**COMPUTER SCIENCE 30S**

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**Course Description**

Grade 11 Computer Science is designed for students who showed aptitude and enjoyed CS20S. Continuing study from topics learned in CS20S, students will work within a framework of topics towards completing the course. We will review some concepts like variables, conditional statements, loops and functions in programming; and learn more complex programming instructions in this level. Students will work on practical programming problems, games and assignments. Students will be introduced to Alice software but Java will be the main instructional language for this course.

## **Topics**

Throughout the year we will be learning programming techniques and the syntax of one or more programming languages.

* Strategies for independent learning, communication, and teamwork
* History of Computer Software
* Impact of ICT on society and the environment
* Ethics
* Researching careers in ICT
* Programming standards and conventions
* Programming concepts
  + Documentation
  + Variables and data types
  + Input/output
  + Debugging
  + Multiple branching
  + Looping
  + Subprograms with parameters
  + Strings
  + Arrays-one-dimensional, parallel
  + Algorithms- simple sorts

Students will program using Java.

**Expectations**

This course assumes students have completed Computer Science 20S. As well, the nature of Computer Science recommends strong mathematics, problem solving, physics, and some typing skills. The most beneficial skills set to be successful in this course are a strong desire to solve problems and to do it in a systematic and structured way. Unlike the grade 10 Computer Science course, more independent work will be done using personal problem solving/programming skills. Earphones or headphones are required for each class as you will need to listen to videos on some assigned websites. Please keep a set in your locker so that you will not forget these. **Food and drinks** are not permitted in the computer lab at any time.

**Teaching Methods**

* Presentation lectures
* Collaborative class discussions
* Demonstrations (hands-on)
* Programming examples
* Skill assignments
* Creative Projects
* Fun activities
* Review quizzes and tests
* Final Project

**Evaluation**

The following reflects the breakdown of the evaluation process for Computer Science 30S:

Knowledge & Understanding 40%

Application 40%

Communication 10%

Inquiry/Thinking 10%

Students who miss deadlines will receive a score of M (missing) until such a time that the missing work is submitted and graded (with possible late penalty). Work that is deemed exceptionally late may not be accepted at all. If you have to miss a class, you are required to find out what lesson notes/handouts you need. If you are absent the day of a test, you will write the test the first day you return.

**Academic Integrity**

Guidelines for academic integrity are outlined in your agenda book. Please read this information carefully. In particular, take note of the following acts of academic dishonesty:

* Copying another student’s work for any required assignment.
* Providing another student with an assignment for the purpose of plagiarism.
* Sharing information when assignments are to be done individually.

Computer Rules

Computer rules at MBCI are strictly enforced. Misuse or abuse of the Internet will result in consequences include: suspension, loss of credit, expulsion, and in some cases police agencies may also intercede. Every student has an individual ID and password. DO NOT SHARE this password with anyone. ALL computer activities are monitored, logged and traceable. All users are held accountable for their actions. There is no such thing as anonymous when using a computer here.

Cell phone Rules

Please keep your phone turned off and out of sight AT ALL TIMES unless you have permission from your teacher to use it for research. Students who choose to use their phone in class will be asked to place it in the phone bin at the front of the room. If you can’t resist the urge to use your phone in class you will be asked to drop off your phone in the phone bin EVERY CLASS so that you may participate in class in a productive way. Of course you can always choose to drop your phone off in the bin proactively.