

RICHVIEW COLLEGIATE INSTITUTE

PROGRAM AREA: COMPUTER STUDIES	COURSE NAME: Introduction to Computer Science
COURSE CODE: ICS3U1	GRADE/LEVEL: 11 (University Preparation)
PREREQUISITE: None (<i>not even ICS2O!</i>)	CREDIT VALUE: 1
NEXT STEPS: ICS4U1, Post-secondary courses	CONTACT: Mr. Foster, adam.foster@tdsb.on.ca

Cost of Textbook/equipment replacement: N/A **Additional Course Costs:** \$10 (computer lab consumables)

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.

CURRICILUM STRANDS AND OVERALL EXPECTATIONS

A. PROGRAMMING CONCEPTS AND SKILLS

By the end of this 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 this 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 SYSTEM

By the end of this 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 this 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

Assessment and Evaluation

Assessment and Evaluation are based on the expectations and levels of achievement outlined in the provincial curriculum document for each subject. A wide range of assessment and evaluation opportunities allows students to demonstrate their learning in a variety of ways. This information provides the basis for reporting student grades on the Provincial Report Card. A final mark will be calculated using the following categories.

70% Course Evaluation (based on the following % breakdown of categories):

All four achievement categories/strands do not need to be evaluated in each evaluation task.

Communication (20%)	Knowledge/Understanding (20%)	Thinking and Inquiry (25%)	Application/Making Connections (35%)
<i>-Style conventions and documentation in programming tasks -Report writing -Research tasks</i>	<i>-Tests & quizzes -Basic programming task elements</i>	<i>-Research tasks -Programming tasks -Tests</i>	<i>-Programming tasks -Research tasks -Tests & quizzes</i>

30% Final Evaluation (based on the above % breakdown of categories):

Components of final evaluation: **1.** Final Exam

**** The final exam will be written during the formal exam period, and will be entirely off-computer (paper-based). Students will have similar evaluations through the year, and will have specific review & preparation for the exam in the final weeks of the year.**

Students should refer to the *Richview Evaluation Policy* document regarding late and missed evaluations, and academic misconduct. All school-wide policies apply, including:

- *Assignments must be submitted on or before the stated due date as set by the teacher.*
- *If a deadline cannot be met, this must be communicated with the teacher in advance.*
- *Students who fail to communicate regarding late work will receive a 10% deduction per day (including weekends) up to the full value of the assignment.*
- *Missed assignments will receive a 0. Assignments are considered missed once they have been returned to the class. Note that this takes precedence over the 10% per day.*
- *Unexplained absences from in-class evaluations will result in a mark of 0.*
- *Students missing an evaluation for a school-based activity must give advance notice in order to make alternative arrangements.*
- *All work submitted must be your own. Consequences may include a grade of 0, failure in the course, and/or suspension from school.*

Learning Skills:

The report card provides a record of the learning skills, demonstrated by the student in every course in the following six categories: Responsibility, Organization, Independent Work, Collaboration, Initiative, and Self Regulation. The learning skills are evaluated using a four-point scale (E-Excellent, G-Good, S-Satisfactory, N-Needs Improvement).

Please refer to the Student Agenda Planner for details regarding the Achievement Chart and Learning Skills.