



Course Name: Advanced Visual Basic

Course Number: CSC* E208

Credits: 4

Catalog description: A continuation of CSC* E205 Visual Basic I. Topics include more complex programming tasks involving advanced language elements, graphics, object-oriented programming, database connectivity, and interaction with the Windows environment.

The course requires substantial hands-on use of computers in a computerized classroom environment.

Prerequisite: CSC* E205 *or* permission of the instructor

Corequisite or Parallel:

General Education Competencies Satisfied:

HCC General Education Requirement Designated Competency Attribute Code(s):

None

Additional CSCU General Education Requirements for CSCU Transfer Degree Programs:

None

Embedded Competency(ies):

None

Discipline-Specific Attribute Code(s):

COMP Computer Science Elective

Course objectives:

General Education Goals and Outcomes:

None



Course Specific Objectives:

1. Develop Visual Basic programs that incorporate advanced Visual Basic controls, functions, and data structures
2. Develop object-oriented Visual Basic programs
3. Develop Visual Basic programs with graphical and multimedia capabilities
4. Develop Visual Basic programs that can access and manipulate sequential files and relational databases
5. Develop Visual Basic programs that can communicate with the external Windows environment

Course Content:

- Language elements
 - Controls supporting rich text, grids, dialogs, and menus
 - Control arrays
 - User defined data types, enumerated constants)
 - Event handling structures and procedures
 - Error handling and debugging
 - Global variables
 - Code modules
 - Class modules
 - Multiple Document Interface (MDI) forms
- Elements of Visual Basic object-oriented programming
 - Visual Basic object libraries
 - Collections
 - Custom properties of a form
 - Design of class modules
 - Properties
 - Methods
 - Property get, set, and let methods
 - Polymorphism
 - Visual Basic inheritance using Interfaces



- Visual Basic Graphics
 - Graphic controls
 - Drawing methods and properties
 - Image manipulation
 - Persistence and double-buffering
 - Color management
 - Animation
 - Multimedia
- Accessing and manipulating databases
 - File commands, file handling functions, and file objects
 - Introduction to relational databases and Structured Query Language (SQL)
 - Methods, properties, and events of database controls
 - Recordsets
 - Data binding
 - Database Objects
 - Database programming techniques
- Interacting with the Windows environment
 - Introduction to communicating with the Windows API.
 - Introduction to ActiveX control design.
 - Introduction to Visual Basic for Applications and VBScript
 - Introduction to communicating with other Windows applications

Date Course Created:

Date of Last Revision: 04/03/2017