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| **T. L. KENNEDY SECONDARY SCHOOL**  **Course Outline** |

*The organization and evaluation of this course has been designed to conform to the requirements of Ontario Secondary Schools, Education Policy and Program Update, and Provincial Curriculum Policy.*

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| **Department/**  **Grade** | **Tech – Grade 12** | **Ministry Course Code & Title** | **ICS4U – Computer Science – University Preparation** | **Prerequisite** | **ICS4U** |
| **Ministry Course Description** | This course enables students to further develop knowledge and skills in computer science. Students will use modular design principles to create complex and fully documented programs, according to industry standards. Student teams will manage a large software development project, from planning through to project review. Students will also analyse algorithms for effectiveness. They will investigate ethical issues in computing and further explore environmental issues, emerging technologies, areas of research in computer science, and careers in the field. | | | | |
| **The**  **Overarching Learning Goals** | Effective learning in all aspects of computer studies depends on the development of knowledge and skills in the areas of software development (including project management and software engineering principles), algorithms and data structures, program correctness and efficiency, and professional and ethical responsibility. An important goal in this course is for students to develop lifelong learning habits that will help them adapt to computer advances in the changing workplace and world | | | | |

# **ASSESSMENT AND EVALUATION GUIDELINES:** *The primary purpose of assessment is to improve student learning.*

Assessment and evaluation are based on the curriculum expectations and levels of achievement outlined in the provincial curriculum document. Evidence of student achievement for evaluation is collected over time from three different sources: **teacher observations, conversations with the student** and **student products.**

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| **Overall Expectations –** According to Growing Success students must demonstrate their learning of all curriculum overall expectation during the term and again in the final evaluation. Please visit <http://www.edu.gov.on.ca/eng/> for all curriculum documents. |

## **ASSESSMENT OF LEARNING SKILLS AND WORK HABITS**

The following learning skills and work habits will be fostered throughout this course and assessed on the report card.

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| **Learning Skills and Work Habits** | **Sample Behaviours** |
| ***Responsibility*** | * completes/submits homework, and assignments according to agreed-upon timelines * takes responsibility for and manages own behaviour |
| ***Organization*** | * develops a plan for completing work * establishes priorities and manages time to complete tasks and achieve goals * identifies, gathers, evaluates, and uses information, tech, and resources to complete task |
| ***Independent Work*** | * uses class time appropriately to complete tasks * follows instruction with minimal supervision |
| ***Collaboration*** | * accepts various roles and an equitable share of work in a group * responds positively to the ideas, opinions, values and traditions of others |
| ***Initiative*** | * looks for and acts on new ideas and opportunities for learning * demonstrates curiosity and interest in learning |
| ***Self-Regulation*** | * sets individual goals and monitors progress towards achieving them * perseveres through challenges, and seeks clarification or assistance when needed |
| **E - Excellent G - Good S - Satisfactory N - Needs Improvement** | |

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| **The final grade (percentage mark) will be determined as follows:** | |
| **70% Term Work** | **30% Final Evaluation** |
| Over the semester, students will demonstrate their level of understanding of course skills and content through the evaluation products listed under “Term Assessments” | Summative tasks will take place in the last half of the semester. Based on ministry documents, it is the expectation that students be present for all parts of the final evaluation and demonstrates their learning. |

Our courses will balance the four achievement categories in such a way that every category is appropriately represented as learning goals are completed. To avoid confusion, categories will not be weighted with percentages.

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| **Knowledge & Understanding** | **Thinking** | **Communication** | **Application** |
| **Facts and concepts (knowledge), and the comprehension of their meaning and significance (understanding)** | **The use of critical and creative thinking skills and/or processes.** | **The expression of meaning through various forms including oral, visual, and written.** | **The use of knowledge and skills to make connections within and between various contexts.** |

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| **Course Units of Study** | **Term Assessments (70% of the Final Mark)** |
| **Programming Concepts and Skills** | For each section of study, as outlined on the class website, students will complete a written quiz on paper, as well as a practical assignment submitted online. Students are given advanced notice to prepare for these assessments – about one a week. Assessments address Knowledge and Understanding, Communication, Application, and Thinking achievement categories. Students who are absent on the day of an evaluation for reasons such as illness, field trip or suspension are responsible for keeping up with missed content and for meeting the teacher to make alternative arrangements to submit/complete a missed evaluation, where appropriate. |
| **Designing Modular Programs** |
| **Topics in Computer Science** |
| **Software Development** |
| **Final Evaluation** | Students will have the final 4-6 weeks of the semester to create an assignment that demonstrates all the overall expectations in the course. Attendance in mandatory. According to Growing Success, students must complete a final evaluation. Otherwise, the credit will not be granted. As per Ministry Policy, teachers evaluate using observations, conversations and products as well as their professional judgment to determine a grade. |

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| **Types of Assessment: *Students are responsible for demonstrating their learning*** |
| **Assessment *as* learning:** Students are actively engaged in this assessment process: that is, they monitor their own learning; use assessment feedback from teacher, self, and peers to determine next steps; and set individual learning goals. Assessment as learning requires students to have a clear understanding of the learning goals and the success criteria. Assessment as learning focuses on the role of the student as the critical connector between assessment and learning. |
| **Assessment *for* learning**: The ongoing process of gathering and interpreting evidence about student learning for the purpose of determining where students are in their learning, where they need to go, and how best to get there. The information gathered is used by teachers to provide feedback and adjust instruction and by students to focus their learning. Assessment for learning is a high-yield instructional strategy that takes place while the student is still learning and serves to promote learning. |
| **Assessment *of* learning**: The process of collecting and interpreting evidence for the purpose of summarizing learning at a given point in time, to make judgments about the quality of student learning on the basis of established criteria, and to assign a value to represent that quality. The information gathered may be used to communicate the student’s achievement to parents, other teachers, students themselves, and others. It occurs at or near the end of a cycle of learning. |

Keep this course outline in the front of you course binder/notebook.

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Print student name Student Signature

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 Parent/Guardian Signature Teacher Signature and Date