Course of Study
ICS3U – Introduction to Computer Science
Grade 11, University Preparation

V. Rao, Sept 2023

A. COURSE DESCRIPTION

This course introduces students to computer science through game development using the **Python** programming language. Students will design software independently and as part of a team, using industry-standard programming tools and applying the software development life-cycle model. They will also write and use subprograms within computer programs. Students will develop creative solutions for various types of problems as their understanding of the computing environment grows. They will also explore environmental and ergonomic issues, emerging research in computer science, and global career trends in computer-related fields.

PREREQUISITE: ICS2O Recommended

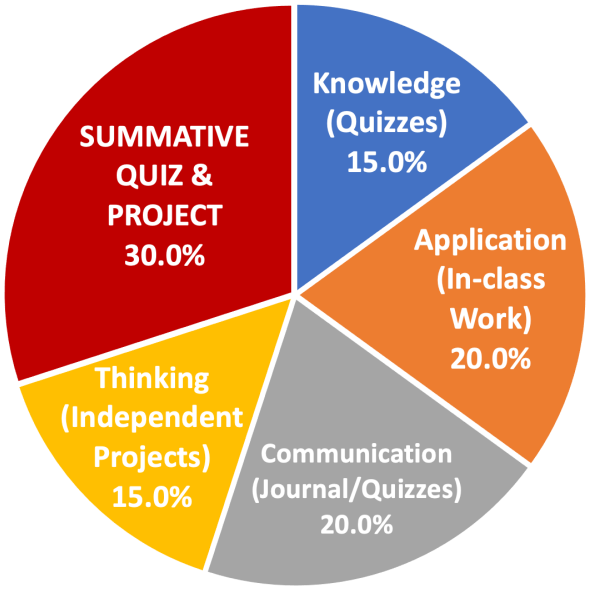
B. OVERALL EXPECTATIONS

Strand	Expectations
Programming Concepts and Skills	• demonstrate the ability to use different data types, including one-dimensional arrays, in computer programs; • demonstrate the ability to use control structures and simple algorithms in computer programs; • use proper code maintenance techniques and conventions when creating computer programs.
Software Development	• use a variety of problem-solving strategies to solve different types of problems independently and as part of a team; • design algorithms according to specifications; • apply a software development life-cycle model to a software development project.
Computer Environments and Systems	• relate the specifications of computer components to user requirements; • demonstrate an understanding of the software development process.
Topics In Computer Science	• describe policies on computer use that promote environmental stewardship and sustainability; • demonstrate an understanding of emerging areas of computer science research; • describe postsecondary education and career prospects related to computer studies.

C. ACHIEVEMENT CATEGORY WEIGHTINGS

A student's final grade in this course will consist of:

- **70%** Cumulative Term Work
- **30%** Summative Quiz & Project



D. UNITS OF STUDY

#	Unit Name	Evaluations	[K]	[A]	[C]	[T]
1	**Getting Started**	Daily Work / Learning Journal		✓	✓	
		Quizzes	✓		✓	
		Assignment				✓
2	**Python Fundamentals**	Daily Work / Learning Journal		✓		
		Quizzes	✓		✓	
		Assignment				✓
3	**Advanced Python**	Daily Work / Learning Journal		✓		
		Quizzes	✓		✓	
		Assignment				✓
4	**OOP & pyGame**	Daily Work / Learning Journal		✓		
S	**Putting It All Together**	Summative Quiz & Game Project	✓	✓	✓	✓

E. LEARNING SKILLS

Learning skills, such as responsibility, organization, independent work, collaboration, initiative, and self-regulation will be assessed (and self-assessed) throughout the year, and will be included on the student's report card.

F. STUDENT EXPECTATIONS

Students Are Expected To..

- **Treat others as you wish to be treated.** This means showing respect for yourself, your classmates, and your teacher.
- Demonstrate keen attendance, punctuality, attentive listening, and participation in class activities (whole class, independent, and team work).
- Complete all homework and assignments on time, and effectively use class time.
- Strictly follow the **TDSB acceptable computer use policy** (see Student Agenda). All students and their parents are required to sign an agreement stating that they have read and understood the policy.
- **NOT** bring <u>any</u> food or (uncovered) drinks into the lab and take care with our classroom computers.
- **NOT** use electronic devices (phones, tablets, laptops) without the consent of your teacher, and for curriculum-related purposes only.

Illness and Other Absences

Students should notify their teacher in advance of any planned absences due to school activities. For absence due to illness, students must provide a slip from the office or a parental note on the first day they return. The note must contain the following: student name, date(s) of absence, reason for the absence, and a parent/guardian signature.

Missed Tests/Assignments

Students who are sick on an assignment or test due date must bring a note on the first day they return and make arrangements with the teacher so that the tests/assignments can be completed. **Failure on the student's part to make such arrangements or failure to show up for a test retake will result in a mark of zero being assigned for any missed evaluations.**

Late Assignments

According to school policy, **late assignments will be penalized by 5% per day** (to a max of 10%). A grade of **zero** will be assigned if the teacher has returned the marked assignment to the rest of the class (i.e., the "ultimate deadline").

Plagiarism

Copying the work of others will not be tolerated and a **zero** grade will be assigned for intentional infractions. Any student found **giving** their work to be copied will **also** be assigned a **zero** grade. In cases of repetitive plagiarism, parents and the office will be notified.