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|  |  | **Course Outline and Evaluation Summary**  **Course Code: ICS3U1** | |  |
|  | Title of Course: Introduction to Computer Science | 416-395-3210 | |
|  | Department: Computer Studies/Engineering |  | |

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| **Course Description** |
| This course introduces students to computer science. 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:** None |

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| **Course Evaluation**  Course evaluations incorporate one or more of the achievement categories (KICA). A brief description of each category can be found [here](https://www.dcp.edu.gov.on.ca/en/assessment-evaluation/categories-of-knowledge-and-skills). The final grade is calculated using the weighted percentages below. | | | | | |
| **Term Work:** | **A variety of tasks where you show your learning and have marks assigned using the Achievement Categories/Strands** | | **Summative**  **Evaluation:** | **Marked summative tasks which assess your learning on the entire course** | |
| 70% | 14% | Knowledge & Understanding | 30% | % | Culminating Task |
| 14% | Thinking & Inquiry |
| 28% | Application | % | Final Exam |
| 14% | Communication |

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| **Learning Skills** |
| Learning skills provide Information to help students understand what skills, habits & behaviors are needed to work on to be successful. These are not connected with any numerical mark. A brief description of each skill can be found [here](http://www.edu.gov.on.ca/eng/policyfunding/growsuccess.pdf#page=17).  **Responsibility, Organization, Independent Work, Collaboration, Initiative, and Self-Regulation**  E – Excellent G – Good S – Satisfactory N – Needs Improvement |

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| **Required Materials:** Any educational resource required for this course will be provided by the school. It is the student’s responsibility to come to class with these materials. |

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| **School/Departmental/Classroom Expectations** |
| **Attendance:** The student is expected to attend class on time. Parents/guardians will be contacted if late/attendance becomes an issue/hindrance. If the student knows about an absence in advance, they should contact the teacher.  **Plagiarism/Cheating:** A mark of 0 will be assigned for any work submitted that does not belong to the student. A mark of 0 will be assigned to a student who was found to have cheated. Parents/guardians will be informed.  **Missed Work:** If a student is absent from class, (e.g. illness, sports team) it is **their** responsibility to find out what they have missed and to catch up. The student is responsible for completing all of the work that was missed due to an absence. If a student misses an assignment or test without a legitimate explanation and documentation, marks up to and including the full value of the evaluation may be deducted. Make-up tests must be arranged to be written.  **Late Work:** Late work may result in a deduction of marks up to and including the full value of the evaluation. |

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| **Course Assessment Tasks** | | | |
| ***Unit/Topic/Strand*** | ***Big Ideas*** | ***Major Assignments / Evaluations*** | ***Estimated Duration*** |
| Unit 1:  Introduction to Programming | Relate the specifications of computer components to user requirements;  Use appropriate file maintenance practices to organize and safeguard data;  Demonstrate an understanding of the software development process.  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. | Tests, Quizzes, Labs, Programming Assignments | 5  5  5  5 |
| Unit 2:  Programming Concepts and Skills | Use different data types, including one-dimensional arrays, in computer programs;  Use control structures and simple algorithms in computer programs;  Use subprograms within computer programs;  Use proper code maintenance techniques and conventions when creating computer programs. | Tests, Quizzes, Labs, Programming Assignments | 10  10  10 |
| Unit 3:  Software Development | Use a variety of problem-solving strategies to solve different types of problems independently and as part of a team – game development;  Design software solutions to meet a variety of challenges;  Design algorithms according to specifications;  Apply a software development lifecycle model to a software development project. | Tests, Quizzes, Labs, Programming Assignments | 10  10  10  10 |
| Culminating Task(s) |  | Test & Final Project | 10 |