ILLINOIS VALLEY COMMUNITY COLLEGE

Course Syllabus

Division: **Business and Engineering**
Course: **CSI 2205 – Advanced Visual Basic**

Date: July 5, 2004
Semester Hours: 3
Lecture hours per week: 2
Labs hours per week: 2
Prerequisite: CSI 1205
Semester Offered: Spring
Instructor(s):   Tannahill

I. CATALOG DESCRIPTION

Advanced programming in the Visual Basic language. Building on what students previously learned in CSI 1205, students will work with events, ActiveX controls, and reuse code with class modules. Students will learn how to develop a project for distribution.

II. EXPECTED LEARNING OUTCOMES AND RELATED COMPETENCIES:

Upon completion of the course, the student will be able to:
1. work with events
2. use Visual Basic with a database
3. use ActiveX controls with a database
4. use windows common controls
5. work with multiforms
6. reuse code with class modules
7. call a DLL function
8. create a program for distribution

Outcome 1 - Students will work with events
Competency 1.1 – Students will display/hide forms
Competency 1.2 - Students will understand form events
Competency 1.3 - Students will create Frame, OptionButton, ComboBox, ListBox, and CheckBox control arrays
Competency 1.4 - Students will understand keyboard, mouse, and recursive events
Competency 1.5 - Students will create menus and dialog boxes
Competency 1.6 - Students will use menu editor

Outcome 2 - Students will use Visual Basic with a database
Competency 2.1 - Students will use VB controls to interact with a database
Competency 2.2 - Students will use the recordset object to manipulate data
Competency 2.3 - Students will understand errors and database objects
Competency 2.4 - Students will use SQL

Outcome 3 - Students will use ActiveX controls with a database
Competency 3.1 - Students will add property pages to an ActiveX control
Competency 3.2 - Students will enable controls for the internet
Competency 3.3 - Students will create an ActiveX document project
Competency 3.4 - Students will use an ActiveX document container
Competency 3.5- Students will learn the basics of creating ActiveX controls
Competency 3.6- Students will create ActiveX events, properties, and methods

Outcome 4 - Students will use windows common controls

Competency 4.1 - Students will use the MSFlexGrid control
Competency 4.2 - Students will create a drill down interface

Outcome 5 - Students will work with multiforms
Competency 5.1 - Students will create a multiple document interface application
Competency 5.2 - Students will program the RichTextBox, CommonDialog, and ToolBar
controls

Outcome 6 - Students will reuse code with class modules
Competency 6.1 - Students will learn the fundamentals of a class module
Competency 6.2 - Students will create a class module
Competency 6.3 - Students will learn how class modules work
Competency 6.4 - Students will understand polymorphism
Competency 6.5 - Students will create a collection of objects
Competency 6.6 - Students will design an object hierarchy
Competency 6.7 - Students will create an ActiveX server

Outcome 7 - Students will call a DLL function
Competency 7.1 - Students will program using the windows registry
Competency 7.2 - Students will understand the basics of DLL
Competency 7.3 - Students will declare a DLL procedure
Competency 7.4 - Students will use ByVal and ByRet arguments in a DLL procedure

Outcome 8 - Students will create a program for distribution
Competency 8.1 - Students will understand the VB compiler
Competency 8.2 - Students will understand the VB setup wizard
Competency 8.3 - Students will add help to a program

III. COURSE CONTENT:

Introduction and requirements
Introduction to Visual Basic
Forms, events, and menus
Using VB with a database
Accessing a database with SQL and ActiveX
Using windows common control
Multiple forms

Creating a collection hierarchy
Creating and ActiveX control
ActiveX documents
Using internet controls
Creating VB programs for distribution

lV. INSTRUCTIONAL METHOD:

Lecture
Lab - hands-on training
Testing
Programming assignments
Teacher demonstration
Group work

V. INSTRUCTIONAL MATERIALS:

Computer overhead projection system
Computer lab

Developing Application with Microsoft Visual Basic Advanced Topics, Michael V. Ekedahl

Vl. STUDENT REQUIREMENTS AND METHODS OF EVALUATION:

Develop an understanding and/or a comprehensive knowledge of the items listed as course content.

Flowchart, code, compile, test, and document computer programming assignments and individual projects.

1. Read required material on the topic
2. Attend class on current topic
3. Complete all tests and homework
4. Ask questions about any misunderstood area either in class, during office hours, or of the tutor
5. Join in discussions

Grading Scale

A   90-100%
B   80-89%
C   70-79%
D   60-69%

There will be 2 tests given worth 100 pts each. 8-12 programming assignments will be completed worth 40 pts each. Pop quizzes will be given at the instructor's discretion worth 10 pts each.