

## H. LAVITY STOUTT COMMUNITY COLLEGE



### Business and Computer Studies Department

#### Course number and title: CSC 103 Programming Techniques

Hours: 45  
Credits: 3  
Pre-requisite(s): MAT 108  
Lecturer: Sherrine N. Augustine  
Office location: Paraquita Bay, Computer Studies Department  
Class days/time:  
Class location:  
Office hours: M/W 12:00 - 5:30pm  
T/Th 12:00 - 6:50 pm  
Fri - appointments only  
Phone: (284) 852 7046  
Email: [snagrnt@yahoo.com](mailto:snagrnt@yahoo.com) and [saugustine@hlscc.edu.vg](mailto:saugustine@hlscc.edu.vg)  
Required textbooks: An Introduction to Programming Using Visual Basic®  
2010, eight Edition  
Author: David I. Schneider

**ACADEMIC DISHONESTY: PLAGIARISM AND CHEATING ARE EXTREMELY SERIOUS OFFENSES AND WILL BE PUNISHED BY FAILURE ON EXAM, HOMEWORK, PORTFOLIO, PAPER, OR PROJECT. FAILURE IN COURSE, AND OR EXPULSION FROM THE COLLEGE IS ALSO POSSIBLE. ALL COURSE WORK WILL BE SUBMITTED TO SOFTWARE CHECKS TO SEE THAT INTELLECTUAL PROPERTY RIGHTS ARE NOT VIOLATED, AND THAT WORK IS NOT COPIED OR PLAGIARIZED. A GRADE OF ZERO (0) WILL BE GIVEN TO ALL PARTIES INVOLVED ENGAGING IN SUCH PRACTICES.**

**FOR MORE INFORMATION, REFER TO "DISHONESTY IN EXAMINATIONS, RESEARCH PROJECTS, AND PAPERS" POLICY IN THE COLLEGE CATALOG.**

## **STATEMENT OF PURPOSE**

Our aim is to develop responsible citizens of the British Virgin Islands and leaders in this complex, fast-changing global economy. To achieve this, the Business and Computer Studies Department will prepare students for jobs in the business environment and for transfer in to the upper division of baccalaureate programmes of other colleges and universities. Additionally, we seek to enhance business and computer skills to meet the needs of our community.

The department's trained faculty will: demonstrate their diverse intellectual abilities, stimulate curious minds, encourage fundamental skills in reasoning, analysis and expression, and teach students ethical and civil responsibility. Foremost, we continuously strive to provide excellence in instruction, and open communication in a collegial atmosphere.

In conjunction with the College's disciplinary standards, we encourage students to comply with established rules and regulations. We also expect them to maintain high standards of honesty, integrity, and to respect the rights, privileges and property of other members of the College community.

### **Business & Computer Studies Department Mission Statement**

The Business and Computer Studies Department is dedicated to preparing students for a rapidly changing global economy by expanding each student's knowledge and skills through; reasoning, experiential learning, analysis in their respectful fields and to promote ethical awareness. Our aim is to prepare students with skills to meet local workforce needs and for further studies through excellence in instruction and communication in a collegial atmosphere.

### **Business and Computer Studies Department Goals:**

1. To promote an understanding and working knowledge of technology and business;
2. To encourage analysis and application of business & computer skills through project work;
3. To prepare students for entry-level employment and continuation on to baccalaureate programmes;
4. To stimulate learning by relating course materials to the dynamic global environment;
5. To enhance effective communication skills.

### **Program Goals Assessed**

1. Analyze real world situations and identify the appropriate software solutions.
2. Demonstrate a knowledge of, and ability to use, current technology, current terminology, concepts, and technology in the computer field.
3. Demonstrate the ability to effectively plan and manage time in the execution of computing projects.
4. Demonstrate the ability to effectively plan and manage time in the execution of computing projects.
5. Demonstrate an awareness of the usefulness of emergent computer technologies in the business domain.

## **Course Description**

This course provides an introduction to Visual Basic .NET. Topics include the Visual Basic .NET Integrated Development Environment, building an application in the Visual Basic .NET environment and working with variables, constants, data types, and expressions. Students also learn about decision making, looping and multiple forms, using menus, common dialogs, procedures, functions and arrays, debugging, creating executable files, and distributing a Windows application.

