1 - Curate information from digital resources, including online databases and catalogs, for research using a variety of tools and methods to create collections of artifacts that support their learning and career goals.	Chapter 7 Chapter 14	Chapter 13

9-12.KC.D.1 - Explore real-world issues and problems through inquiry and analysis, develop ideas, actively create solutions for them, and evaluate and revise through the use of digital tools.	Chapter 14 Suppl. Ch. 2, Lesson 5	Chapter 13

Innovative Designer		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
9-12.ID.A.1 - Engage in a design process and employ it to inquire and analyze, generate ideas, create innovative products or solve authentic problems, and evaluate the process to revise if needed.	Chapter 13 Chapter 14	Chapter 13
9-12.ID.B.1 - Creatively use digital tools to support a design process and expand their understanding to identify constraints, trade-offs, and to weigh risks.	Chapters 9 - 11 Chapters 13 - 14	Chapter 13
9-12.ID.C.1 - Engage in a cyclical design process to inquire and analyze, develop ideas, test, and revise prototypes, presenting finished products and best practices learned during the development.	Chapter 13 Chapter 14	Chapter 13
9-12.ID.D.1 - Demonstrate an ability to persevere and handle greater ambiguity as they work to solve open-ended problems.	Chapter 13, Lesson 3 Chapter 14 Suppl. Ch. 1, Lesson 4	Chapter 13

Computational Thinker		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
9-12.CT.A.1 - Define complex issues, create a plan, and select appropriate technology-assisted methods such as data analysis, abstract models, and algorithmic thinking in exploring and finding solutions.	Chapter 13 Chapter 14 Suppl. Ch. 1, Lesson 4 Suppl. Ch. 2, Lesson 5	Chapter 13 Suppl. Ch. 3, Lesson 3
9-12.CT.B.1 - Evaluate created or given data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.	Chapters 9 - 12 Chapter 14 Suppl. Ch. 2, Lessons 1,3	Chapter 2 Chapter 11 Activity Suppl. Ch. 2, Lessons 1,2
9-12.CT.B.2 - Evaluate and justify the formats for reporting results to a variety of audiences.	Chapter 9, Lessons 3,5 Chapter 10, Lessons 4,7 Chapter 11, Lessons 3-5	
9-12.CT.C.1 - Collaborate to break problems into component parts, identify key pieces, and use that information to problem-solve.	Chapter 13, Lesson 3 Chapter 14	Chapter 9 Chapter 13
9-12.CT.C.2 - Use 3D design tools to create prototypes, models, and simulations to demonstrate solutions and ideas.	Chapter 10, Lesson 7 (Graphical Charts) Chapter 14	Chapter 11 Activity Chapters 12, 13

9-12.CT.D.1 - Collaborate to develop an automated process by using algorithmic thinking to develop a sequence of steps to create and test automated solutions.	Chapter 14 Suppl. Ch. 1, Lesson 4 Suppl. Ch. 2, Lesson 5	Chapter 13 Suppl. Ch. 3, Lesson 3

Creative Communicator		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
9-12.CC.A.1 - Use digital learning tools and resources to identify communication needs considering goals, audience, content, access to tools or devices, and timing of communication, to involve teams in diverse locales for effective communication.	Chapter 14 Chapter 16	Chapter 13
9-12.CC.B.1 - Create an original work using multiple digital tools, including planning, research, editing, and production.	Chapter 14	Chapter 13
9-12.CC.C.1 - Create digital graphic visualizations, data driven models, and simulations to succinctly communicate complex ideas and problems; justify methods and tools used.	Chapters 9 - 11 Chapter 14 Suppl. Ch. 1, Lesson 4 Suppl. Ch. 2, Lesson 5	Chapter 13 Suppl. Ch. 3, Lesson 3
9-12.CC.D.1 - Publish or present content designed for specific audiences using online meeting tools to asynchronous and synchronous audiences.	Chapters 9 - 11 Chapter 14 Suppl. Ch. 3, Lesson 4	

Global Collaborator		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
9-12.GC.A.1 - Use digital tools to interact with others to develop a richer understanding of different perspectives and cultures; publish electronic artifacts that communicate to a culturally diverse and global community.	Chapters 16 - 18	
9-12.GC.B.1 - Use collaborative technologies (live and recorded) to connect with global stakeholders including peers, not excluding other languages, experts, and community members, to learn about issues and problems or to gain a broader perspective; develop multiple viewpoints that may be electronically published and accessible to all audiences.	Chapter 7 Chapter 14 Chapters 17 - 18	
9-12.GC.C.1 - Learn project management roles on a team to meet goals, based on their knowledge of technology and content, as well as personal preference; goals in project, timelines and milestones, will be monitored with tools and shared globally.	Chapter 13 Chapter 14	Chapter 13

