CompuScholar, Inc.
Correlations to the Nevada CTE Computer Science Standards
Level 2, Grades 9 - 12

"Windows Programming with C#"

Nevada Course Details:

Course Name:	Computer Science
Primary Cluster:	CTE - Computer Science
CIP Code(s):	11.0701 - Level 2
Credit:	1
Grade Level:	9th-12th
Program Standards Link:	Program Standards - Computer Science (2018)
Framework Link:	Curriculum Frameworks - Computer Science (2018)

CompuScholar Course

Course Title:	Windows Programming with C#
Course ISBN:	978-0-9887070-0-9
Course Year:	2021

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 ("Suppl.") lessons or chapters can be found in Supplemental chapters at the end of each course.

Course Description

CompuScholar's **Windows Programming with C#** is a computer science course based on the C# language. The curriculum can be flexibly used for introductory computer science courses at Levels 1, 2 or 3.

This document demonstrates how the course meets standards within the Nevada CTE Computer Science sequence, Level 2. Program standards not applicable for Level 2 have been omitted. Please see alignment documents for Level 1 and Level 3 at the link below for details on how this course can be used to address those requirements.

https://www.compuscholar.com/nevada

Course Standards

CONTENT STANDARD 1.0 : UNDERSTAND ALGORITHMS AND PROGRAMMING	CITATION(S)	LEVEL(S)
PERFORMANCE STANDARD 1.1 : APPLY ALGORITHMS		
1.1.2 Describe how artificial intelligence drives many software and physical systems	Suppl. Chapter 3, Lesson 3	2
1.1.3 Implement an artificial intelligence algorithm to play a game against a human opponent or solve a problem	Chapter 18 (Team project may have an AI focus if desired) Suppl. Chapter 3, Lesson 3	2
1.1.4 Use and adapt classic algorithms to solve computational problems	Chapter 7, Lesson 3 Chapter 14	2
1.1.5 Develop classic algorithms in code to solve computational problems	Chapter 7, Lesson 3 Chapter 14	2, 3
PERFORMANCE STANDARD 1.2 : IMPLEMENT CONTROLS		
1.2.2 Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions	Chapters 16, 17, 18 Suppl. Chapter 1, Lessons 5 - 6	1, 2
PERFORMANCE STANDARD 1.3 : UTILIZE VARIABLES		
1.3.3 Implement arrays in code	Chapter 11, Lessons 1, 3	2, 3
1.3.4 Implement ArrayLists and LinkedLists in code	Chapter 11, Lessons 2, 3	2, 3
PERFORMANCE STANDARD 1.4 : CONSTRUCT SOLUTIONS USING MODULARITY		
1.4.3 Construct solutions to problems using student-created components, such as procedures, modules and/or objects	Chapters 9, 12, 13, 16	2
1.4.4 Analyze a large-scale computational problem and identify generalizable patterns that can be applied to a solution	Chapter 14, Lessons 1, 3 Chapter 16	2
1.4.5 Demonstrate code reuse by creating programming solutions using libraries and APIs	Chapter 2, Lesson 1 Use of .NET Framework (e.g. Chapter 7, Lesson 2, Chapter 11, Lesson 2)	2, 3
PERFORMANCE STANDARD 1.5 : DEMONSTRATE PROGRAMMING AND DEVELOPMENT		
1.5.6 Plan and develop programs for broad audiences using a software life cycle process	Chapter 18 Suppl. Chapter 2, Lesson 1	2
1.5.7 Explain security issues that might lead to compromised computer programs	Chapter 1, Lesson 6	2
1.5.8 Develop programs for multiple computing platforms	Chapter 1, Lesson 4 Chapter 2, Lesson 1	2
1.5.9 Use version control systems, integrated development environments (IDEs), and collaborative tools and practices (code documentation) in a group software project	Chapter 2, Lessons 1-2 Chapter 18 Suppl. Chapter 3, Lesson 4	2

