Computer Science – ICS2O
Course Information & Evaluation

This course introduces students to computer programming. Students will plan and write simple computer programs by applying fundamental programming concepts, and learn to create clear and maintainable internal documentation. They will also learn to manage a computer by studying hardware configurations, software selection, operating system functions, networking, and safe computing practices. Students will also investigate the social impact of computer technologies, and develop an understanding of environmental and ethical issues related to the use of computers

PREREQUISITE: None

Overall Expectations

Understanding Computers

A1. describe the functions of different types of hardware components, and assess the hardware needs of users;

A2. describe the different types of software products, and assess the software needs of users;

A3. use the basic functions of an operating system correctly;

A4. demonstrate an understanding of home computer networking concepts;

A5. explain the importance of software updates and system maintenance to manage the performance

and increase the security of a computer.

Introduction to Programming

B1. describe fundamental programming concepts and constructs;

B2. plan and write simple programs using fundamental programming concepts;

B3. apply basic code maintenance techniques when writing programs.

Computers and Society

C1. describe key aspects of the impact of computers and related technologies on society;

C2. describe computer use policies that promote environmental stewardship and sustainability;

C3. describe legal and ethical issues related to the use of computing devices;

C4. describe postsecondary education and career prospects related to computer studies.

Strands/Units Topics

1. What's Under The Hood? (Parts of a computer, and the OS that runs it all)

2. Thinking Algorithmically, Working with Flowcharts

3. Can Machines "Think"?

4. Introduction to Programming: Making things happen

5. Conditional Statements

SUMMATIVE 1: The Great Escape (a game that incorporates everything we've learned so far)

6. Repetition (Loops) and Arrays

7. Working with Strings

8. Social Networking and Internet Privacy

9. Networking: How computers to talk to each other

10. Interfacing: Computer control of real-world items on the other side of your desk or on the other side of the planet

11. Game creation with Sprites

SUMMATIVE 2: Create a game of your choosing that creatively incorporates everything we've learned, with an emphasis on Term 2.

Course Text and Reference Resources

Xojo/REALbasic language reference, Processing language reference, programming reference texts, online texts and tutorials.

Assessment & Evaluation Policy

Refer to the attached SWL Assessment and Evaluation Policy April 2011

Attendance Policy

Students are responsible for catching up on class notes and completing any assignments or tasks involving equipment for which they were absent. ***It is up to the students to ask the instructor what they missed when they return***. Parents will be contacted for any student who skips class. After three such skips, the student will be referred to the Vice-Principal.

70% Formative Evaluation
Student evaluation is based on the Overall Expectation found in the Ontario Curriculum using various forms, such as, but, not limited to, quizzes, tests, assignments, projects, presentations, safety practices, and activities.

30% Summative Evaluation
Each student will complete two summative projects representing 30% of their mark.
Certain forms of these summative evaluations (exams, final tests, performance based tasks, etc.) are time sensitive. This means they must be completed at and within a specific time. Students must be present for these summative evaluations. Any absence will result in a mark of zero, unless validated by an official certificate. (ex. Medical Certificate). Students and parents will be informed well in advance of summative evaluation dates.

Classroom Expectations

1. Students are expected to be willing and active participants in all course activities. This includes completing all assignments both on time and with sufficient effort, and honoring all of their commitments. Every student is expected to keep a neat, well-organized notebook or portfolio

2. Students will contribute to a positive learning environment by: • practicing safe work habits at all times • being respectful to others and respecting their property • treating all equipment with care and ensuring proper knowledge of its operation • reporting

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unsafe or hazardous situations to the instructor • reporting software or equipment problems to the instructor • cleaning up their workspace and putting everything away before they leave the class*** Electronic storage devices and headphones can be used at the discretion of the teacher * No food or drink is permitted in any of the equipment areas.**