ICS2O: Introduction to Computer Studies

DEPARTMENT:	Computer Studies
CURRICULUM LEADER:	Mr. Raptou
TEACHER:	Ms. Koczkodaj (Office: A31)
COURSE TITLE:	ICS2O - Introduction to Computer Studies
COURSE TYPE:	Open
GRADE:	10
CREDIT VALUE:	One
PREREQUISITES:	None
COURSE DEVELOPED:	Revised September 2019

MINISTRY OF EDUCATION CURRICULUM POLICY DOCUMENT:
The Ontario Curriculum. Grades 10 to 12. Computer Studies, 2008, pp. 33-38. ISBN 978-1-4249-8102-1. © Queen's Printer for Ontario, 2009.

Webpage: http://www.edu.gov.on.ca/eng/curriculum/secondary/computer10to12_2008.pdf

RESOURCES:

- **Textbook:** Brown B., Presley B. *An Introduction to Programming Using Microsoft Visual Basic.Net*, Lawrenceville Press, 2003. ISBN 1-58003-038-6.
- **Computer Lab A23:** Visual Studio 2019. VB.Net Programming Environment
- **Student Binder** to hold all handouts and assignments.
- **Course folder in the RH King folder on the TDSB File Server.**

A. 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.

This course is designated as open and can be taken by all students who wish to learn about Computer Studies. Students who wish to continue study in this area can take the University/College preparation courses in Grades 11 and 12.

Overall Expectations
Understanding Computers, Introduction to Programming and Computers and Society

By the end of the course, students will:

- describe the functions of different types of hardware components, and assess the hardware needs of users;
- describe the different types of software products, and assess the software needs of users;
- use the basic functions of an operating system correctly;
- demonstrate an understanding of home computer networking concepts;
- explain the importance of software updates and system maintenance to manage the performance and increase the security of a computer;
- describe fundamental programming concepts and constructs;
- plan and write simple programs using fundamental programming concepts;

- apply basic code maintenance techniques when writing programs;
- 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 postsecondary education and career prospects related to computer studies.

B. EVALUATION

Students are provided with opportunities to demonstrate the highest level of their achievement of the expectations in the four achievement categories. Students will be evaluated based on the following four categories of knowledge and skills in technological education (70% of the final mark) and a final evaluation made of a final project and a final exam (30% of final mark).

The categories are:

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

Thinking. The use of critical and creative thinking skills and/or processes, as follows:

- planning skills (e.g., focusing research, gathering information, selecting strategies, organizing a project)
- processing skills (e.g., analyzing, interpreting, assessing, reasoning, generating ideas, evaluating, synthesizing, seeking a variety of perspectives)
- critical/creative thinking processes (e.g. problem solving, decision making, research).

Communication. The conveying of meaning through various forms.

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

Knowledge/Understanding	**20%**
Thinking	**20%**
Application	**20%**
Communication	**10%**
Final Evaluation	**30%**

Tests/Quizzes

Tests/Quizzes will be given on a regular basis and advance notice will be given. At the end of each unit a test will be given. Tests may be either written or practical or both. Students will be notified about unit tests a week in advance. Performance on tests and quizzes will be used to assess the achievement of knowledge and skills.

If a test is missed due to illness, a parental/guardian note must be presented upon return and a date/time will be arranged to write the test. **Students who are going to miss a test because of a school trip or team activity must notify their teacher prior to the test date, so that an earlier test date may be assigned for those students.** These are the only valid reasons for a rewrite. **Failure to write a test will result in a NOT COMPLETE**.

Assignments

Assignments will be given for each unit. Performance on assignments will be used to assess the achievement of knowledge and skills.

Assignments are due at the beginning of the class on the due date. All assignments handed in past the ultimate due date will not be accepted. Students must give an acceptable reason to the teacher for handing in an assignment late prior to the ultimate due date.

