## Teacher: Mr. Di Muro *Please feel free to contact me if you have course-related questions at* [dimuro.matteo@bsd.ca](mailto:dimuro.matteo@brandonsd.mb.ca)

**Course Description/Objectives**

This course will introduce the student to the concept of computer programming using Microsoft Visual Basic. These topics will be covered at an introductory level only and will provide valuable problem-solving skills. Computer Science is generally a basic requirement for many college and university level programs/degrees.

One major theme of this course will be learning how to “help yourself”. Many jobs require that you continue to learn, often with very little support from an “instructor”. In order to help you become a life-long learner, I have set up this course in a way that you can work at your own pace. I will give you suggestions as to where you should be in the course material, but it is up to you.

We will look at how to use resources online to help you learn how to code, how to evaluate a good source from a “bad” source, and how you organize yourself in a way that should ensure your success in this class.

**Learning Outcomes**

1. Understand how a computer interacts with all of its components in order to function, how computers network, and a basic knowledge of the binary number system.
2. Students will be able to create even-driven applications, and be able to write numerical expressions to be used in coding.
3. Students will be able to demonstrate the difference between variables and constants, and obtain user input in their programs.
4. Students will be able to debug their own programming and understand the Microsoft Visual Basic debugger.
5. Students will be able to demonstrate an understanding of Boolean expressions, and use message boxes and check boxes in programs.
6. Students will be able to demonstrate an understanding of loop procedures.
7. Students will be able to write their own procedures in Visual Basic.
8. Students will be able to implement color, sounds, files, and graphics in their programing.

**Units of Study:**

|  |  |  |
| --- | --- | --- |
| **Unit** | | **Outcomes** |
|  |  | |
| **Chapter 2: Introduction to Visual Basic**  **(~8 classes)** | * + Become familiar with VB IDE (Integrated Development Environment)   + Understand the need of and become proficient in commenting code   + Manipulate property values and menus of forms, command buttons, labels and images | |
| **Chapter 3: Variables and Constants**  **(~10 classes)** | * + Differentiate between different data types (strings, integers, double, constants, currency) and understand when to use each, declare variables   + Understand syntax errors and run-time errors   + Utilize “pseudo-code” to understand and solve a problem and use good programming style guidelines | |
| **Chapter 4: Controlling Program Flow with Decision Structures**  **(~15 classes)** | * + Use: If statements, If…Then statements, nested If..Then…Else statements, If…Then…ElseIf statements, and use Select…Case Is statements   + Write Boolean expressions and understand static variables   + Understand logic errors and design problem-solving strategies   + Use message boxes, counters, and check box objects | |
| **Chapter 5: Controlling Program Flow with Loops**  **(~11 classes)** | * + Use Do…Loops and Infinite Loops, explain how infinite loops can occur   + Use input boxes in applications, utilize String Concatenation   + Use String class and its methods (LetterCount, StringTest, FindString, Compare) | |
| **Chapter 7: Using Files**  **(~5 classes)** | * + Use files for data input   + Create, copy, and delete files at run time   + Understand file streams and use a stream reader to read file contents   + Use a text box to display file contents. | |
| **Chapter 9: Color, Sound, and Graphics**  **(~10 classes)** | * + Apply color to an interface and include a Color dialog box in an application   + Add sounds and images to an application and distinguish between image and sound file formats   + Use the Graphics class and its methods   + Create event procedures that respond to mouse events and use a Timer control to create animation | |
| **Putting it all Together**  **(~8 classes)** | * + Compile everything you know into a grand masterpiece of programming genius and chose a project from various pre-approved project ideas, and add your own personal flare if you wish.   + Prepare your brain for the biggest written exam ever ☺ | |

(please note that order of units completed will vary and/or be combined). All units will be evaluated with a variety of assignments, checkpoints, case studies, tests and/or projects.

**Course Evaluation Structure**

Several types of evaluation will be used in the course. This will allow students to display their level of learning in a variety of manners and also expand their skill levels in different presentation methods.

* Tests 35%
* Summative Assignments 35%
* Check Points/Oral Tests 10%
* Final Assessment 20% (10% written test, 10% final project)

You will be provided with regular updates of your cumulative mark. If, at any time, you have questions about your mark, please see me immediately. Many parents are registered on **Vincent Massey’s Home Logic** program, which allows parents and students access to their updated marks from their home computer. If you are interested in becoming a Home Logic user you can contact the main office at 729-3170 or email Mrs. Val Smith at [smith.val@brandonsd.mb.ca](mailto:smith.val@brandonsd.mb.ca)

**Absent and Test Procedures**

**It is the student’s responsibility to first get missed notes/materials from a classmate or my website and then come and discuss the notes and assignment with me.**

All missed tests will be written on the first day back, unless arranged with the teacher. There are **no test re-writes**. If I know ahead of time, I will do my best to accommodate the student with prepared notes and assignments ahead of time. *Please refer to the Student Responsibility Guidelines for Assessment and Evaluation regarding absent and late assignment/test policy*

**Supplies** **Required:**

Binder with note paper, Ruler, Pencils, Pens and a Scientific calculator.

**Expectations/Rules for classroom:**

1. **Respect** is the main rule in my classroom. I strive to create an environment of mutual respect in which learning can take place. This means students are expected to respect themselves, their classmates, and teachers; both in the classroom andoutside the classroom.
2. Cell phones should not be used in class UNLESS it is for some educational purpose or activity. Please refer to the handbook regarding misuse of cell phone policy.
3. I-pods may only be used during work periods/times. Please remove earphones/ear buds during teaching lessons, labs, & tests.
4. Please do not bring food or drinks, other than water, to class.

Student Responsibility Guidelines for Assessment and Evaluation (Division Policy)

Students actively engaged in their learning are the essence of the Brandon School Division’s mission of educating the whole child.

The assessment, evaluation and reporting of student learning and achievement involves students, teachers, principals, parents, superintendents and the Board of Trustees. It is the responsibility of professional educators to assess, evaluate, and report on each student’s degree of engagement and resulting learning outcomes. Such assessment, evaluation and reporting is a continuous and fundamental part of the student’s learning process. Students are responsible for:

* their own learning with the expertise, assistance and motivation of their teachers;
* engaging individually and collectively in school/community learning opportunities;
* improving their learning involvement
* playing an active role in assessing their own learning
* providing evidence of their learning within established timelines

The purpose of this document is to identify student responsibilities in assessment and evaluation practices, provide clear guidelines and consequences so students can make informed decisions, and to provide structures that improve the relationship between student learning and assessment.

All assessments and/or evaluations will be assigned a reasonable completion date by the classroom teacher.

When a student demonstrates negligence and/or disregard towards the assessment and/or evaluation due date, the teacher can assign a “0” grade for the incomplete assessment and/or evaluation.

For a “0” grade to remain permanent on the student’s record for that unit of study, a teacher’s records will demonstrate that he/she had advised the student and the parent/guardian that there was an opportunity to complete the original assessment or an alternate assessment, but that it would have been penalized in accordance to divisional guidelines.

Penalization for late assessments is as follows:

🡪Grade 9 – 10% 🡪 Grade 11 – 20%

🡪Grade 10 – 15% 🡪 Grade 12 – 25%

Once the late assessment is marked, the penalized assessment mark will replace the “0” grade that was originally assigned to the student by the teacher.

If the original or alternate assessment is not submitted by the new completion date or if the student refuses to submit a required assessment, the “0” grade assigned to it will remain on the student’s evaluation records. The “0” grade(s) will be calculated into the student’s final mark for the unit of study and will be used in the calculation of the final grade of the course.