Raritan Valley Community College
Course Outline

CISY 224 - Introduction to Visual Basic.NET

I. Basic Course Information

A. Course number and Title: **CISY 224- Introduction to Visual Basic.NET**

B. Date of Proposal: **November 2006**

C. Course Developer: **Steve Schwarz**

D. Sponsoring Department **Computer Science**

E. Semester Credit Hours: **3**

F. Weekly Contact Hours: **4** Lecture __**2**__
Lab __**2**__

G. Prerequisites: CISY 103 - Computer Concepts and Programming

H. Laboratory Fees: **Yes, at current rate**

II. Catalog Description

(Prerequisite/s: Computer Concepts and Programmin; Corequisite/s: None) In this introductory course, students will learn how to create event driven, Windows based applications using the Visual Basic.NET programming language. Hands on laboratory exercises are emphasized.

III. Statement of Course Need

Visual Basic .NET provides the features that are most important to programmers, such as object oriented programming, strings, graphics, graphical-user-interface (GUI) components, exception handling, multithreading, multimedia (audio, images, animation and video), file processing, prepackaged data structures, database processing, Internet and World-Wide-Web-based client/server networking and distributed computing.

The language is appropriate for implementing Internet-based and World-Wide-Web-based applications that seamlessly integrate with PC-based applications. Visual Basic .NET is the latest phase in the evolution of Visual Basic, the world`s

most popular programming language. Both employers and students have requested this course.

IV. Place of Course in College Curriculum

- Required for Web Programming Certificate
- Required for Microsoft.NET Certificate
- Programming Elective
- Elective in CIS Curriculum
- Students from industry requiring further education
- Free Elective

V. Outline of Course Content

This course explores the following topics:

- Visual Basic.NET IDE
- Visual Basic.NET Basic Controls
- VB.NET datatypes
- Design time vs. Run time
- Shared functions
- Type conversions/casts
- Subprocedures
- Functions
- Passing by value vs. Passing by reference
- Regions
- Relational Operators
- If Blocks
- Select Case Blocks
- Do Loops
- For/Next Loops
- Single and Multidimensional arrays
- Structures
- Control Arrays
- Setting Breakpoints
- Try/Catch/Finally Blocks
- Server Explorer
- Data Tables
- Data Sets
- Data Adapters

VI. Educational Goals and Learning Outcomes

A. General Education Goals

After completion of this course, the student will be able to:

1. Apply creativity to problem solving; decision making; and quantitative reasoning (G.E. 1, 3, 4, 7)
2. Demonstrate proficiency in the use of an integrated development environment. (G.E. 3)
3. Build communication skills (effective writing and speaking) through collaborative learning, utilizing team projects and multi-tasking. (G.E. 2, 3, 6)

Student goals for this course:

At the conclusion of the course, students will be able to:

- Create a rudimentary calculator that allows a user to add, subtract, multiply, and divide two numbers.
- Compose a game that allows a user to guess a number between one and 100, states whether or not the number is higher or lower, and displays a specific message based upon the number of guesses the user requires to complete the game.
- Create a small application that demonstrates minimal code repetition.
- Connect an Access database to a Visual Basic.NET application.

VII. Modes of Teaching and Learning

* Lecture/Discussion
* Student Collaboration
* Computer-Assisted Instruction
* Laboratory

VIII. Papers, Examinations, and other Assessment Instruments

- To be determined

IX. Grade Determinants

* Homework - The student will complete homework assignments throughout the semester. The assignments will relate to the topics currently being discussed in class.
* Tests - Test questions will be multiple choice, short answer, fill in the blank, true/false, and coding.
* Computer Programs - Labs will be assigned during the course's duration. Students will be required to follow lab specifications to completion with a minimum of errors. Labs must also be clearly documented so other users may comprehend the code's purpose and logic.

X. Text and Materials

Suggested Textbook--Introduction to Programming with Visual Basic 2005 Sixth Edition
David I. Schneider
Prentice Hall

ISBN 0-13-030654-1

XI. Resources

http://msdn.microsoft.com/vbasic/
http://www.mvps.org/vbnet/
http://www.gotdotnet.com/team/vb/
http://vbwire.com/