



A. Y. Jackson S. S.
www.ayjackson.ca

ICS3U1 Introduction to Computer Science Grade 11, University Preparation

General Course Information

Prerequisite:	None
Department:	Computer Studies / Technology
Extra Help:	By appointment with teacher
Textbook and Replacement Cost:	An Introduction to Computer Science Using Java, \$40
Material Required:	Notebook / Binder, USB Drive, Java Development Kit (JDK) 1.5 or later, JGrasp
Course Fee:	None

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.

The course is organized into 4 strands:

- Programming Concepts and Skills
- Software Development
- Computer Environments and Systems
- Topics in Computer Science

A detailed list of the course expectations can be found at

<http://www.edu.gov.on.ca/eng/curriculum/secondary/computer.html>

Assessment and Evaluation

To promote student success, ongoing assessment and feedback will be given regularly to the students. A variety of assessment and evaluation strategies will be used in this course, including programming assignment, written quizzes and tests. Expectations will be evaluated based on the provincial curriculum expectations and the achievement levels outlined in the ministry document.

Expectations are organized into four categories of knowledge and skills. The categories and their corresponding weighting is as follows:

Knowledge and Understanding	20%
Thinking	25%
Communication	20%
Application	30%

Each student's final mark will be in the form of a percentage grade based on their achievement in the 4 categories on the achievement chart. The breakdown of the final mark is as followed:

Term Evaluation	70%
Final Evaluation	30%

The final Evaluation will be completed during the final 6 weeks of the course and may include a variety of summative activities including an exam, a presentation, a seminar, or an essay or another writing assignment.

In addition to students' performance in the achievement categories, students will also be assessed on their performance in the following learning skills:

- Responsibility
- Organization
- Independent Work
- Collaboration
- Initiative
- Self-Regulation

For specific policies on assessment and evaluation, and academic honesty, please refer to *School Procedures* in the student agenda.

Overall Course Expectation



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By the end of this course, students will:

- Demonstrate the ability to use different data types, including one-dimensional arrays, in computers programs;
- Demonstrate the ability to use control structures and simple algorithms in computer programs;
- Demonstrate the ability to use subprograms within computer programs;
- Use proper code maintenance techniques and conventions when creating computer programs;
- Use a variety of problem-solving strategies to solve different types of problems independently and as part of a team;
- Design software solutions to meet a variety of challenges;
- Design algorithms according to specifications;
- Apply a software development life-cycle model to a software development project;
- Relate the specifications of computer components to user requirements;
- Use appropriate file maintenance practices to organize and safeguard data;
- Demonstrate an understanding of the software development process;
- Describe policies on computer use that promote environmental stewardship and sustainability;
- Demonstrate an understanding of emerging areas of computer science research;
- Describe postsecondary education and career prospects related to computer studies;

Unit Summary

Unit Title	Approx. # of Hours
Unit 1: Introduction to Programming	20
Unit 2: Control Structures	20
Unit 3: Arrays	20
Unit 4: Modularity	25
Unit 5: Software Development Life Cycle	5
Unit 6: Putting it Together	20

Classroom Expectation

- Academic Honesty – Students are expected to be academically honest by submitting their own original work, and the mark received is intended to reflect their own academic achievement.
- Online Code of Conduct as in the school agenda or http://www.tdsb.on.ca/communications/code_of_online_conduct/occ.html
- Respect for Property – no food or drink in the lab
- Policy on late or missed evaluations as in the school agenda