

**NorthWest Arkansas Community College
Business and Computer Information Course Outline**

PROG 1103 VISUAL BASIC PROGRAMMING (S)

Catalog Description

This course will provide an introduction to Windows programming using the Visual Basic Programming language. Students will gain knowledge of object-oriented programming fundamentals. Specific features of the Visual Basic language covered include variables, controls, input and output, data types, flow-of-control constructs, arrays, strings, multiple forms, methods and classes, database connectivity, exception handling, and file I/O. Prerequisites: PROG 1003 Beginning Basic Programming or prior programming experience and MATH 1204 College Algebra (may be co-requisite). (Outside lab time will be required.)

Prerequisite

PROG 1003 Beginning Basic Programming or equivalent programming experience
MATH 1204 College Algebra (may be a co-requisite)

Credit Hours: 3

Target Audience

This course is for students seeking self-improvement and/or the AAS degree in Computer Information

General Course Objectives

Knowledge:

Understand structured program design concepts.
Demonstrate competence of structured programming concepts by designing solutions to various selected problems.
Implement those designs as Windows applications that incorporate basic Windows elements such as menus, common controls, and dialog boxes.

Critical Thinking:

Analyze problems, develop an algorithm, incorporate the algorithm into a Windows application, and test and evaluate the application's output.

Academic Skills:

Apply computational and algebraic skills to problems.

Required Text

Programming with Microsoft Visual Basic .NET: An Object-Oriented Approach,
Michael Ekedahl and William Newman, Course Technology: 2004. ISBN 0-619-23920-4
(w/software) OR ISBN 0-619-01658-2 (w/o software).

Topics/Software

Software: Microsoft Visual Basic .NET 2003

Topics:

Using the Visual Basic Editor
Common controls
Creating single form projects
Creating multiple form projects
Menus
Programming control structures:
 sequence, selection, and
 repetition

Common dialog boxes
Arrays and objects
Accessing a database with Visual Basic
Using data controls in an application
File input and output
Other controls:
 list boxes, combo boxes, DateTimePicker,
 RadioButtons, CheckBoxes, DataGrid,
 scroll bars, etc.

Required Instructional Activities

It is required that all instructors who teach this course cover all topics listed above. If difficulties arise, early contact must be made with the lead faculty to find and share ideas to deliver remaining content. Naturally, no optional section can be done in lieu of required sections.

Individual instructor's syllabi must contain required components. The upper portion of this course outline may be distributed but is not sufficient alone as a syllabus.

Laboratory exercises, consisting of designing and implementing various programming projects, should average 3 hours per week. Outside lab time will be required.

Computer Lab: Students will require additional time in the computer lab to complete Programming projects.

Projects/ Assignments: Outside programming projects plus a Final Programming project.

Required Forms of Assessment

Chapter quizzes
Programming project for each chapter
Final Programming Project

Resources

Open access computer lab