# Computer Programming – Visual Basic
# 2015-2016 COURSE SYLLABUS
# Assignment Code 10153

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**TEXTBOOK**:  Microsoft Visual Basic 2010 For Windows, Web, and Office Applications

## COURSE DESCRIPTION
Visual Basic is designed to provide the introduction to intermediate working knowledge of Visual Basic and the skills needed for software development. Students will learn how to create user interfaces as well as the coding behind the interface.
Emphasis is place on the three-step process of building an application, creating the user interface, setting properties, writing code and solving problems.
Students enrolled in Visual Basic should be able to understand story problems and create solutions to problems.
Prerequisite for the course is ½-computer credit and a strong mathematical background.

## Instructional Philosophy
Students will complete challenging programming labs in which they will learn and demonstrate knowledge of programming skills.  High quality work is expected, and students will be given opportunity to redo work until it meets industry standards given during instruction. Classroom activities include course reading, programming labs, and problem-solving activities, end of chapter questions and course quizzes and exams.  On some projects, students will work in teams but will be expected to complete individual assignments in relation to the team's project. Assessment methods will include written exams, tests, quizzes, and projects. Students will be expected to display good work habits, positive attitudes and respectful human relations.

**Course Standards**

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**Students will demonstrate programming as it relates to the customer needs**

1.1 Students will gather data to identify customer requirements.

1.2 Students will demonstrate knowledge of programming language concepts.
1.3 Students will develop software requirements specification.

**Students will produce IT-based strategies and project plans to solve the problem.**

2.1 Students will define scope of work for the programming project.

2.2 Students will demonstrate knowledge and skills of working in a software development team.

**Students will demonstrate knowledge of the software development process.**

3.1 Students will demonstrate knowledge of software development methodology.

3.2 Students will apply tools for developing software applications.

3.3 Students will apply language specific programming tools/techniques.

**Students will create a logical design for a software application.**

4.1 Students will create design specification for a computer application.
4.2 Students will analyze real world problems for the applicability of structured, object orientate, even driven logical design methods.

**Students will create a computer application by writing code.**

5.1 Students will demonstrate knowledge of programming language concepts.

5.2 Students will develop an application using selected programming language.

5.3 Students will demonstrate knowledge of basic software systems implementation.

 **Major Projects and Assignments**

**(These projects may change at the discretion of the instruction during the course of the semester)**

Programming Careers:  Students will research computer programming careers and the colleges and majors that will help them to obtain a job as a computer programmer. Students will write and demonstrate their findings on the best schools and careers that are available for people that are interested in computer science and visual basic programming.

Introduction to Visual Basic:  Students will begin creating new Visual Basic projects that will include changing form properties such as the caption, name, and backcolor property. Students will begin adding controls to the form as well as adding simple code to make the form interactive.  Through this section, students will work on creating a variety of programs, debugging, and answering end of unit questions.

Designing and Application:  Students will understand terminology and planning for an Object Orientated Event Driven application.  This will include identifying the applications tasks, objects, events and drawing the user interface.  After the plan phase is over students will begin creating the interface and then will code, test, debug and document

the program.  Through this section, students will work on creating a variety of programs, debugging, and answering end of unit questions.

Using Variables and Constants:  Students will begin working with variables.  While working with variables students will understand data types, naming variables, declaring variables, storing data, and the scope of variables.  Emphasis will be placed on local, form level and global variables.  Students will begin working with built-in visual basic functions to enhance and add functionality to the user interface.    Through this section, students will work on creating a variety of programs, debugging, and answering end of unit questions.

Selection Structure:  Students will begin using selection structure statements such as the if…then…else and case select statements.  Other items that will be covered to assist in the use of selection statements include relational operators, UCase functions, check box controls, call statements, msgbox function, GotFocus Event, pseudocode, and flowcharting.    Through this section, students will work on creating a variety of programs, debugging, and answering end of unit questions.

**Description of Grading and Quality Work**

| Grade | Scale | Description of Work |
|-------|-------|---------------------|
| A | 94-100% | Consistently demonstrates an exceptional level of quality and effort. Having all work in on time and completed to exceed expectations. Mastery in evaluating, synthesizing, and applying the knowledge and skills of information technology. |
| B | 86-93.5% | Consistently demonstrates proficient knowledge with a good effort and quality of work. All assignments are complete and on time. Demonstrates the ability to evaluate, analyze, synthesize and apply the principles of information technology. |
| C | 77-85.5% | Demonstrates proficient knowledge and the ability to apply information technology. Work shows average effort. A few assignments may be missed or late. |
| D | 70-76.5% | Work shows minimal effort and some assignments are late. Demonstrates a basic understanding of recalling or comprehending information technology. |
| F | Below 69.5% | Understanding is below basic in relation to information technology. Work is of poor quality and does not meet standards or expectations. |

# MAKE-UP WORK
Students will be allowed five school days to turn in make-up work.  Students are expected to be responsible about asking for the assignment.  Students will also

have the opportunity to re-do assignments that receive a failing grade.  Special circumstances are at the discretion of Mrs. Sage.