## **General Objectives**

1. To demonstrate well-written and readable programs using a disciplined coding style, including documentation and indentation standards.
2. To design useful, well-designed programs for personal computers and handheld computers that solves practical business problems.
3. To demonstrate how to implement logic involving sequence, selection, and repetition while using Visual Basic 2010.
4. Apply graphical user interface (GUI) design principles.

## **Course Content and Specific Objectives:**

### **Unit 1: Program and Graphical User Interface**

1. Visual Basic Controls and Events
2. Positioning and Aligning Control
3. Event Procedures

#### *Learning objectives*

- Understand software and computer programs
- State the role of a developer in creating computer programs
- Specify the use of a graphical user interface and describe an event-driven program
- Specify the roles of input, processing, output, and data when running a program on a computer
- Describe the arithmetic operations a computer program can perform
- Explain the logical operations a computer program can perform
- Identify the use of a computer programming language in general, and Visual Basic in particular
- Create a Visual Basic Windows Application project
- Align objects on the Windows Form object
- Understand and implement graphical user interface design principles

## **Unit 2: Program Design and Coding**

1. Visual Basic program Coding
2. Design the program Objects
3. Code the Program

### *Learning objectives*

At the end of this unit students should be able to:

- Locate and save an image from the World Wide Web
- Import an image into the Program Resources folder
- Set the Visible property in the Properties window
- Set the Enabled property in the Properties window
- Run a Visual Basic program
- Correct errors in Visual Basic code
- Write code to use the Close() procedure
- Enter Visual Basic code
- Understand Visual Basic code statement formats
- Using code, set the Visible property of an object
- Using code, set the Enabled property of an object
- Enter comments in Visual Basic code

## **Unit 4: Variables, Arithmetic Operation, Input, Output**

1. Numbers
2. String
3. Input and Output

### *Learning objectives*

At the end of this unit students should be able to:

- Understand and declare String and Numeric variables
- Use assignments statements to place data in variables
- Use literals and constants in coding statements
- Understand scope rules for variables
- Convert string and numeric data
- Understand and use arithmetic operators and arithmetic operations
- Format and display numeric data as a string
- Create a form load event
- Create a concatenated string
- Debug a program
- Formatting Output with format Functions

- Dates as Input for Output

## **Unit 5: Making Decisions with Conditional Statements**

1. Relational and Logical Operators
2. If Blocks
3. Select Case Blocks

### *Learning objectives*

At the end of this unit students should be able to:

- Use the Panel object
- Place RadioButton objects in applications
- Display a message box
- Make decisions using If...Then statements
- Make decisions using If...Then...Else statements
- Make decisions using nested If statements
- Make decisions using logical operators
- Make decisions using Case statements
- Insert code snippets
- Test input to ensure a value is numeric

## **Unit 6: Repetition**

1. Do Loops
2. For...Next Loop

### *Learning objectives*

At the end of this unit students should be able to:

- Use the InputBox function
- Display data using the ListBox object
- Understand the use of counters and accumulators
- Understand the use of compound operators
- Select the best type of loop
- Repeat a process using a For...Next loop
- Repeat a process using a Do loop
- Avoid infinite loops
- Prime a loop
- Validate data
- Create a nested loop

