

METROPOLITAN STATE COLLEGE OF DENVER
Office of Academic Affairs

REGULAR COURSE SYLLABUS

School of Letters, Arts Sciences

Department: Mathematical and Computer Sciences

Semester(s) Offered: All

Prefix & Course Number: CSS 1247

Course Title: Introduction to Programming: Visual Basic

Credit Hours: 4 (4+0)

Contact Hours: Lecture 60 Lab 0 Internship 0 Practicum 0

Schedule Type(s): Lecture **Grading Mode(s):** Letter

Prerequisite(s): CSS 1010, or equivalent knowledge, and satisfaction of the General Studies Level I Mathematics requirement or permission of instructor

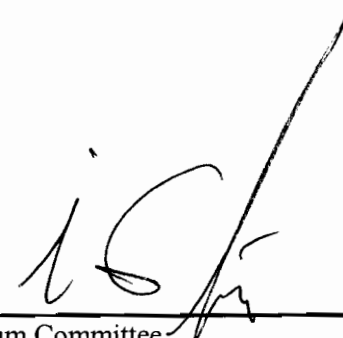

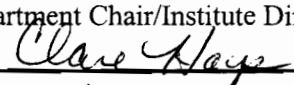
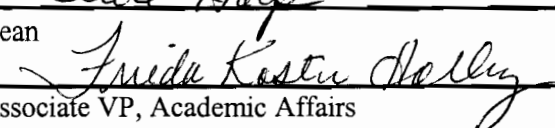
Corequisite(s): none

Catalog Course Description:

This is an introductory computer programming course in which the major elements of Visual Basic are taught. Visual Basic is one of Microsoft's versions of Basic and was created to specialize in easy graphical user interface development. It is an object-based programming language with many characteristics of object oriented programming languages. Students will write programs to solve problems selected from a variety of applications.

Required Reading Materials (Title, Author, Publisher, Copyright Date):

Visual Basic Programming: A Laboratory Approach, by Judith L. Gersting, Freeman, 1996

APPROVED:		9-14-01
Department Curriculum Committee		Date
		9-14-01
Department Chair/Institute Director		Date
		9-17-01
Dean		Date
		11-1-01
Associate VP, Academic Affairs		Date

*If crosslisted, attach completed Course Crosslisting Agreement Form

Specific (Measurable) Student Behavioral Learning Objectives:

Upon completion of this course the student should be able to:

1. design and write a simple event-driven program in Visual Basic
2. create user interfaces using the Visual Basic Toolbox including menus
3. utilize Visual Basic's intrinsic functions in a program
4. determine the scope of procedures, variables, and controls in a Visual Basic program
5. write functions and procedures in Visual Basic
6. utilize looping, if-then-else, and select-case in a Visual Basic program
7. use the debugging facilities of Visual Basic
8. design and write a Visual Basic program that uses simple animation
9. utilize one- and two-dimensional arrays in a Visual Basic program
10. design and write a Visual Basic program that uses files

Outline Of Course Content (Major Topics and Subtopics)

- I. HOW VISUAL BASIC PROGRAMS WORK
 - a. Introduction to Visual Basic
 - b. Event-driven Programming
- II. USER INTERFACE
 - a. Visual Basic Toolbox
 - b. Menus
- III. INPUT AND OUTPUT
- IV. DATA MANIPULATION
 - a. Arithmetic Expressions
 - b. String Expressions
- V. PROCEDURES
 - a. Scope
 - b. Parameter Passing
 - c. User-defined Functions
- VI. CONDITIONAL PROCESSING AND LOOPING
 - a. Boolean Expressions
 - b. Selection
 - c. Looping
 - d. Searching
 - e. Debugging
- VII. DATA STRUCTURES
 - a. One-dimensional Arrays
 - b. Sorting and Searching
 - c. Two-dimensional Arrays
- VIII. FILES
 - a. Sequential Files
 - b. Random Access Files
 - c. Message Boxes
- IX. GRAPHICS AND ANIMATION

To the extent allowed by available display technology in the classroom, that technology will be appropriately incorporated into classroom presentations, including compare and contrast techniques.

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September 2001

Evaluation Of Student Performance:

1. Homework and programming assignments
2. Quizzes and examinations
3. Final examination
4. Research papers and/or book reports
5. Oral presentations

As determined by the instructor