If an assignment is handed in later than course expectations deadline, the assignment will be marked as **Not Complete.**

If marked assignments are returned to students, late assignments will no longer be accepted. In this case, the assignment will be marked as **Not Complete.**

Independent Study

There will be at least one independent study assigned. The independent study will be based on any of the units outlined for this course. Students are responsible for any material covered by independent study. Thus, tests may cover some of the material from the independent study.

All independent studies must be handed in on time otherwise a NOT COMPLETE will be given.
Remember: You always have CLINIC TIME to work on any computer assignments if you fall behind.

Midterm Mark

There will be no midterm examination. The midterm mark is based on the student's cumulative mark at the midterm mark date.

Final Evaluation

The final evaluation is made of two parts: the Final Project and the Final Exam. The content of the final evaluation will be based on the material covered throughout the full semester. For further information on exam protocol refer to the student agenda book.

C. CLASSROOM ROUTINES AND PROCEDURES

Throughout the course, students will work with many different people in the class. It is expected that students will do this work in a respectful manner which results in a valued contribution to classroom learning.

1. Students will adhere to the computer use policy as outlined in the Student Planner's Code of Conduct.

2. Students must bring all class materials including textbooks, binders etc. to every class.

3. When students work in pairs they will each maintain their own copy and back up of all assignments. Submitted assignments will have both student names. One may only work with a partner if approved by the course teacher. Under no other circumstances will assignments be identical.

4. All students are required to check their posted marks and inform the teacher if they feel an error was made in recording the marks in MARKBOOK.

5. Regular attendance and punctuality is a must. Get into the habit of writing down homework into your student planner. Prepare for each class by reading and doing the homework assigned by the teacher. **Students are responsible for catching up on missed homework and in-class assignments.** It is suggested the student have the phone numbers of at least two classmates.

6. All work submitted to the instructor shall be original work from the student. Plagiarism/cheating is copying, reproduction, or paraphrasing significant portions or someone else's published or unpublished material, and representing these as one's own thinking by not acknowledging the appropriate source, or by failing to use appropriate quotation marks. Plagiarism and/or copyright infringement will immediately receive a zero, parents/guardians will be informed and the matter will be referred to a vice-principal.

7. There will be three formal reporting periods. The Interim, Mid-term and Final reports will be distributed according to administration (only the last two reports will receive a numerical grade.) The student mark is a cumulative mark representing the standing of the student at the end of the reporting period. Comments will be made around student performance, learning skills, attendance and lates.

PROGRAM PLANNING CONSIDERATIONS

Some students in this course may have special needs. If a student has difficulties with hearing, vision, a learning disability, medical condition or other personal situation which could affect their grade, the student must see the teacher by the end of the first week of classes.

D. LEARNING SKILLS

Responsibility The student:	• fulfils responsibilities and commitments within the learning environment; • completes and submits class work, homework, and assignments according to agreed-upon timelines; • takes responsibility for and manages own behaviour.
Organization The student:	• devises and follows a plan and process for completing work and tasks; • establishes priorities and manages time to complete tasks and achieve goals; • identifies, gathers, evaluates, and uses information, technology, and resources to complete tasks.
Independent Work The student:	• independently monitors, assesses, and revises plans to complete tasks and meet goals; • uses class time appropriately to complete tasks; • follows instructions with minimal supervision.
Collaboration The student:	• accepts various roles and an equitable share of work in a group; • responds positively to the ideas, opinions, values, and traditions of others; • builds healthy peer-to-peer relationships through personal and media-assisted interactions; • works with others to resolve conflicts and build consensus to achieve group goals; • shares information, resources, and expertise and promotes critical thinking to solve problems and make decisions.
Initiative The student:	• looks for and acts on new ideas and opportunities for learning; • demonstrates the capacity for innovation and a willingness to take risks; • demonstrates curiosity and interest in learning; • approaches new tasks with a positive attitude; • recognizes and advocates appropriately for the rights of self and others.
Self-regulation The student:	• sets own individual goals and monitors progress towards achieving them; • seeks clarification or assistance when needed; • assesses and reflects critically on own strengths, needs, and interests; • identifies learning opportunities, choices, and strategies to meet personal needs and achieve goals; • perseveres and makes an effort when responding to challenges.