**Course Schedule**

| <b>Week</b>  | <b>Chapter</b>                                   | <b>In Class Work</b>  | <b>Work Due/Graded</b>                                      | <b>Test</b> |
|--|--|---|---|-------------|
| Unit 1: Program and Graphical User Interface           |  |   |   |             |
| <b>1</b>   | An Introduction to Computers and Problem Solving | <b>1.1 - An Introduction to Computers<br/>Windows, Folders, and Files<br/>Program Development Cycle<br/>Programming Tools</b> | Read Pages 17 -37<br>Do the exercises.                      |             |
| Unit 2: Program Design and Coding                      |  |   |   |             |
| <b>2</b>   | Visual Basic, Controls, and Events               | <b>An Introduction to Visual Basic 2010<br/>Visual basic Control<br/>Visual Basic Events</b>                                  |   | test        |
| Unit 3: Variables, Arithmetic Operation, Input, Output |  |   |   |             |
| <b>3</b>   | Variables, Input, and Output                     | <b>1. Number<br/>2. String<br/>3. Input and Output</b>  | Pages 50 exercise 34,35<br>and 39                           | Test        |
| <b>4</b>   |  |   |   |             |
| <b>5</b>   |  |   |   |             |
| Unit 4: Making Decisions with Conditional Statements   |  |   |   |             |
| <b>6</b>   | Decision   | <b>1. Relational and Logical<br/>Operation<br/>2. IF<br/>3. Select Case Block<br/>4. Input via User Selection</b>             | READ: 160-205<br>Page 100 exercise 2<br>Page 101 exercise 5 |             |
| <b>7</b>   |  |   |   |             |
| <b>8</b>   |  |   |   |             |
| <b>9</b>   |  |   |   |             |
| <b>10</b>  | General Procedures<br><br>Repetition             | <b>A Case Study: Weekly Payroll<br/><br/>Do Loops</b>   | Page 154 exercise 1 and 6                                   | Test        |
| <b>11</b>  | Repetition                                       | <b>Do Loops<br/>For..... Next Loop<br/>List Boxes and Loops</b>   | Page 215 exercise 4<br>Page 252 exercise 7                  |             |
| <b>12</b>  |  |   |   |             |

|           |               |                    |  |  |
|-----------|---------------|--------------------|--|--|
|           |               |                    |  |  |
| <b>13</b> |               | <b>Project Due</b> |  |  |
| <b>14</b> | Exam Revision |                    |  |  |
| <b>15</b> | Final Exam    |                    |  |  |

## Teaching Methods:

1. **Lectures:** Important material from the text and outside sources will be covered in class. You should plan to take careful notes as not all material can be found in the texts or readings. Discussion is encouraged as is student-procured, outside material relevant to topics being covered.
2. **Assignments:** There are several assignments for this course, which involve weekly readings from the textbook, and written assignments. All written assignments are to be turned in one week from the date assigned **and must be type-written** using a word processor of your choice. Any assignment turned in after this date will not be graded.
3. **Quizzes:** Occasional scheduled or unscheduled quizzes will be given to help ensure you stay up with assigned material. Missed or late quizzes cannot be made up under any circumstances but with good cause and adequate notice, an early quiz may be given. One quiz (lowest score) will be dropped at the end of the semester.
4. **Exams:** The exams will be closed book/note and will test assigned readings and material discussed in class. The final exam will be comprehensive in nature. However, the instructor reserves the right to retest on material that was not appropriately comprehended. These items will be noted during the exam review session. There are no make-up exams. **Any uncoordinated, unexcused missed exam will result in a score of “0” for that exam.**

## Grading:

Letter grades will be determined using a standard percentage point evaluation as outlined below.

### Grade Distribution:

|                          |                                 |            |
|--------------------------|---------------------------------|------------|
| <input type="checkbox"/> | <i>Attendance/Participation</i> | <i>5%</i>  |
| <input type="checkbox"/> | <i>Activity</i>                 | <i>10%</i> |
| <input type="checkbox"/> | <i>Project</i>                  | <i>25%</i> |
| <input type="checkbox"/> | <i>Tests</i>                    | <i>20%</i> |
| <input type="checkbox"/> | <i>Final Exam</i>               | <i>40%</i> |

### Grade Scale

|    |         |
|----|---------|
| A+ | 100     |
| A  | 99 – 95 |
| A- | 90 – 94 |
| B+ | 89 – 85 |
| B  | 84 – 80 |
| B- | 79 – 75 |
| C+ | 74 – 70 |
| C  | 69 – 65 |
| C- | 64 – 60 |
| D  | 59 – 54 |
| F  | 53 – 0  |



**Course Policies:****Missed Classes:**

You are responsible for obtaining material, which may have been distributed on class days when you were absent. This can be done through contacting a classmate who was present or by contacting the instructor during his office hours or other times.

**Assignments:**

All assignments are due at the beginning of class on the date due. No exceptions are made.

All Assignments will be posted to the course website site which can be accessed from the college's homepage <http://www.hlsc.edu.vg>.

**Academic Dishonesty:**

Plagiarism and cheating are serious offenses and may be punished by failure on exam, paper or project; failure in course; and or expulsion from the College.

