Markham District High School
Introduction to Computer Studies, Grade 11, University Preparation (ICS3U) 2024 - 2025

Credit Value:	**1.0**	**Teachers:**	**Mr. M. Berry, Mr. M. Raffoul**
Department:	**Computer Studies**	**Department Head:**	**Mr. M. Berry**
		Prerequisite(s):	**None**

Teacher Contact: The Computer Studies Department office is in room 151D. Computer Studies teachers can be reached via email at michael.berry@yrdsb.ca and michael.raffoul@yrdsb.ca.

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

Core Texts:
This course makes use of teaching and reference documents stored on the X: (Student Resources) drive on the school's network.

Ontario Curriculum Document: full course content information about ICS3U can be located at http://www.edu.gov.on.ca/eng/curriculum/secondary/computer10to12_2008.pdf.

Overall Curriculum Expectations (by Strand):

A. Programming Concepts and Skills

By the end of the course, students will:

A1. demonstrate the ability to use different data types, including one-dimensional arrays, in computer programs

A2. demonstrate the ability to use control structures and simple algorithms in computer programs

A3. demonstrate the ability to use subprograms within computer programs

A4. use proper code maintenance techniques and conventions when creating computer programs

B. Software Development

By the end of the course, students will:

B1. use a variety of problem-solving strategies to solve different types of problems independently and as part of a team

B2. design software solutions to meet a variety of challenges

B3. design algorithms according to specifications

B4. apply a software development life-cycle model to a software development project

C. Computer Environments and Systems

By the end of the course, students will:

C1. relate the specifications of computer components to user requirements

C2. use appropriate file maintenance practices to organize and safeguard data

C3. demonstrate an understanding of the software development process

D. Topics in Computer Science

By the end of the course, students will:

D1. describe policies on computer use that promote environmental stewardship and sustainability

D2. demonstrate an understanding of emerging areas of computer science research

D3. describe postsecondary education and career prospects related to computer studies

Course Overview by Unit

Unit 1: Beginning to Program in Java
Unit 2: Problem Solving with Methods
Unit 3: Information Storage and File Handling
Unit 4: Arrays, Sorting and Searching
Unit 5: Computers in Society
Unit 6: Putting it all together

Achievement and Evaluation Breakdown			
Achievement Categories	**Mark Distribution**		
	Term 70%	**Summative 30%**	
		ISP 15%	**In-Class Practical Exam 15%**
Knowledge / Understanding	**15**	**15**	**15**
Thinking	**10**	**10**	**10**
Communication	**10**	**10**	**10**
Application	**35**	**35**	**35**

Summative Assessment Tasks for Evaluation of Course Work (weighting provided above)

Unit / Description of Task	**Method(s) of Evaluation with Achievement Chart Category Focus** (samples included)	**Overall Expectations Evaluated**
Unit 1: Beginning to Program in Java	Unit Tests (K/U, T/I, A) Journal (T/I, C)	A2, B1, B3, C3
Unit 2: Problem Solving with Methods	Unit Tests (K/U, T/I, A) Journals (T/I, C)	A3, A4
Unit 3: Information Storage & File Handling	Unit Test (K/U, T/I, A)	B2, B4, C2
Unit 4: Arrays, Sorting and Searching	Unit Test (K/U, T/I, A)	A1, C1
Unit 5: Computers in Society	Presentation Project (C)	D1, D2, D3

Note: The tasks listed above are subject to change, e.g. for teachers to respond to evidence of student learning. Students will be notified in advance of any changes to the assessment tasks or posted assessment dates.

Culminating/Final Summative Activities (30% of final grade total for Provincial Report)

Description of Final Summative Task and Weighting	**Method(s) of Evaluation (All achievement chart categories are evaluated)**	**Overall Expectations Evaluated**
In-Class Practical Exam (15%)	Series of in-class Tests	All (cumulative)
Independent Study Project (15%)	Program Code submitted (December / May)	All (cumulative)

Information about Assessment, Evaluation, and Communication

(Please refer to the *MDHS Assessment, Evaluation, and Communication Policy* for more detail.)

1. Definitions of Assessment:

AS and FOR Learning (Formative Assessment)

- Students monitor their own learning using descriptive feedback from teachers, self, and peers to determine the next steps and to set individual learning goals. Assessment as learning requires students to have a clear understanding of the learning goals and focuses on the role of the student as pivotal to assessment and learning. Assessment for learning is used by teachers to provide descriptive feedback, to adjust instruction, and by students to focus their learning. Common examples of this type of assessment include, but are not limited to: exit cards, quizzes, conferencing, and peer assessments. These assessments are NOT included in the calculation of student grades (as per Growing Success: Assessment, Evaluation, and Reporting in Ontario Schools, Ministry of Education, Ontario, 2010).

Assessment OF Learning (Summative Evaluation)

- Summative Evaluation is the process of collecting and interpreting evidence for the purpose of demonstrating learning at a given point in time, on the basis of established criteria. The information gathered will be used to communicate the student's achievement to parents, other teachers, themselves, and others. It occurs at or near the end of a cycle of learning. Common examples of this type of assessment include, but are not limited to: unit tests, performance tasks, essays, reports, presentations, projects, and exams. These evaluations WILL be included in the calculation of student grade (as per Growing Success).

