**Challenger High School 2023-2024**

Computer Programming 1

**CEDARS Course Code:** COMP PROGRAMMING 1 & 2 Term 1: 01/31/24 - 04/12/24

 Term 2: 04/15/24 - 06/14/24

**Teacher’s Name:** Scott Birdseye **Phone**: (253) 800-6822  **Email: sbirdseye@bethelsd.org**

**Grade Level:** 10, 11, 12  **Credit:** Occupational/CTE or Elective **NCAA Approved**

**District Course Code:** CTT251 **Prerequisite Courses:** *Successful completion of Algebra 1 or AP Computer Science Principles* **Credits:** .5

***Course Description***: Introduction to Programming A is a one quarter course that focuses on fundamental computer science concepts while students learn to program using Python. This project-based course will allow students to use a variety of tools and platforms. Assignments and instruction are application-based and include socially relevant, real-world, current topics. Students will learn a text-based coding language, Python, with the focus of this course teaching introductory coding concepts Such as user inputs and outputs, if/else statements and while loops.

# *Course Objective and Goals:* This trimester will cover the basics of computer science, number calculations and data, decision making, repetition and loops. Students will begin learning some basic Python programming as we progress through modules in projectSTEM, which is our main platform used for this course.  Students in Programming 1 will progress through modules 1-3, Programming 2 students will continue through modules 4-9.

**Bethel School District Priority Standards**(or industry standards addressed):

* PS1: Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.
* PS2: Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs.
* PS3: Translate between different bit representations of real-world phenomena, such as characters, numbers, and images.
* "PS4: Decompose problems into smaller components through systematic analysis, using
* constructs such as procedures, modules, and/or objects."
* PS5: Create and improve computer programs that use different instructions, like repeating actions inside other actions, and making choices based on different conditions. (ex: Loops)
* PS6: Make computer programs step by step that use different sets of rules, like repeating actions inside other actions and making decisions based on different conditions. (ex: if/else statements)
* PS7: Compare and contrast fundamental data structures and their uses.
* PS8: Analyze a large-scale computational problem and identify generalizable patterns that can be applied to a solution.
* PS9: Select data collection tools and techniques to generate data sets that support a claim or communicate information.
* PS10: Demonstrate code reuse by creating programming solutions using libraries and APIs.
* PS11: Use lists to simplify solutions, generalizing computational problems instead of repeatedly using simple variables.
* PS 12: Create artifacts (a complex, functional computer program) by using procedures within a program, combinations of data and procedures, or independent but interrelated programs.

***Teacher and Course Expectations:*** Students will be required to complete units 1 through 3 in projectSTEM plus supplemental activities as assigned by your teacher for Programming 1. Students will be required to complete units 4 through 9 in projectSTEM plus supplemental activities as assigned by your teacher for Programming 2.

***Grading Policy:***

***Course Grading Categories:***

* Formative Assignments will make up 20% of your grade.
* Summative Assignments will make up 80% of your grade.

***Summative Assessments:***

Unit assessments found in Canvas course

***Grading Scale:***

A: 100-94, A-: 93.99-90

B+ 89.99-87, B: 86.99-84, B-: 83.99-80

C+: 79.99-77, C: 76.99-74, C-: 73.99-70

D+: 69.99-67, D: 66.99-64, D-: 63.99-60

F: 59.99-0.

***Textbook Used:***

Project STEM Canvas course

**Assessment Retake**

Students that do not demonstrate adequate progress on assessments (either a written test, or project) will be provided with retakes opportunities. Students may be required to complete a retake after school, and will need to make arrangements with the instructor.

**Make-Up Work Policy**

* If a student misses class, it is up to the student to find out what they missed. All daily assignments are posted on Canvas with instructions and access to course work.  If a student has questions about missed assignments, they should let the teacher know as soon as possible.
* Tests and homework that need to be made up or redone must be submitted before the end of the grading period in which they were assigned.

**What You Need to Be Successful**

* **Technical Skills -**Students should be able to navigate the Internet, online videos, multiple windows open on their browser, use Google Suite/Drive, and Canvas in this course. Students will either take quizzes/tests on the curriculum website or in Canvas, will know how to join Zoom sessions, and behave appropriately while online.
* **Prior Knowledge Needed -**Using a computer/tablet, saving files efficiently, navigating multiple windows and websites at one time, researching valid, fact-based information online, some technical writing will help.