1.5.10 Develop and use a series of test cases to verify that a program performs according to its design specifications	Chapter 10, Lesson 4 Chapter 18, Lesson 4 Suppl. Chapter 2, Lesson 1	2
1.5.11 Modify an existing program to add additional functionality and discuss intended and unintended implications, e.g., breaking other functionality	Adding to existing projects: Activities in Chapters 13, 14, 16, 17, etc. Iterative & regression testing: Chapter 10, Lesson 4 Chapter 18, Lesson 4	2

CONTENT STANDARD 2.0 : UNDERSTAND COMPUTING SYSTEMS	CITATION(S)	LEVEL(S)
PERFORMANCE STANDARD 2.1 : DESCRIBE DEVICES		
PERFORMANCE STANDARD 2.2 : COMPARE HARDWARE AND SOFTWARE		
2.2.2 Categorize the roles of operating system software	Chapter 1, Lesson 3	2
PERFORMANCE STANDARD 2.3 : EXPLAIN TROUBLESHOOTING		
2.3.2 Illustrate ways computing systems implement logic, input, and output through hardware components	Chapter 1, Lesson 2	2

CONTENT STANDARD 3.0 : UNDERSTAND DATA AND ANALYSIS	CITATION(S)	LEVEL(S)
PERFORMANCE STANDARD 3.1 : EVALUATE STORAGE SOLUTIONS		
3.1.3 Demonstrate the ability to store bit representation of real-world phenomena, characters, numbers, and images	Chapter 4, Lesson 5 Chapter 8 Activity Suppl. Chapter 1, Lesson 1	2
PERFORMANCE STANDARD 3.2 : CREATE USING COLLECTION, VISUALIZATION, AND TRANSFORMATION		
3.2.3 Select data collection tools and techniques to generate data sets that support a claim or communicate information	Suppl. Chapter 1, Lesson 5 Suppl. Chapter 1, Lesson 6	3
PERFORMANCE STANDARD 3.3 : CREATE USING INFERENCE AND MODELS		
3.3.2 Evaluate the ability of models and simulations to test and support the refinement of hypotheses	Suppl. Chapter 1, Lesson 5 Suppl. Chapter 1, Lesson 6	3

CONTENT STANDARD 4.0 : UNDERSTAND IMPACTS OF COMPUTING	CITATION(S)	LEVEL(S)
PERFORMANCE STANDARD 4.1 : EVALUATE THE IMPACT OF COMPUTING ON CULTURE		
4.1.5 Evaluate computational artifacts to maximize their beneficial effects and minimize harmful effects on society	Suppl. Chapter 3, Lessons 2, 3	2
PERFORMANCE STANDARD 4.2 : INCREASE SOCIAL INTERACTIONS		
PERFORMANCE STANDARD 4.3 : EXPLAIN SAFETY, LAW, AND ETHICS RELATED TO COMPUTING		
4.3.4 Discuss the role of ethics in emerging technologies	Chapter 1, Lesson 5 Suppl. Chapter 3, Lessons 2 - 3	2

CONTENT STANDARD 5.0 : UNDERSTAND NETWORKS AND THE INTERNET	CITATION(S)	LEVEL(S)
PERFORMANCE STANDARD 5.1 : EVALUATE NETWORK, COMMUNICATION, AND ORGANIZATION		
PERFORMANCE STANDARD 5.2 : DESCRIBE CYBERSECURITY		