2. Late and Missed Term Evaluations (70%):

- **Students:** If a student is aware of an expected absence prior to the date of the Term Evaluation (e.g. prescheduled test, performance task) they are expected to discuss with their teacher and set an agreed upon date and time to complete the Term Evaluation (i.e. next class). If a student misses or does not complete a Term Evaluation due to extended absence, they will meet with the classroom teacher, upon return to school, to establish a new completion date as part of the Multiple Intervention Process. If a student misses a term evaluation for a single day/period, they will complete the assessment/test immediately upon return to school.
- **Teachers:** If the student is aware of the absence and speaks to the teacher prior to, they will consult with student to set an agreed upon date and time to complete the Term Evaluation, follow the accommodations listed in a student's IEP prior to implementing the Multiple Intervention Process and work through the Multiple Intervention Process to assist each student in completing their Term Evaluation prior to assigning a mark of 0 (zero). For students who have multiple late or missed assessments or evaluations (i.e. projects/assignments), the teacher will contact the parents to develop an action plan to help the student reach success. For students, who have missed two original evaluations (i.e. tests), teachers will contact parents and document the conversation (i.e. in TeachAssist). For students who are 18 years or older who have missed two original evaluations (i.e. tests), teachers will speak with the student and inform the appropriate vice-principal and will document the conversation (i.e. in TeachAssist).
- **Unauthorized Absences:**
  - Teachers will inform parent/guardian of missed Term Evaluations (for students under 18)
  - Students under 18 years of age must have the absence authorized by a parent, with a valid reason, in order to complete the missed Term Evaluation. If the absence is not authorized a mark of zero will be assigned
  - Students 18 years of age or older, must have the absence authorized, with a valid reason, in order to complete the missed Term Evaluation. If the absence in not authorized a mark of zero will be assigned
  - Students must complete the assessment/test immediately upon return to school
- **Multiple** (2 or more) absences for Term Evaluations require the student to meet with their Vice-Principal prior to being permitted to complete the Term Evaluation and to discuss the absences. The Vice-Principal will determine if an opportunity will be provided to complete the missed assessment/test. A mark of zero for the assessment/test may be the result.

- **Multiple Intervention Process:**

The series of steps below will be followed prior to assigning a mark of 0 (zero)* for Term Evaluations (evaluations conducted throughout the course that make up 70% of a final grade):
1. Student arranges for an extension on the Assessment or Evaluation. The teacher may choose to have the student complete the "Student Request for Extension on an Assignment or Evaluation" form. 2. Teacher will communicate with Student Support Services (i.e. Student Success, Special Education, ESL, Alternative Education and/or Guidance) if required. 3. Student and Teacher will establish a new mutually agreed upon date for submission/completion of the Term Evaluation and the new date shall be documented (i.e. teacher logs, Student Request for Extension Form, etc.). 4. Teacher and student will discuss the Term Evaluation to ensure that the student clearly understands the requirements of the assessment. 5. Teacher may contact the student's Parents/Guardian to inform them of the new agreed upon date for submission/completion of the Term Evaluation. 6. If the student does not complete the Term Evaluation by the new date, the teacher will contact the student's Parent/Guardian to inform them that the Term Evaluation is still outstanding, and that a mark deduction of **2%** per class to a maximum of **10%** may now occur. 7. If the Term Evaluation has not been handed in by the fifth class after the alternative submission date, administration will be advised, and a final mark of **0%** may be applied to the assignment and parents/guardians will be informed.

*Table contains the minimum required steps teachers will follow to obtain assignments before assigning a mark of 0 (zero)

3. Process for Individual Assignment Mark Appeal:

In the event that a student wishes to discuss the mark earned on a specific evaluation:

- The student will clearly identify the area(s) of concern with specific references for possible consideration
- The student and teacher will meet outside of class time, at which point the student's issues will be addressed
- The teacher will provide the student with feedback including next steps for improvement and/or a possible amendment to the marked evaluation
- If the student is dissatisfied with the resolution, they may approach the specific course's Department Head for further discussion
- If the student is still dissatisfied, after working with the Department Head, then they may speak with their alpha-assigned Vice-Principal

It is important that all summative assessment tasks are completed so that there is sufficient evidence of achievement of the overall expectations for a credit to be granted. Students are expected to submit/complete assignments/tasks on the due date communicated by the teacher. Students are to notify their teacher of expected difficulty in meeting a due date in advance of the deadline. The student should clarify their reason for not completing the assignment in a timely manner to support discussion of intervention strategies with their teacher.

