Course Outline – Computer Programming 11/12 – Mr. Choi

"Computer Science is as much about computers as Astronomy is about telescopes"

Communication methods

- MS Teams
- wchoi@sd43.bc.ca

Big Ideas

- The design cycle is an ongoing reflective process.
- Personal design choices require self-exploration, collaboration, evaluation, and refinement of skills.
- Tools and technologies can be adapted for specific programs.

Content

Computer Programming 11

1. Introduction to Computers and Python
2. Data Types and Conditionals
3. Functions
4. Nested Loops and Lists
5. Music Programming
6. Dictionaries

Computer Science 12

1. Programming as a way of thinking
2. Variables and Statements
3. Functions
4. Functions and Interfaces
5. Conditionals and Recursion
6. Return Values
7. Iteration and Search
8. Strings and Regular Expressions
9. Lists
10. Dictionaries
11. Algorithms – linear & binary search, sorting, and performance analysis

Computers

You may work on a school computer or choose to use your own device. If you choose to use your own device, you will need to install the latest version of Python from https://www.python.org/downloads/

All homework and computer programs should be saved to a cloud account (OneDrive). Most assignments will be assessed face-to-face. If submission is required, it will be through MS Teams.

Grading

20% - In-class Participation and Homework Assignments
30% - Projects (assessed with Rubrics)
50% - Written Tests and Quizzes

If a student's scores for projects and written tests differ by more than 30%:
20% - In-class Participation and Homework Assignments
80% - Written Tests and Quizzes

Group Work

Students should be prepared to work in groups, collaborate and assist others in class.

Missed Assessments (due to excused absences)

You are expected to notify your teacher in advance when possible. Be prepared to write the assessment on the day of your return – you will be advised of assessment days well in advance. A note explaining your absence is required to write a make-up assessment.

Late Projects

Projects submitted more than one week late; students will receive a PASS only – no feedback will be given.

Class Expectations

- Careful listening, following directions, raising your hand to answer questions, working during class, and respecting your classmates and the teacher are expected.
- Come to class on time, prepared to work each day. Ergo: visit the bathroom during your breaks and bring all required materials with you to class.
- Be respectful of everyone and everything around you – that includes you, your teacher, your classmates, any TTOCs, and all school property. Certain language is not school-appropriate and will not be tolerated.
- Students who fail to meet classroom expectations will be asked to leave the class. Repeated failure to meet these expectations will be referred to the school administration.

Abridged Network Policy

- The district's local and wide area networks are intended only for educational purposes related to your enrolled course.
- Users are advised that computer systems (and files/records, including email records) are District property and may be inspected or monitored at any time if misuse is suspected.
- Users may not violate, or attempt to violate, the security of the district's computers, data or network equipment or services.
- Users may not distribute or use anyone else's account name and password.
- Violation of the Acceptable Use Policy is subject to remedial action on the part of the school, including termination of student account access.

Plagiarism & Cheating (including use of A.I.)

- Failure to cite or document material from another source
- Submitting the same assignment more than once
- Submitting work which was acquired from another source, including the Internet
- Cheating on an examination by either sharing material, use of unauthorized course notes, or any aids not approved by the instructor
- Submitting identical or virtually identical assignments unless authorized. Any acts listed will involve counselors, administration