**Cheating Policy:**

Students are expected to uphold the college's standard of conduct relating to academic honesty. Students assume full responsibility for the content and integrity of the academic work they submit. The guiding principle of academic integrity shall be that a student's submitted work, examinations, reports, and projects must be that of the student's own work. Students shall be guilty of violating the honor code if they:

1. Represent the work of others as their own.
2. Use or obtain unauthorized assistance in any academic work.
3. Give unauthorized assistance to other students.
4. Modify, without instructor approval, an examination, paper, record, or report for the purpose of obtaining additional credit.
5. Misrepresent the content of submitted work.

The penalty for violating the honor code is severe. Any student violating the honor code is subject to receive a failing grade for the course and will be reported to the Office of Student Services. If a student is unclear about whether a particular situation may constitute an honor code violation, the student should meet with the instructor to discuss the situation.

For this class, it is permissible to assist classmates in general discussions of computing techniques. General advice and interaction are encouraged. Each person, however, must develop his or her own solutions to the assigned projects, assignments, and tasks. In other words, students may not "work together" on graded assignments. Such collaboration constitutes cheating. A student may not use or copy (by any means) another's work (or portions of it) and represent it as his/her own. If you need help on an assignment, contact your instructor, not other classmates.

**Need for Assistance:**

If you have any condition, such as a physical or learning disability, which will make it difficult for you to carry out the work as I have outlined it, or which will require academic accommodations, please notify me as soon as possible.

**Posting of Grades:**

Grades will be posted periodically to your record online.

**Student Conduct In Class Policy:**

Any acts of classroom disruption that go beyond the normal rights of students to question and discuss with instructors the educational process relative to subject content will not be tolerated

# H. LAVITY STOUTT COMMUNITY COLLEGE

## CSC 103 PROJECT GUIDELINES- SHERRINE AUGUSTINE

Topic: Project Guidelines  
Course Code: CSC 103  
Course Name: Programming Techniques

### Project Guidelines

This project counts for 25% of your overall grade for this course, and such, it is extremely important that you complete it to the best of your ability.

For this project, you must create an application in Visual Basic.Net.

The application that you submit **must have** the following;

1. The application should consist of **Two** of the following codes;
  - If...Then... Else...
  - Select Case
  - Do Until loop
  - Do While loop
  - For...Next and a For Each... Next loop
2. Codes should include:
  - Comment statements
  - Introduction statements
3. Radio buttons or check boxes (both)
4. Labels
5. Combo box
6. Text boxes
7. Buttons
8. All cost should be in currency format.
9. Have more than **TWO** forms

### **To change between forms:**

Hide – Me.Hide()

Show – frmxx.Show() ----- (xx means the name of the form)

| <b>CSC 103 – Programming Techniques<br/>RUBRIC</b> |  |   |   |   | <b>Total Points<br/>(30)</b> |     |
|--|--|---|---|---|------------------------------|-----|
|  | <b>Poor</b><br>1 points  | <b>Fair</b><br>2 points   | <b>Good</b><br>3 points   | <b>Excellent</b><br>4 - 5points   |                              |     |
| <b>User Interface</b>                              | User interface is incomplete   | User interface is half complete   | User interface almost complete  | User interface contains <b>ALL</b> the element required.  |                              | /5  |
| <b>Documentation</b>                               | Design specification is incomplete   | Design specification half complete  | Design specification is almost complete                                   | <b>All</b> methods contain comments describing author, the date, and what it is used for or what it is about. |                              | /5  |
|  | <b>Poor</b><br>0 - 4 points  | <b>Fair</b><br>5 - 6 points   | <b>Good</b><br>6 - 7 points   | <b>Excellent</b><br>8 - 10 points   |                              |     |
| <b>Algorithms</b>                                  | More than 15 errors<br>Did not follow Algorithm<br>Did not follow objectives | More than 10 errors<br>Follow algorithm but algorithm did not match equation  | Less than 5 errors<br>Correct algorithm<br>Followed all of the objectives | <b>No</b> errors<br>Correct algorithm<br>Followed all of the objectives                                       |                              | /10 |
| <b>Test and Debug</b>                              | Code does <b>NOT</b> Work  | Code runs as expected but user- controlled events do <b>NOT</b> work properly | Code runs as expected but <b>NOT</b> consistent                           | Code runs as expected with <b>NO</b> syntax or logic errors. User-controlled events work correctly.           |                              | /10 |
| <b>TOTAL</b>                                       |  |   |   |   |                              | /30 |