4. Academic Honesty:

Students must provide original evidence of their learning and appropriately acknowledge the work of others by:

- Understanding the key concepts and definitions related to academic honesty
- Understanding the range of supports to promote academic honesty (teacher, librarian, on-line…)
- Using skills and strategies to prevent cheating and plagiarizing
- Understanding the consequences applied when cheating and/or plagiarizing is detected
- Demonstrating the learning skills and work habits that support life-long learning
- Acknowledging all sources using the required citation format
- Obtaining permission, where possible, to use other's intellectual property
- Actively seeking clarification and support when needed

Cheating is the attempt to gain an unfair advantage in an academic evaluation which may misrepresent the demonstration of student's learning or the learning of others. Forms of cheating include but are not limited to:

- Copying from another student or permitting another student to copy
- Using aids, materials, and assistance which are not approved by the teacher
- Obtaining an unauthorized copy of a test or examination prior to the date and time of writing
- Changing a grade/percentage mark of an evaluation
- Preparing work, in whole or in part, with the expectation that this work will be submitted by another student for evaluation
- Offering for sale or gratis (no charge) assignments, in whole or in part, with the expectation that these works will be submitted by a student for evaluation
- Unauthorized entries into a computer file for the purpose of using, reading, changing or deleting its contents, or the unauthorized transfer, in whole or part, of files for academic gain

Plagiarism means representing someone else's ideas, writing, intellectual property (i.e. idea, concept, design or technical work) as your own. Any use of the work of others (whether published, unpublished or posted electronically) must include acknowledgement. Forms of plagiarism include, but are not limited to, the use of the following without appropriate reference or citation:

- Someone else's written and/or spoken idea, theory or opinion
- Misrepresenting co-authored or collaboratively created work as one's own
- Music, drawings, designs, dance, photography, and other artistic or technical work created by someone else
- Reproductions of tables, graphs or any other graphic element produced by someone else
- Facts and information that are not generally known
- An unusual or distinctive phrase, a specialized term, a computer code, or quantitative data,paraphrase or summary
- Unauthorized entry into a computer file for the purpose of using, reading, changing or deleting its contents, or the unauthorized transfer in whole or part of files for academic gain
- Copying from the Internet without giving proper acknowledgment to the source
- Submitting work prepared, in whole or in part, by another person or source
- Downloading research papers from the World Wide Web (www), in whole or in part, and submitting the paper as original work

Consequences: Plagiarism or cheating in any of its forms will result in behavioural and academic consequences because of its negative impact on the individual student's learning and the integrity of the learning environment of other students.

Behavioural responses/consequences may include:

- Progressive discipline that supports the student's awareness of, and accountability for, their actions and the impact upon the learning environment
- Student collaboration with their administrator, teacher, and others to determine ways to make amends
- Reviewing strategies and practicing skills to prevent future incidents
- A log of incidents of plagiarism or cheating will be maintained centrally for progressive discipline purposes

Note: Parents/guardians (of students under 18 years of age) will be informed of incidents of cheating and plagiarism

Academic responses/consequences may include:

- The opportunity to redo the original task, in part, or in its entirety, or to complete an alternative assignment under supervision
- An assignment or task to promote a deeper understanding of the importance of academic honesty
- The deduction of marks up to and including the full value of the assignment when the absence of original student work is due to cheating or plagiarizing.

Note: When a situation involving suspected plagiarism arises, it is the student's responsibility to demonstrate that the submitted work is his/her own. Students must provide evidence, through sources such as rough drafts, study notes, resources, and discussion, that the work is original.

5. Summative Evaluation (30%):

Students are required to participate in all summative evaluations which constitute 30% of the final grade. Summative evaluations may include written exams, oral and/or written presentations, and practical tests/exams. If a summative evaluation is missed or not completed, a zero may be assigned for the evaluation(s) missed and this will be used in the determination of the final grade. Discussion will occur between the Student, Teacher, the Department Head, and Administration to determine if a zero will be assigned. In cases where there are extenuating circumstances (which may impact on a student's ability to participate in all or some of this summative evaluation) the administration in consultation with the teacher will decide the most appropriate method of determining the student's final standing in the course (i.e. alternative summative assignment).

- For students under 18 years of age, who have missed a summative evaluation (i.e. presentation / exam), teachers will contact parents and document the conversation (i.e. in TeachAssist)
- For students who are 18 years or older who have missed a summative evaluation (i.e. presentation / exam), teachers will speak with the student and inform the appropriate vice-principal and will document the conversation (i.e. in TeachAssist)

Note: Documentation to support the absence(s) will be required (i.e. medical note) for all students.

6. Learning Skills: Responsibility, Organization, Independent Work, Collaboration, Initiative, Self-Regulation

Developing good learning skills is crucial to student success; such skills will be assessed and tracked separately from achievement. Teachers will provide ongoing feedback on student performance in learning skills at various points in the term/semester.

7. Homework and Extra Help:

Homework reinforces student learning and provides opportunity for descriptive feedback when it is checked for understanding. From time to time, students may experience a gap in their understanding of course material that requires more direct intervention and support. When recognizing difficulty, we encourage students to immediately seek extra help sessions with subject teachers as a starting point. Other resources available may include: Guidance Services, Special Education Resource Teachers, Student Success Teacher, ESL Teachers, or Peer Tutors.

Extra Help is available for this course on Tuesdays at 3:00 - 4:00 in room 155, or by arrangement with the teacher. Times and location of extra help support are subject to change.