

Common Course Outline
Common Course Outline
CMSC 108
Basic Programming II
3 Semester Hours

The Community College of Baltimore County

Description

Basic Programming II

Continues discussion of Visual BASIC with emphasis on structured programming concepts; includes writing menu-driven programs, multidimensional arrays, binary search, creating and using sequential files, creating and managing direct access files, and hashing.

Prerequisite: CMSC 107 or consent of instructor.

Overall Course Objectives

Upon successfully completing the course, students will be able to:

1. analyze problems to determine appropriate file structure.
2. use graphics to display mathematical data in Visual Basic.
3. use advanced Visual Basic controls and objects.
4. design database solutions.
5. communicate with Internet-based programs through Visual Basic.
6. analyze complicated problems to determine appropriate programming solutions.
7. convert input from random access files.
8. create multidimensional arrays and nested loops to handle multiple files of input and output.
9. organize code into nested sub procedures.
10. work in teams to develop several corporate style programs.

Major Topics

- I. Introduction to Sequential Files
 - A. Sorting and merging sequential files
 - B. Checks and deposits banking program application
- II. Random-Access Files
 - A. Creating, appending, writing and reading
 - B. Program for related student data in a teacher's random-access file.
- III. Using Graphics to Display Data
 - A. Specifying a coordinate system
 - B. Methods for drawing lines, points, and circles
 - C. Positioning text
 - D. Displaying line charts, bar charts, pie charts
- IV. Additional Controls and Objects
 - A. Displaying folder lists with ListBox
 - B. Inserting or selecting information with ComboBox
 - C. Other elementary controls

- D. Using Clipboard to move text
- E. Activating multiple forms with clicking
- V. Producing useful Dialogue Boxes with Common Dialogue control
- V. Database Management Introduction
 - A. Use of Data Control to read, modify, delete and add records
 - B. Moving records within databases
 - C. Designating fields as Primary Keys or Foreign Keys
 - D. Facilitating SQL requests
 - E. Creating methods for finding information
 - F. New databases with data-bound grid control and Visual Data Manager
- VI. Object-Oriented Programming
 - A. Classes of objects
 - B. Defining events to communicate property changes
 - C. Usage, containment, and inheritance
 - D. ActiveX controls
- VII. Communicating with Other Applications
 - A. OLE to join spreadsheets and word processing
 - B. VB to access Internet
 - C. VBScript for interactive web pages

Course Requirements

Grading: Grading procedures will be determined by the individual faculty member, will be provided the first week of class, and will include the following:

1. Computer Projects: Students will develop at least five computer projects. Programming time outside of class is required to complete projects.
2. At least two tests, exams, and/or quizzes: Individual faculty will notify students of the testing procedures to be used.
3. Comprehensive Final Exam: The course will include a comprehensive final exam, which may include a final project.
4. Final Grades: Grades will be determined by individual faculty members.

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.

The Community College of Baltimore County is committed to providing a high-quality learning experience that results in growth in knowledge, attitudes, and skills necessary to function successfully as a transfer student, in a career and as a citizen. To accomplish this goal, we maintain high academic standards and expect students to accept responsibility for their individual growth by attending classes, completing all homework and other assignments, participating in class activities and preparing for tests.

We take seriously our responsibility to maintain high-quality programs and will periodically ask you to participate in assessment activities to determine whether our students are attaining the knowledge, attitudes and skills appropriate to various courses and programs. The assessment activities may take many different forms such as surveys, standardized or faculty-developed tests, discussion groups or portfolio evaluations. We ask that you take these activities seriously so that we can obtain valid data to use for the continuous improvements of CCBC's course and programs.