

Sir John A. Macdonald Collegiate Institute Course Brief

Course Name	Introduction to Computer Science	Grade	11
Course Code	ICS3U	Credit Value	1
Pre-Requisite	None	Programming Language	Java
Type of Course	University Preparation	School Year	2020 - 2021

TEXTBOOKS

N/A

REPLACEMENT COST (if lost or damaged)

Course 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.

Curriculum Strands/Categories (this may differ depending on discipline and level)

Knowledge and Understanding: Subject-specific content acquired in each grade/course (knowledge), and the comprehension of its meaning and significance (understanding)

Thinking: The use of critical and creative thinking skills and/or processes

Communication: The conveying of meaning through various forms

Application: The use of knowledge and skills to make connections within and between various contexts

Assessment and Evaluation of Student Achievement

Unit	Unit Title/Description	Evaluation Task	Achievement Chart Focus
Unit 1	Problem Solving Strategies using Flowcharting Developed from the Computer System model	Unit Test Flowcharting Assignments	Knowledge & Understanding Thinking, Communication, Application
Unit 2	Programming Constructs – Sequence and arithmetic calculation with variables using keyboard input and console output.	Unit Test Program Assignments	Knowledge & Understanding Thinking, Communication, Application
Unit 3	Programming Constructs – Selection (If)	Unit Test Program Assignments	Knowledge & Understanding Thinking, Communication, Application
Unit 4	Creating and Using Sequential Files IO(input/output) for Programming Applications	Unit Test Program Assignments	Knowledge & Understanding Thinking, Communication, Application
Unit 5	Programming Constructs – Repetition (Looping) using sequential files for IO.	Unit Test Program Assignments	Knowledge & Understanding Thinking, Communication, Application
Unit 7	One and Two Dimensional Arrays- Using file I/O structure	Unit Test Program Assignments	Knowledge & Understanding Thinking, Communication, Application
Unit 8	Culminating Activities	Culminating Program	Knowledge & Understanding Thinking, Communication, Application

Levels of Achievement

For Grades 9 to 12, a student's achievement of the overall curriculum expectations will be evaluated in accordance with the achievement charts in the provincial curriculum and will be reported using percentage marks.

Achievement Level	Percentage Mark Range	Achievement Description
HL4/L4+ L4 LL4/L4-	95 – 100 87 – 94 80 – 86	Level 4 identifies achievement that surpasses the provincial standard. The student demonstrates the specified knowledge and skills with a high degree of effectiveness.
HL3/L3+ L3 LL3/L3-	77 – 79 73 – 76 70 – 72	Level 3 represents the provincial standard for achievement. The student demonstrates the specified knowledge and skills with considerable effectiveness. Parents of students achieving at level 3 can be confident that their children will be prepared for work in subsequent grades/courses
HL2/L2+ L2 LL2/L2-	67 – 69 63 – 66 60 – 62	Level 2 represents achievement that approaches the provincial standard. The student demonstrates the specified knowledge and skills with some effectiveness. Students performing at this level need to work on identified learning gaps to ensure future success.
HL1/L1+ L1 LL1/L1-	57 – 59 53 – 56 50 – 52	Level 1 represents achievement that falls much below the provincial standard. The student demonstrates the specified knowledge and skills with limited effectiveness. Students must work at significantly improving learning in specific areas, as necessary, if they are to be successful in the next grade/course

Students who achieve below 50% have not met curriculum expectations; a credit will not be granted.

Learning Skills	Assessment of Learning Skills
Responsibility Organization Independent Work Collaboration Initiative Self-Regulation	Excellent (E) Good (G) Satisfactory (S) Needs Improvement (N)

Weighting by Strands/Categories			
Knowledge and Understanding	30%	Communication	10%
Thinking	10%	Application	20%

Assessment and Evaluation Strategies: the following is a list of potential A/E strategies used within the course; the list may not be exhaustive and is subject to change

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|---------------------------------|--------------------------------------|
| →Unit Tests | →Quizzes |
| →Programming Assignments | →Exam |
| →Culminating Program Assignment | →Collaborative /Cooperative Learning |
| →Independent Study | →Inquiry |

CALCULATION OF FINAL MARK

- 70% for evaluations conducted throughout the course
- 15% for a Culminating Activity – the C/A will occur in the final 5 weeks of the course
- 15% for the final exam