

COURSE OUTLINE

CMSY-178

Introduction to Database Application Development

3 Semester Hours

HOWARD COMMUNITY COLLEGE

Description

This course is designed to give students the knowledge and experience to be proficient database developers. The student will learn the fundamentals of relational databases and the kinds of applications that are suited to them. Project management for database application design and development will be emphasized. Students will learn to create and use database objects according to project requirements. The student will use Microsoft Access 2000 and Visual Basic for Applications (VBA). Prerequisite: CMSY-110. (3 hours lecture, 1 hour lab)

Overall Course Objectives

Upon completion of this course, the student will be able to:

1. Describe the functions and capabilities of a relational database.
2. Describe database objects.
3. Create Database tables.
4. Use table relationships and referential integrity.
5. Create Queries using the Access query designer and Structured Query Language.
6. Create Screens for reviewing and editing data.
7. Use form controls and their properties to create an effective user interface.
8. Create reports to given desired output.
9. Use Visual Basic for Applications and event procedures to add functionality to database screens.
10. Use ActiveX Data Objects (ADO) and Data Access Objects (DAO) to manipulate data.
11. Implement error handling code in VBA Code.
12. Document a database application.
13. Manage a database development project.

Major Topics

- I. Access 2000 Environment
- II. Database Structure
- III. Table Normalization
- IV. Structured Query Language
- V. Building and using queries
- VI. Building and using tables
- VII. Building and using forms
- VIII. Building and using Reports
- IX. Database analysis
- X. Visual Basic for Applications commands for Access 2000
- XI. Managing a database project
- XII. Manipulating data using Data Access Objects and ActiveX Data Objects

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member but will include the following: one exam, one database analysis and one database project.