

CSC 139
Visual BASIC Programming

COURSE DESCRIPTION:

Prerequisites: CIS 115

Corequisites: None

This course introduces computer programming using the Visual BASIC programming language with object-oriented programming principles. Emphasis is on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.* Course Hours Per Week: Class, 2. Lab, 3. Semester Hours Credit, 3.

COURSE OBJECTIVES:

Upon completion of this course, the student will be able to:

- a. Use object oriented programming.
- b. Work in the context of event-driven programming.
- c. Demonstrate problem solving ability.
- d. Illustrate the use of assignment statements.
- e. Use different data types
- f. Be able to work with and design: text boxes, labels, forms, buttons, frames, message boxes, input boxes, check boxes, combo boxes, and list boxes.
- g. Write and call subroutines and functions
- h. Use relational and logical operators
- i. Create and access 1 and 2 dimensional arrays.
- j. Follow syntax rules in coding a program
- k. Design, code, and test Visual Basic programs
- l. Meet deadlines and schedules

OUTLINE OF INSTRUCTION

- I. Getting acquainted with the interface
 - A. Solution Explorer
 - B. Tool box
 - C. Properties window
 - D. Project window

- II. Introduction to Visual Basic
 - A. Concepts of object oriented programming
 - B. The Visual and Command Line programming
 - C. Visual Basic Classes and Objects

- III. Creating a Visual Basic application
 - A. Parts of an application
 - B. Designing an application interface
 - C. Preparing and running a procedure

- IV. Programming fundamentals

- A. Numbers
 - B. Strings
 - C. Input and Output
 - D. Built-In functions
 - E. General procedures
 - 1. Sub Procedure
 - 2. Function Procedure
 - 3. Pass-by-Value vs. Pass-by-Reference
- V. Decisions
- A. Operations
 - 1. Relational
 - 2. Logical
 - B. If statements
 - C. SelectCCase blocks
- VI. Repetition
- A. Do While loops
 - B. Do Until loops
 - C. For/Next loops
- VII. Arrays
- A. Creating arrays
 - B. Using arrays
 - C. Sorting arrays
 - D. Searching arrays
 - E. Two dimensional arrays
 - F. Control arrays
- VIII. Advanced Topics
- A. Classes and Objects
 - B. Inheritance (One of three Object Oriented criteria)
 - C. Debugging an application

REQUIRED TEXTBOOK AND MATERIALS:

Deitel. Visual Basic .NET 2005: How To Program. 3rd ed Prentice Hall. ISBN0131869000

STATEMENT FOR STUDENTS WITH DISABILITIES:

Students who require academic accommodations due to any physical, psychological, or learning disability are encouraged to request assistance from a disability services counselor within the first two weeks of class. Likewise, students who potentially require emergency medical attention due to any chronic health condition are encouraged to disclose this information to a disability services counselor within the first two weeks of class. Counselors can be contacted by calling 686-3652 or by visiting the Student Development Office in the Phail Wynn Jr. Student Services Center, room 1309.