Course Syllabus

Department: Computing Sciences

Date: 4/17/2012

I. Course Prefix and Number: CSC116

   Course Name: Introduction to Visual Basic

   Credit Hours and Contact Hours: 3 credit hours and 3 contact hours

   Catalog Description including pre- and co-requisites: This course focuses on developing good problem-solving skills, and building a strong foundation that will give students a sustainable overview of computer programming. The course starts with a brief review of the preliminaries of Windows, and then focuses on problem-solving using the Visual Basic language. Visual Basic is an object-oriented computer programming language where programs are developed in an integrated development environment (IDE). All programs have a graphical user interface. A broad range of real-world examples, case studies, and programming projects gives students significant hands-on experience. This course is intended for a general audience with little or no prior formal programming experience. This course does not carry CS credit for any computing sciences majors.

   Relationship to Academic Programs and Curriculum
   This course is a requirement for AS New Media degree program.

II. Course Student Learning Outcomes

   Upon completion of the course the participant will be able to:
   a. Build a windows Application in Visual Basic using the MS Visual Studio IDE
   b. Create a user interface following good GUI design guidelines
   c. Change attributes of controls by setting properties at design time or in code
   d. Create program code that follows current programming standards.
   e. Create classes and object
   f. Debug an application
   g. Access and manipulate data from a database

   College Learning Outcomes Addressed by the Course:
   □ writing □ ethics/values
   □ oral communications □ citizenship
   ☑ reading □ global concerns
   □ mathematics ☑ information resources
   ☑ critical thinking □ computer literacy

III. Assessment Measures (Summarize how the college and student learning outcomes will be assessed):
Student learning outcomes will be assessed through a variety of activities including the following:
1. **Assignments: Programming Problems**
   Hands on projects will assess skills in writing, reading, computer literacy, critical thinking (problem solving) and ethics/values. These skills will include good design standards and programming standards and best practices used in industry including written documentation, both internal and external to the source programs. Testing strategies will assess the ability to debug problems encountered in the problem solving and programming process.

2. **Online text tests**, given in a current online environment will assess the student’s ability to comprehend, interpret, analyze, and evaluate course content and reading materials. Chapter tests will be given in a current online environment to encourage students to read the course materials. The tests will measure their comprehension of the course concepts as related to problem solving and programming.

3. **In-class quizzes** will assess student writing capabilities, and well-reasoned arguments.

4. Students will be required to complete an in class final project that will assess reading, writing and problem solving skills.

**IV. Instructional Materials and Methods**

**Types of Course Materials**

Textbook, and various web based tutorials.

**Methods of Instruction (e.g. Lecture, Lab, Seminar ...):**

Lecture and hands-on lab activities.

**V. General Outline of Topics Covered:**

1. An Introduction to Visual Basic
2. Creating a User Interface
3. Variables, Constants, Methods, and Calculations
4. Making Decisions in a Program
5. Repeating Program Instructions
6. String Manipulation and More Controls
7. Sub and Function Procedures
8. Arrays
9. Structures and Sequential Access Files
10. Creating Classes and Objects
11. Accessing data in a database
12. Creating Menus
13. Designing and developing an entire Visual Basic application