9-12.GC.D.1 - Select and justify the effective collaborative technologies (live video conference, online forums, social media and other emerging communication methods) to investigate, develop, and publish solutions related to local and global issues.	Chapter 14 Chapters 16 - 18	
9-12.GC.D.2 - Understand that digital tools such as blogs and social media can be used to crowd source, crowd fund, and mobilize a community toward a goal.	Chapters 17 - 18	

Computer Science Concepts

Algorithms and Programming		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
9-12.AP.A.1 - Create prototypes that use algorithms to solve computational problems by leveraging prior student knowledge and personal interests.	Suppl. Ch. 2, Lesson 2	Suppl. Ch. 3, Lesson 3
9-12.AP.V.1 - Demonstrate the use of both linked lists and arrays to simplify solutions, generalizing computational problems instead of repeatedly using simple variables.		Chapter 6, Lessons 1-2
9-12.AP.C.1 - Justify the selection of specific control structures when tradeoffs involve implementation, readability, and program performance, and explain the benefits and drawbacks of choices made.		Chapter 6, Lessons 3-4
9-12.AP.C.2 - Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions.	Chapter 14	Chapter 13
9-12.AP.M.1 - Decompose problems into smaller components through systematic analysis, using constructs such as procedures, modules, and/or objects.		Chapters 9, 10, 11
9-12.AP.PD.2 - Evaluate licenses that limit or restrict use of computational artifacts when using resources such as libraries.	Chapter 2, Lesson 2	Suppl. Ch. 2, Lesson 2
9-12.AP.PD.4 - Design and develop computational artifacts working in team roles using collaborative tools.	Chapter 14	Chapter 13

Computing Systems		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
9-12.CS.D.1 - Explain how abstractions hide the underlying implementation details of computing systems embedded in everyday objects.	Chapter 1, Lessons 1-3 Suppl. Ch. 3, Lesson 3	

9-12.CS.HS.1 - Compare levels of abstraction and interactions between application software, system software, and hardware layers.	Chapter 2, Lesson 1	
9-12.CS.T.1 - Develop guidelines that convey systematic troubleshooting strategies that others can use to identify and fix errors.	Chapter 5, Lesson 3	Chapter 5

Data and Analysis		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
9-12.DA.S.1 - Translate between different bit representations of real-world phenomena, such as characters, numbers, and images (e.g., convert hexadecimal colors to decimal percentages, ASCII/Unicode	Suppl. Ch. 2, Lessons 1, 3	Suppl. Ch. 3, Lessons 1, 2
9-12.DA.CVT.1 - Create interactive data visualizations or alternative representations using software tools to help others better understand real-world phenomena.	Chapter 14 Suppl. Ch. 2, Lesson 5	Chapter 11 Activity Chapter 13

Impacts of Computing		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
9-12.IC.C.1 - Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.	Chapters 17 - 18 Suppl. Ch. 1, Lessons 1,	Suppl. Ch. 4
9-12.IC.C.2 - Test and refine computational artifacts to reduce bias and equity deficits.	Suppl. Ch. 1, Lesson 3	
9-12.IC.SI.1 - Use tools and methods for collaboration on a project to increase connectivity of people in different cultures and career fields.	Chapter 14	Chapter 13
9-12.IC.SLE.2 - Explain the privacy concerns related to the collection and generation of data through automated processes that may not be evident to users.	Chapter 8, Lessons 1-3 Chapters 17 - 18	Suppl. Ch. 4, Lesson 2 Suppl. Ch. 2, Lessons 1, 3, 4
9-12.IC.SLE.3 - Evaluate the social and economic implications of privacy in the context of safety, law, or ethics.	Chapter 8, Lessons 1-3	Suppl. Ch. 4, Lesson 2 Suppl. Ch. 2, Lessons 1, 3, 4

Networks and the Internet		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
9-12.NI.NCO.1 - Evaluate the scalability and reliability of networks, by describing the relationship between routers, switches, servers, topology, and addressing.	Chapter 6, Lessons 1-3	

9-12.NI.C.1 - Give examples to illustrate how sensitive data can be affected by malware and other attacks.	Chapter 8, Lessons 1-3	Suppl. Ch. 2, Lesson 3

