## Course Outline

**Title:** Programming I  
**Abbreviation and Number:** CISB210  
**AB Paper No.:** 13-122  
**School:** Business  
**Department:** Computer Information Systems  
**Credits:** 3  
**Course Sequence:** ( ) Fall  
( ) Spring  
( ) Fall and Spring  
**Hours Per Week:**  
( 3 ) Lecture  
( ) Seminar  
( ) Laboratory  
( ) Studio  
( ) Kitchen  
( ) Other (Specify)  
**Pre-requisite(s):** CISB110 and MATH169  
**Co-requisite(s):** None

### COURSE DESCRIPTION

Concepts of programming are covered including data types, variables, logical conditions, looping, recursion and method. This course will introduce students to the foundations of object oriented programming such as classes, inheritance, polymorphism, and other programming aspects as implemented in console environment using the C# programming language.

### SPECIFIC OBJECTIVES

Upon successful completion of this course students will be able to

1) demonstrate an understanding of the Microsoft.Net framework and effectively use the Visual Studio environment;
2) use the syntax of C# programming language;
3) apply fundamental Object-Oriented Programming (OOP) concepts and techniques using object-oriented methodology to implement algorithms and solve problems;
4) write console-based application using C#; and
5) develop algorithms.

### COURSE CONTENT

I. General Microsoft .NET Framework Environment  
   A. Write, debug and compile programs in C#  
   B. Implement output techniques  
   C. Awareness of style, comments, and importance of documentations

II. Variables, Constants and Data Types  
   A. Declarations and initialization  
   B. Use of different data types  
   C. Input and data storage

III. Logical Decisions  
   A. Write conditional statements using the IF ELSE structure  
   B. Use CASE selection to control program execution flow

IV. Looping Constructs  
   A. While  
   B. Do – While  
   C. For  
   D. For each
V. Arrays
   A. Declare and create
   B. Loop through to find a specific element
   C. Sort and reverse
   D. Use of multidimensional

VI. Using Methods
   A. Declare
   B. Void methods with and without parameters
   C. Methods that return a value
   D. Passing parameters by value and by reference
   E. Methods as class member

VII. Classes and Objects
   A. Construct classes and instantiate objects of those classes
   B. Private and public access of class members
   C. Constructors and destructors

VIII. Inheritance
   A. Fundamental concepts
   B. Overriding of methods
   C. Constructors in child class
   D. Member’s visibility of parent class in the child class
   E. Protected members
   F. Base class method call in the derived class

IX. Files and Streams
   A. Input from and output to text files
   B. Open, read from and write onto a text file

X. Exception Handling
   A. Use of the exception class
   B. Raise an exception message

XI. Graphical User Interface
   A. Introduce the code that instantiates GUI objects such as Forms and Buttons

**ASSESSMENT**

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<tr>
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<tr>
<td><strong>TOTAL</strong></td>
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REQUIRED TEXT

SUPPLEMENTARY READINGS/MATERIALS

JOURNALS
A Programmers Journal
.NET Developers Journal

WEBSITES
http://www.aprogrammersjournal.com (A Programmers Journal)
http://www.dotnet.sys-con.com (.NET Developers Journal)