Each learning skill and work habit is evaluated on the report cards using the following scale:

E = Excellent **G = Good** **S = Satisfactory** **N= Needs Improvement**

COURSE EVALUATION PLAN

70% Course Work

(K/U = Knowledge/Understanding; TI = Thinking and Inquiry; A = Application; C= Communication)

CHAPTER/UNIT	EVALUATION TASK	ACHIEVEMENT CHART FOCUS	WEEK ENDING	DUE DATE
INTRODUCTION. COMPUTERS AND SOCIETY: IMPACT OF COMPUTERS ON ENVIRONMENT AND HUMAN HEALTH	Assignments: Ergonomics Article. Ergonomics Webquest.	K/U, T, C, A	**WEEK 1**	
COMPUTERS AND SOCIETY: IMPACT OF COMPUTERS ON ENVIRONMENT AND HUMAN HEALTH cont.	Major Assignment: Design your Ergonomic Office.	K/U, T, C, A	**WEEK 2**	
COMPUTER AND SOCIETY: SOCIAL IMPACT AND CONSEQUENCES	Assignment: Essay/Report and Presentation: Social Impact of IT.	K/U, T, C	**WEEK 3**	
UNDERSTANDING COMPUTERS: PC HARDWARE AND SOFTWARE	Assignments: Acronym, Motherboard Labeling. Major Assignment: Computer Components. Motherboard Quiz. Test PC Hardware and Software.	K/U, T, A, C	**WEEK 4, 5 and 6**	
OPERATING SYSTEMS	Quiz: Operating Systems	K/U, T, A	**WEEK 7**	
HOME COMPUTER NETWORKING	Assignments: Network Topologies. Networking Cables. Test: Networking	K/U, T, A	**WEEK 8**	
MAINTENANCE AND SECURITY	Assignment	K/U, T, A	**WEEK 9**	
POSTSECONDARY OPPORTUNITIES THAT REQUIRES COMPUTER SKILLS (ISU)	Major Assignment: Computer Careers.	K/U, C	**WEEK 10**	
PROBLEM SOLVING MODELS AND FLOW CHARTS	Test: IPO, HIPO, Storyboard, Flow Chart	K/U, T, C, A	**WEEK 11**	
FOUNDATION OF PROGRAMMING. PROGRAMMING CONCEPTS: VISUAL BASIC IDE	Chapter 3 Test- Theory. Chapter 3 Test- Programming. Chapter 3 Projects and Thinking Reviews	K/U, T, A	**WEEK 12**	
PROGRAMMING CONCEPTS: VARIABLES AND CONSTANTS	Chapter 4 Test - Theory. Chapter 4 Test- Programming. Chapter 4 Projects and Thinking Reviews	K/U, T, A	**WEEK 13**	
PROGRAMMING CONCEPTS: DECISION STRUCTURES	Chapter 5 Test – Theory. Chapter 5 Test- Programming. Chapter 5 Projects and Thinking Reviews	K/U, T, A	**WEEK 14 and 15**	
PROGRAMMING CONCEPTS: LOOPS AND FUNCTIONS	Chapter 6 Test – Theory. Chapter 6 Test-Programming. Chapter 6 Projects and Thinking Reviews	K/U, T, A	**WEEK 15 and 16**	

30% Final Evaluation

FINAL PROJECT AND EXAM	ACHIEVEMENT CHART FOCUS	WEEK ENDING	DUE DATE
FINAL PROJECT and EXAM REVIEW	All categories: **K/U, T, C, A**	**WEEK 17 and 18**	

Note: The order of units/chapters and assignments/tests/ISUs indicated above **may change.**