**THE COLLEGE OF THE BAHAMAS**

**Course Outline**

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<table>
<thead>
<tr>
<th>Title: Programming II</th>
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<tbody>
<tr>
<td>Abbreviation and Number: CISB310</td>
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<tr>
<td>School: Business</td>
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<tr>
<td>Department: Computer Information Systems</td>
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<tr>
<td>Credits: 3</td>
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<tr>
<td>Course Sequence: ( ) Fall ( X ) Spring ( ) Fall and Spring</td>
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<tr>
<td>Hours Per Week: ( 3 ) Lecture ( ) Seminar ( ) Laboratory ( ) Studio ( ) Kitchen</td>
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<td>( ) Other (Specify)</td>
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<tr>
<td>Pre-requisite(s): CISB210 and CISB307 or CIS120 and CIS307</td>
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<td>Co-requisite(s): None</td>
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**COURSE DESCRIPTION**

This course will present intermediate and advanced programming techniques in a Graphical User Interface (GUI) environment. Visual C#.NET and its supporting .NET libraries will be used to construct large software applications. Event Driven/Object Oriented concepts are covered such as properties, WinForm classes, event handling using delegation model.

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**SPECIFIC OBJECTIVES**

Upon successful completion of this course, students will be able to

1) demonstrate use of the .Net (dot Net) Graphical User Interface (GUI);
2) analyse large problems and develop algorithms in an Object Oriented manner to solve the problem programmatically;
3) use GUI environment to handle events;
4) develop algorithms and Object Oriented Program (OOP)/Event driven techniques for large sound software; and
5) build complex code in combination with GUI.

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**COURSE CONTENT**

I. General .NET Framework Environment For Windows Programming
   A. Write, debug and compile programs in Visual C#
   B. Implement output techniques
   C. Style, comments and documentation

II. Splash Screen
   A. Add to an application
   B. Navigate to a main form

III. WinForm and the IDE
    A. Use the Integrated Development Environment (IDE) of C#.NET
    B. Tool box
    C. Create, save, and run programs

IV. Toe Charts and Interface Design of Windows Applications
    A. Design and create interfaces
    B. Utilise controls and events to solve problems

V. Event Driven Windows Programming
A. Use of controls
B. Set control’s appropriate events
C. Utilise GUI
D. User’s event

VI. Listbox, ComboBox Controls
A. Add and delete items
B. Sort items

VII. Use of Various Controls and Objects
A. Radio buttons
B. Checkboxes
C. Frames
D. Labels
E. Implement dialog boxes

VIII. Input Validation
A. Use programming techniques
B. Force controls to accept a specific data format

IX. Logon Screens
A. Implement fields
B. Open text files
C. Extract and compare logon information
D. Allow or deny access

X. Menus
A. Creating menu control at design time
B. Handle its behaviour at runtime
C. Implement standard menus and submenus

XI. Database Connectivity
A. Use ADO.NET
B. Implement from a C# program
   i. Insert
   ii. Delete
   iii. Update
   iv. Retrieve

**ASSESSMENT**
Lab Assignments..............................................15%
Tests............................................................30%
Project..........................................................35%
Final Examination............................................20%
**TOTAL .........................................................100%**
REQUIRED TEXT

SUPPLEMENTARY READINGS/MATERIALS

JOURNALS
* A Programmer’s Journal
  * .NET Developer’s Journal

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