Practices

Practice 1. Fostering an Inclusive Computing Culture		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
1. Include the unique perspectives of others and reflect on one's own perspectives when designing and developing computational products.	Chapters 13, 14 Suppl. Ch. 1, Lessons 1,3	Chapter 13
2. Address the needs of diverse end users during the design process to produce artifacts with broad accessibility and usability.	Chapter 14 Suppl. Ch. 1, Lesson 3	Chapter 13
3. Employ self- and peer-advocacy to address bias in interactions, product design, and development methods.	Chapters 13, 14 Suppl. Ch. 1, Lessons 1,3	Chapter 13

Practice 2. Collaborating Around Computing		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
1. Cultivate working relationships with individuals possessing diverse perspectives, skills, and personalities.	Chapter 14	Chapter 13
2. Create team norms, expectations, and equitable workloads to increase efficiency and effectiveness.	Chapter 14	Chapter 13
3. Solicit and incorporate feedback from, and provide constructive feedback to, team members and other stakeholders.	Chapter 14	Chapter 13
4. Evaluate and select technological tools that can be used to collaborate on a project.	Chapters 9 - 11 Chapters 14, 16	Chapter 13

Practice 3. Recognizing and Defining Computational Problems		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
1. Identify complex, interdisciplinary, real-world problems that can be solved computationally.	Suppl. Ch. 1, Lesson 4 Suppl. Ch. 2, Lessons 2,5	Suppl. Ch. 3, Lesson 3 Suppl. Ch. 4, Lesson 4
2. Decompose complex real-world problems into manageable subproblems that could integrate existing solutions or procedures.	Suppl. Ch. 1, Lesson 4 Suppl. Ch. 2, Lessons 2,5	Chapter 9, Lessons 1,2 Suppl. Ch. 3, Lesson 3 Suppl. Ch. 4, Lesson 4
3. Evaluate whether it is appropriate and feasible to solve a problem computationally.	Suppl. Ch. 1, Lesson 4 Suppl. Ch. 2, Lessons 2,5	Suppl. Ch. 3, Lesson 3 Suppl. Ch. 4, Lesson 4

Practice 4. Developing and Using Abstractions		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
1. Extract common features from a set of interrelated processes or complex phenomena.		Chapters 9, 10, 11
2. Evaluate existing technological functionalities and incorporate them into new designs.	Chapter 14	Chapter 13
3. Create modules and develop points of interaction that can apply to multiple situations and reduce complexity.		Chapters 9, 10, 11
4. Model phenomena and processes and simulate systems to understand and evaluate potential outcomes.	Suppl. Ch. 1, Lesson 4 Suppl. Ch. 2, Lessons 2,5	Chapter 11 Activity Chapter 13

Practice 5. Creating Computational Artifacts		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
1. Plan the development of a computational artifact using an iterative process that includes reflection on and modification of the plan, taking into account key features, time and resource constraints, and user expectations.	Chapter 13 Chapter 14	Chapter 13
2. Create a computational artifact for practical intent, personal expression, or to address a societal issue.	Chapter 14	Chapter 13
3. Modify an existing artifact to improve or customize it.		Many Lesson "Work-With-Me" Exercises

Practice 6. Testing and Refining Computational Artifacts		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
1. Systematically test computational artifacts by considering all scenarios and using test cases.	Chapter 13, Lesson 2 Chapter 14, Activity 3	Chapter 5 Chapter 13, Activity 4
2. Identify and fix errors using a systematic process.	Chapter 13, Lesson 2 Chapter 14, Activity 3	Chapter 5 Chapter 13, Activity 4
3. Evaluate and refine a computational artifact multiple times to enhance its performance, reliability, usability, and accessibility.	Chapter 13, Lesson 2 Chapter 14, Activity 3	Chapter 5 Chapter 13, Activity 4

Practice 7. Communicating About Computing		
Indicator and Standard	**Digital Savvy Citation(s)**	**Python Programming Citation(s)**
1. Select, organize, and interpret large data sets from multiple sources to support a claim.	Chapter 14 Suppl. Ch. 2, Lesson 5	Chapter 13
2. Describe, justify, and document computational processes and solutions using appropriate terminology consistent with the intended audience and purpose.	Chapter 14 and throughout the course	Chapter 13 and throughout the course
3. Articulate ideas responsibly by observing intellectual property rights and giving appropriate attribution.	Chapter 7, Lesson 3 Chapter 8, Lesson 5	Suppl. Ch. 2, Lesson 2