Employability Skills for Career Readiness Standards

CONTENT STANDARD 1.0: DEMONSTRATE EMPLOYABILIITY SKILLS FOR CAREER READINESS	CITATION(S)	LEVEL(S)
PERFORMANCE STANDARD 1.1: DEMONSTRATE PERSONAL QUALITIES AND PEOPLE SKILLS		
1.1.1 Demonstrate a positive work ethic by coming to work every day on time, a willingness to take direction, and motivation to accomplish the task at hand	Chapter 18 (Team project with team roles & deliverables) Suppl. Chapter 2, Lesson 2	1, 2, 3
1.1.2 Demonstrate integrity by abiding by workplace policies and laws and demonstrating honesty and reliability	Chapter 18 (Team project with team roles & deliverables) Suppl. Chapter 2, Lesson 2	1, 2, 3
1.1.3 Demonstrate teamwork skills by contributing to the success of the team, assisting others, and requesting help when needed	Chapter 18 (Team project with team roles & deliverables) Suppl. Chapter 2, Lesson 2	1, 2, 3
1.1.4 Demonstrate positive self-representation skills by dressing appropriately and using language and manners suitable for the workplace	Chapter 18 (Team project with team roles & deliverables) Suppl. Chapter 2, Lesson 2	1, 2, 3
1.1.5 Demonstrate diversity awareness by working well with all customers and coworkers	Chapter 18 (Team project with team roles & deliverables) Suppl. Chapter 2, Lesson 2	1, 2, 3
1.1.6 Demonstrate conflict-resolution skills by negotiating diplomatic solutions to interpersonal and workplace issues	Chapter 18 (Team project with team roles & deliverables) Suppl. Chapter 2, Lesson 2	1, 2, 3
1.1.7 Demonstrate creativity and resourcefulness by contributing new ideas and working with initiative	Chapter 18 (Team project with team roles & deliverables) Suppl. Chapter 2, Lesson 2	1, 2, 3

PERFORMANCE STANDARD 1.2: DEMONSTRATE PROFESSIONAL KNOWLEDGE AND SKILLS		
1.2.1 Demonstrate effective speaking and listening skills by communicating effectively with customers and employees and following directions	Chapter 18 Suppl. Chapter 2, Activity 1	1, 2, 3
1.2.2 Demonstrate effective reading and writing skills by reading and interpreting workplace documents and writing clearly	Chapter 18 Suppl. Chapter 2, Activity 1	1, 2, 3
1.2.3 Demonstrate critical-thinking and problem-solving skills by analyzing and resolving problems that arise in completing assigned tasks	Hands-on tasks are completed throughout the course	1, 2, 3
1.2.4 Demonstrate healthy behaviors and safety skills by following safety guidelines and managing personal health	N/A (See Digital Savvy)	1, 2, 3
1.2.5 Demonstrate understanding of workplace organizations, systems, and climates by identifying "big picture" issues and fulfilling the mission of the workplace	Chapter 18, Lessons 1, 2 Suppl. Chapter 2, Lessons 1 - 2	1, 2, 3
1.2.6 Demonstrate lifelong-learning skills by continually acquiring new industry-related information and improving professional skills	Suppl. Chapter 2, Lessons 2 - 3	1, 2, 3
1.2.7 Demonstrate job acquisition and advancement skills by preparing to apply for a job and seeking promotion	Suppl. Chapter 2, Lesson 2	1, 2, 3
1.2.8 Demonstrate time, task, and resource management skills by organizing and implementing a productive plan of work	Chapter 18 Suppl. Chapter 2, Lesson 1	1, 2, 3
1.2.9 Demonstrate mathematics skills by using mathematical reasoning to accomplish tasks	Chapter 4, Lesson 5 Chapter 5, Lesson 1 Chapter 7, Lessons 2, 3 Chapter 15, Lesson 1	1, 2, 3
1.2.10 Demonstrate customer service skills by identifying and addressing the needs of all customers and providing helpful, courteous, and knowledgeable service	N/A (See Digital Savvy)	1, 2, 3
PERFORMANCE STANDARD 1.3 : DEMONSTRATE TECHNOLOGY KNOWLEDGE AND SKILLS		
1.3.1 Demonstrate proficiency with job-specific technologies by selecting and safely using technological resources to accomplish work responsibilities in a productive manner	Online technical resources used throughout the course	1, 2, 3
1.3.2 Demonstrate proficiency with information technology by using computers, file management techniques, and software/programs effectively	Computers, file management and software used throughout the course	1, 2, 3
1.3.3 Demonstrate proper Internet use and security by using the Internet appropriately for work	Internet used safely and securely to access online course material	1, 2, 3
1.3.4 Demonstrate proficiency with telecommunications by selecting and using appropriate devices, services, and applications	Appropriate devices and applications used throughout the course	1, 2, 3