CIS 215   C# Programming

I. CIS 215   C# Programming– 3 Semester Hours

II. Course Description
This course is a continuation of C# programming. Techniques for the improvement of application and systems programming will be covered and other topics may include developing GUI's with C#, memory management, Classes and objects, functions, debugging, portability, and reusable code. Upon completion, the student will been able to demonstrate knowledge of the topics through the completion of programming projects and appropriate tests.

III. Prerequisite
CIS 150

IV. Textbook

Textbook: Programming in C#
Publisher: McGraw Hill
Author: Bradley and Millspaugh

V. Course Objectives
    A. Explain C#.
    B. Design a user interface.
    C. Perform various calculations using C# programming.
    D. Develop a C# program that makes decisions.
    E. Develop a C# program that utilizes iteration structure.
    F. Develop a C# program that utilizes functions and procedures.
    G. Develop a C# program that utilizes data structures.
    H. Develop a C# program that utilizes error handling.

VI. Course Outline of Topics
    A.   Introduction to C#
        1. Terms and definitions
        2. Review design applications
        3. Event driven object-oriented programming
        4. Uses for C# Programming
        5. Integrated Development Environment (IDE)
        6. Syntax
    B. Design a User Interface
        a. Objects
              i. Forms
             ii. Controls
            iii. Properties
        b. Methods
        c. Events
        d. Input/output
        e. Interface design guidelines
    C. Calculations
        a. Data types
        b. Variables and constants
        c. Mathematical operations

       d. Debugging
       e. Intrinsic functions

  D. Decision Making
       a. If statements
       b. Select case
       c. Relational operators
       d. Logical operators
  E. Iteration
       a. Looping structures
       b. Do loops
           i. Pretest/Post test
       c. For loops
       d. Counters
       e. Accumulators
  F. Functions and Procedures
       a. User defined functions
       b. Parameters
           i. By value
          ii. By reference
  G. Data Structures
       a. Arrays
       b. Strings
       c. Abstract data types
       d. Classes
  H. Error Handling
       a. Types of errors
       b. Error handling methods

VII. **Evaluation and Assessment**

Evaluation and assessment will be determined by the instructor and specified on the instructor's class syllabus. Grades will be based upon following scale: A = 90 – 100%, B = 80 – 89%, C = 70 – 79%, D = 60 – 69%, and F = below 60%.

VIII. **Attendance**

Students are expected to attend all classes for which they are registered. Students who are unable to attend class regularly, regardless of the reason or circumstance, should withdraw from that class before poor attendance interferes with the student's ability to achieve the objectives required in the course. Withdrawal from class can affect eligibility for federal financial aid.

IX. **Statement on Discrimination/Harassment**

The College and the Alabama State Board of Education are committed to providing both employment and educational environments free of harassment or discrimination related to an individual's race, color, gender, religion, national origin, age, or disability. Such harassment is a violation of State Board of Education policy. Any practice or behavior that constitutes harassment or discrimination will not be tolerated.

X. **Americans with Disabilities**

The Rehabilitation Act of 1973 (Section 504) and the Americans with Disabilities Act of 1990 state that qualified students with disabilities who meet the essential functions and academic requirements are entitled to reasonable accommodations. It is the student's responsibility to provide appropriate disability documentation to the College. The ADA Accommodations Office is in FSC 305 (205-856-7731).