|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Course Outline and Evaluation Summary**  **Course Code: ICD2O1** |  | |
|  | Title of Course: Digital Technology and Innovations in the Changing World | | 416-395-3210 |
|  | Department: Computer Studies /Engineering | |  |

|  |
| --- |
| **Course Description** |
| This course helps students develop cutting-edge digital technology and computer programming skills that will support them in contributing to and leading the global economic, scientific and societal innovations of tomorrow. Students will learn and apply coding concepts and skills to build hands-on projects and investigate artificial intelligence, cybersecurity, and other emerging digital technologies that connect to a wide range of fields and careers. Using critical thinking skills with a focus on digital citizenship, students will investigate the appropriate use and development of the digital technologies that they encounter every day, as well as the benefits and limitations of these technologies.**Prerequisite:** None |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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 |

|  |
| --- |
| **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 |

|  |
| --- |
| **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. |

|  |
| --- |
| **School/Departmental/Classroom Expectations** |
| **Attendance:** The student is expected to attend class on time. Parents/guardians will be contacted if lates/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. |

\\\\

|  |  |  |  |
| --- | --- | --- | --- |
| **Course Assessment Tasks** | | | |
| ***Unit/Topic/Strand*** | ***Big Ideas*** | ***Major Assignments / Evaluations*** | ***Estimated Duration*** |
| Unit 1:  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. | Class assignments and Unit Test | 20 |
| Unit 2:  Computers and  Society | Describe key aspects of the impact of computers and related technologies on society.  Describe computer use policies that promote environmental stewardship and sustainability.  Describe legal and ethical issues related to the use of computing devices.  Describe post-secondary education and career prospects related to computer studies. | Assignment | 5 |
| Unit 3:  Introduction to  Programming | Describe fundamental programming concepts and constructs.  Plan and write simple programs using fundamental programming concepts.  Controlling Program Flow with Decision Structures  Controlling Program Flow with Looping Structures  Apply basic code maintenance techniques when writing programs. | Labs, Programming Assignments & Tests | 10  10  15  10  15 |
| Culminating Task(s) |  | Test and Project | 30 |

Note: The order of the units of study may change due to student needs and resources available during the course.