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| <p><b>Course Description:</b></p> <p>This course introduces students to computer systems, networking, and interfacing, as well as electronics and robotics. Students will assemble, repair, and configure computers with various types of operating systems and application software. Students will build small electronic circuits and write computer programs to control simple peripheral devices. Students will also develop an awareness of related environmental and societal issues, and will learn about secondary and postsecondary pathways and career opportunities in computer technology.</p> | <p>Grade 10 - Open</p>  |
|  | <p><b>Level:</b> (University &amp; College)</p> <p><b>Credit Value:</b> 1.0</p> <p><b>Prerequisite:</b> TEJ3M</p> <p><b>Department:</b> Technology Department</p> |
| <p><b>Course Fees:</b> None</p>  |   |

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| <p><b>Textbooks &amp; Resources:</b></p> <ul style="list-style-type: none"> <li>● Growing Success: Assessment, Evaluation and Reporting in Ontario Schools</li> <li>● The Ontario Curriculum Grade 9 and 10 Technological Education</li> <li>● Google Classroom will be used to distribute additional resources (docs and videos) and collect student work.</li> </ul> |
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| <p><b>Course Evaluation:</b> Student Evaluation consists of three components...</p>  |   |
| <p><b>1) Learning Skills &amp; Work Habits:</b></p>  |   |
| <p>Students are evaluated on 6 Learning Skills &amp; Work Habits. The 6 Essential Skills are:</p> <ul style="list-style-type: none"> <li style="width: 50%;">● Responsibility</li> <li style="width: 50%;">● Collaboration</li> <li style="width: 50%;">● Organization</li> <li style="width: 50%;">● Initiative</li> <li style="width: 50%;">● Independent Work</li> <li style="width: 50%;">● Self-Regulation</li> </ul> | <p>These six attributes are evaluated on a scale of Excellent (E), Good (G), Satisfactory (S) &amp; Needs Improvement (N) and reported on the report card. They are not included in the course mark, unless specified in the curriculum expectations.</p> |
| <p><b>2) Course Mark (Assessment of Learning):</b></p>   |   |
| <p>Student performance standards for knowledge and skills are described in the curriculum Achievement Chart. The curriculum is assessed in four categories:</p> <ul style="list-style-type: none"> <li>● Knowledge 20%</li> <li>● Thinking &amp; Inquiry 20%</li> <li>● Communication 20%</li> <li>● Application 40%</li> </ul>  | <p>Evaluation of these four categories within this course will determine the course mark (100%).</p> <p><b>It is the student's responsibility for submitting evidence of Learning.</b></p>  |

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| <p><b>Course Conduct Policies:</b> See Student Agenda.</p> |
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### Course Outline (Quadmester - Covid19)

| Unit   | Description   | Approx Time             | Unit Evaluation                          |
|--|---|-------------------------|--|
| <b>Basic Hardware and Software</b>           | Personal Computer Hardware<br>PC Disassembly and Assembly<br>Software and Operating Systems<br>Networking Basics                                      | ( $\frac{1}{3}$ course) | Research<br>Presentations<br>Assignments |
| <b>Digital Logic</b>                         | Number Systems<br>Data Representation<br>Logic Gates<br>Circuit Schematics and Truth Tables<br>Basic Boolean Algebra<br>Design of Integrated Circuits | ( $\frac{1}{3}$ course) | Assignments                              |
| <b>Electronics, Robotics and Programming</b> | Basic Electronic Components<br>Wiring Schematics<br>Basic Programming Concepts in C++<br>Interfacing with Arduino                                     | ( $\frac{1}{3}$ course) | Assignments                              |

Note: Order units are delivered may change due to student needs and resources available during the course.

### General Information:

**Academic Honesty:** SATEC + TDSB Academic Honesty policy will apply.

**Late Work:** Late work, that has not been previously coordinated/discussed with the teacher, will be marked at the discretion of the teacher.

**Field Trips:** Due to Covid-19, there will be no field trips.

**Recommended Resources:** Google Classroom, CISCO Networking Academy

**How to Seek Extra Help:** Before, during and after class, and via email.

**Certifications:** None.

**Safety Training:** All students will complete safety training to the Teachers standards prior to use.