Douglas College

EFFECTIVE: JANUARY 2004

CURRICULUM GUIDELINES

A. Division: **Instructional** Effective Date: **JANUARY 2004**

B. Department / Program Area: **Commerce & Business Admin. Information Technology**

Revision [ ] New Course [X]

If Revision, Section(s) Revised:
Date of Previous Revision:
Date of Current Revision:

C: **ITEC 160** **D**: **Introduction to Programming – Visual Basic** **E:** **3**

Subject & Course No. | Descriptive Title | Semester Credits

F: Calendar Description: This course is an introduction to computer programming environments, concepts and covers the VisualBasic programming language. It starts with the basics of programming logic, control statements, variables and modular techniques. It includes form design, control manipulation, properties management, events and event handlers, as well as programming methods used in Visual Basic. Public and private subroutines, user and built-in functions, as well as variables and their scope are discussed.

G: Allocation of Contact Hours to Type of Instruction / Learning Settings

Primary Methods of Instructional Delivery and/or Learning Settings:

Lectures and Laboratory

Number of Contact Hours: (per week / semester for each descriptor)

Lecture: **4 Hrs.**
Laboratory: **4 Hrs.**
Total: **8 Hrs.**

Number of Weeks per Semester: **12**

H: Course Prerequisites:

None

I: Course Corequisites:

None

J: Course for which this Course is a Prerequisite

ITEC 260 and ITEC 300

K: Maximum Class Size:

20

L: PLEASE INDICATE**:**

[ ] Non-Credit
[ ] College Credit Non-Transfer
[X] College Credit Transfer:

SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bccat.bc.ca)

M: Course Objectives / Learning Outcomes

At the end of this course the successful student should be able to:

1. describe the process of program design and development;
2. apply the concepts of logic preparation;
3. recognize the benefits of both procedural and event driven languages;
4. design a GUI by using objects (forms and controls) and managing properties of controls;
5. design a program to solve a well-defined problem;
6. explain what a form is, how to create it, and be familiar with the properties of a form;
7. explain what objects and controls are, and be able to add controls to a form;
8. explain the properties of a control and explore the events that can occur with a control;
9. differentiate among the various data types;
10. distinguish between variables and constants, and understand how to include them in programs;
11. perform number and string manipulations including the use of built-in procedures;
12. explain the purpose of procedures and be able to write reusable code in Sub procedures and Function procedures;
13. evaluate conditions using the relational operators and combine conditions using logical operators;
14. explain and code selection logic using IF-THEN and SELECT CASE statements;
15. explain and code looping routines DO-WHILE, DO-UNTIL, and FOR-NEXT;
16. design and program a completely documented Visual Basic project.

N: Course Content:

1. Introduction to Programming in General
    a. Program Development Cycle
    b. Levels of Languages
    c. Decision making techniques
    d. Problem solving tools
    e. Programming tools - flowcharts, pseudocode
2. Programming in Visual Basic
    a. Introduction to Visual Basic 6.0
    b. Forms, Controls, Properties, Events
    c. Numbers, variables, and constants
    d. Strings
    e. Input and Output using Text Boxes
    f. Built-in Functions - Numeric Functions, String Functions
3. Procedures
    a. Sub Procedures
    b. Function Procedures
    c. Scope of Variables
4. Decisions
    a. Relational and Logical Operators
    b. IF-THEN Blocks
    c. SELECT CASE Blocks
5. Repetitions
    a. DO-WHILE and DO-UNTIL Loops
    b. FOR NEXT Loops
6. Data Management
    a. Data bound variables
    b. DAO methods
    c. ADO methods
7. Sequential & Random file handling

O: Methods of Instruction

There are three components to the course: lectures, labs, and self directed learning (i.e. programming assignments).

The lecture is used to introduce new material where concepts and techniques will be discussed and demonstrated.
The four hour weekly lab parallels the lecture by considering the application of the new material. In the lab the students will key and execute the examples provided.

P: Textbooks and Materials to be Purchased by Students

Zak, Diane. Programming with Microsoft Visual Basic 6.0, Enhanced Edition, Latest Canadian Edition. Course Technology

Q: Means of Assessment

Lab Assignments	25% - 40%
Quizzes	10% - 30%
Midterm Examination	20% - 30%
Final Examination	20% - 30%
	100%

R: Prior Learning Assessment and Recognition: specify whether course is open for PLAR

This course is open for PLAR

Course Designer(s) Barbara Allen

Education Council / Curriculum Committee Representative

Dean / Director Rosilyn Coulson

Registrar Trish Angus

Date of New Course or Current Revision: November 2003