

# Introduction to Computer Studies (ICS2O)

## TDSB - Forest Hill Collegiate Institute (416 393-1860)

### **DESCRIPTION**

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

(Computer Studies: The Ontario Curriculum Grades 10 to 12, Revised, 2008)

### **CURRICULUM & OVERALL EXPECTATIONS**

Course Strands	Concepts	
A. Understanding Computers	A1. Hardware Components	
	A2. Software Products	
	A3. Operating Systems	
	A4. Home Computer Networking	
	A5. Maintenance and Security	
B. Introduction to Programming	B1. Programming Concepts	
	B2. Writing Programs	
	B3. Code Maintenance	
C. Computers and Society	C1. Social Impact	
	C2. Environmental Stewardship and Sustainability	
	C3. Ethical Issues	

### UNDERSTANDING COMPUTERS

- 1. describe the functions of different types of hardware components, and assess the hardware needs of users
- 2. describe the different types of software products, and assess the software needs of users
- 3. use the basic functions of an operating system correctly
- 4. demonstrate an understanding of home computer networking concepts
- explain the importance of software updates and system maintenance to manage the performance and increase the security of a computer

### INTRODUCTION TO PROGRAMMING

- 1. describe fundamental programming concepts and constructs
- 2. plan and write simple programs using fundamental programming concepts
- 3. apply basic code maintenance techniques when writing programs

### **COMPUTERS & SOCIETY**

- 1. describe key aspects of the impact of computers and related technologies on society
- 2. describe computer use policies that promote environmental stewardship and sustainability
- 3. describe legal and ethical issues related to the use of computing devices
- 4. describe post-secondary education and career prospects related to computer studies

### **ASSESSMENT & EVALUATION**

Evaluations will consist of traditional tests & quizzes, assignments, projects, group work, and presentations.

Students can expect at least one written evaluation (quiz, test) and at least one major assignment or project per unit.

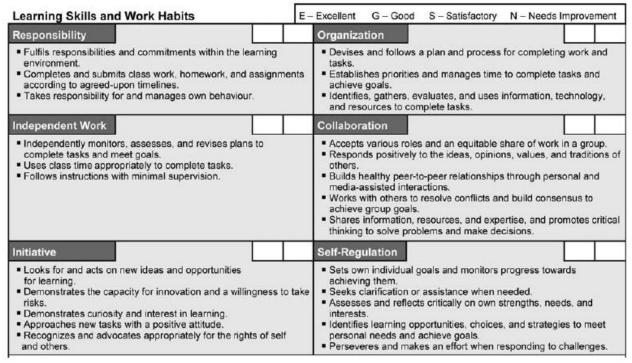
To promote student success, ongoing formative assessment and feedback will be given to students.

The course expectations will be evaluated according to the four categories of the achievement chart.

Term Evaluations		
Knowledge & Understanding	25%	
Application	30%	
Thinking/Inquiry & Problem-solving (TIPS)	25%	
Communication	20%	70%
Course Culminating Evaluations		
Final Programming Project	20%	
Final Written Test	10%	30%
Final Course Mark		100%

### LEARNING SKILLS ASSESSMENT

These skills will be assessed throughout the course and reflected on the report card.



For further details, see "Growing Success" (p. 9 – 14): http://www.edu.gov.on.ca/eng/policyfunding/growSuccess.pdf

### **ONTARIO SKILLS PASSPORT (OSP)**

• Essential skills needed for work, learning, and life: Reading text, Writing, Computer Use, Measurement and Calculation, and Problem Solving (http://www.skills.edu.gov.on.ca/OSP2Web/EDU/Welcome.xhtml)

### **POLICIES & CLASSROOM EXPECTATIONS**

- Academic Honesty Students are expected to be academically honest. They are expected to submit their own work, so that the mark received reflects their own academic achievement.
- Lab Rules computers and equipment are to be used for course-related work (see Acceptable Use Policy for more details)
- Care & Respect for Property no food or drink in the lab, take care of equipment, report any issues/problems to teacher
- Online Code of Conduct as in the school agenda or <a href="http://www.tdsb.on.ca/communications/code">http://www.tdsb.on.ca/communications/code</a> of online conduct/occ.html
- Assignments & Projects assignments and projects are to be completed and submitted by the due date and are subject to late penalties (work submitted after the ultimate deadline will not be accepted and will receive a mark of zero)

### RESOURCES, COURSE MATERIALS, USEFUL WEBSITES (PROGRAMMING & ONLINE TUTORIALS)

- USB flash drive or external HDD for storing and transporting digital material and work between school and home
- 3-ring binder, paper, writing utensils (pen, pencil, eraser)
- Khan Academy Programming: https://www.khanacademy.org/computing/cs
- Khan Academy Internet 101: <a href="https://www.khanacademy.org/computing/computer-science/internet-intro">https://www.khanacademy.org/computing/computer-science/internet-intro</a>
- Google Classroom

### PROVISIONS FOR STUDENT SUCCESS

# Extra help Keep an organized binder to assist with your studies Keep an organized "digital binder" of all digital materials provided Set and focus on realistic goals for each class, each unit, the whole course Record daily achievements to set and meet new challenges Review learning at home daily Home study in preparation for each class to enrich your learning Take advantage of extra help and lab hours to assist in meeting goals Provide help to peers to consolidate your learning and increase confidence Ask and answer questions; look hard for answers; participate!