

Tarkanian Middle School
COMPUTER SCIENCE AND APPLICATIONS
Course Expectations

Instructors: Mrs. Cindee Cavazos * Room 201 * cavazcg@nv.ccsd.net
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Course Scope:

This one-semester course provides students with skills in computer education and technology. Areas of emphasis include computer science, computational thinking, productivity applications, and digital citizenship. Instructional practices incorporate integration of diversity awareness including appreciation of all cultures and their important contributions to society. **This course fulfills the one-half computer credit required for high school graduation.**

Course Goals:

1. To examine the relationship between hardware and software in computing systems.
2. To apply computational thinking to algorithms, problem-solving, abstraction, and connections.
3. To design and develop computational artifacts.
4. To determine methods for data storage, collection, and visualization.
5. To generate documents utilizing productivity applications.
6. To explore system failures and options for troubleshooting.
7. To create digital text, images, and sound for communication and collaboration.
8. To identify network security risks associated with cyber-attacks and threats.
9. To research issues related to safety, invasion of privacy, data security, and the ethical use of information.

Course Methods of Instruction:

Online course designed in the Canvas Learning Management System accessible 24/7. Instruction is teacher-led with online content including, but not limited to, reading and video lessons, discussions, assignments, and formative and summative assessments. Online distance education students engage with content in Canvas and participate in weekly teacher-led online synchronous sessions. Instructors are highly qualified teachers licensed by the Nevada Department of Education.

Course Grading:

All grades will be recorded in the instructor's gradebook available via Infinite Campus. Parents/guardians are encouraged to monitor grades frequently.

Grades are based on the standard percentage scale below.

A= 90-100% B= 80-89% C= 70-79% D= 60-69% F= 0-59%

Semester grades are determined as follows: First Quarter Grade 40%, Second Quarter Grade 40%, and Semester Exam 20%.

All assignments are placed within to categories. *Formative assessments* (30% of overall grade) include classroom assignments, observations, quizzes etc. and *summative assessments* (70% of overall grade) which include formal tests and projects. Students have until the end of each module to complete assignments. Missing formative assessments are graded as zero and missing summative assessments are graded as a Minimum F (50%).

Citizenship grades are determined based on the student's adherence to school and classroom rules and expectations. O=Outstanding (no infractions), S=Satisfactory, N=Needs Improvement, and U=Unsatisfactory

Texts & Resources:

- [GCF Global LearnFree](#)
- [Google Applied Digital Skills](#)
- [Common Sense Education Digital Citizenship](#)
- [Code.org Discoveries](#)

Course Outline:

- **Quarter 1 (45 days)**
 - **Module 1: Use of Computers & the Internet**
 - **Computer Hardware & Devices**
 - **Computer Software**
 - **Troubleshooting**
 - **Internet Basics, Searching & Networking**
 - **Internet Cybersecurity & Safety**
 - **Module 2: Digital Citizenship**
 - **Media Balance & Well-Being**
 - **Privacy & Security**
 - **Digital Footprint & Identity**
 - **Cyberbullying & Digital Drama**
 - **News & Media Literacy**
 - **Law & Ethics**
 - **Module 3: Productivity Applications: Word Processing**
 - Storing Files on a Computer & in the Cloud
 - Creating, Sharing & Collaborating in Documents
 - Adding, Editing & Formatting Text
 - Hyperlinks & Images
 - Indenting & Tabs
 - Inserting, Formatting and Inputting Text and Objects
 - **Module 4: Productivity Applications: Presentations & Projects**
 - Slide Themes and Templates
 - Adding Slides, Formatting Layouts
 - Inserting and Formatting Images, Shapes & Video
 - Slide Transitions and Object Animations
 - Sharing, Collaborating, and Presenting

- **Module 5: Productivity Applications: Spreadsheets & Data**
 - Inserting Data, Modifying and Formatting Cells (Rows & Columns)
 - Formulas (Simple & Complex)
 - Using Relative and Absolute References
 - Functions
 - Collecting, Organizing (Sorting), Analyzing and Representing Data
 - Spreadsheets & Data within Collaborative Project-Based Activities
- **Quarter 2 - (45 days)**
 - **Module 6: Coding/Computer Science - Interactive Images & Animations**
 - Programming for Entertainment
 - Plotting Shapes
 - Drawing in Game Lab
 - Shapes & Randomization (Parameters)
 - Variables
 - Characters (Sprites), Animation, Images, Text, Drawing, Debugging
 - The Draw Loop
 - Counter Pattern (Variables & Properties)
 - Character Movement
 - Booleans
 - Conditionals
 - User Input Other Forms of Input
 - Cumulative Interactive Programming Project
 - **Module 7: Coding/Computer Science - Building Games**
 - Velocity
 - Collision Detection
 - Complex Sprite Movement
 - Collisions
 - Functions
 - The Game Design Process
 - Using the Game Design Process