

DBA 115
DATABASE APPLICATIONS

COURSE DESCRIPTION

Prerequisites: DBA 110

Corequisites: None

This course applies concepts learned in DBA 110 to a specific DBMS. Topics include manipulating multiple tables, advanced queries, screens and reports, linking, and command files. Upon completion, students should be able to create multiple table systems that demonstrate updates, screens, and reports representative of industry requirements. Course Hours Per Week: Class, 2. Lab, 2. Semester Hours Credit, 3.

COURSE OBJECTIVES:

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

- a. Understand and explain the difference between an application and a database.
- b. Understand and explain how Visual Basic for Applications compares to and differs from other programming languages
- c. Use the on-line help system from within the VBA environment
- d. Understand and explain the importance of breaking a program into procedures.
- e. Describe the fundamental language elements of VBA
- f. Use the looping, comparison, and selection language constructs to write programs that correctly flow and control computations to produce accurate and readable code.
- g. Correctly use built-in data-manipulation, numeric, string, date, time, and financial functions in a program.
- h. Understand the use of single- and multidimensional arrays to store data.
- i. Understand and use the elements of Table I/O to interact with table, queries, and dynasets.

OUTLINE OF INSTRUCTION:

- I. Review of Database Basics
 - A. Database design considerations
 - B. Tables
 - C. Forms
 - D. Queries
 - E. Reports

II. Access Integration with the Web and Other Programs

- A. Exporting Access objects to HTML documents
- B. Data Access Pages
- C. PivotTables
- D. PivotCharts
- E. Introduction to XML
- F. Exporting a Query to Excel
- G. Using Hyperlinks

III. Advanced Queries and Table Relationships

- A. Advanced Select Queries
- B. Action Queries
- C. Relationships
 - 1. One-to-Many
 - 2. Many-to-Many
 - 3. One-to-One
- D. Using Indexes
- E. Join Properties

IV. Working with Macros

- A. Running
- B. Editing
- C. Single Stepping
- D. Creating
- E. Macro Groups
- F. Working with Command Buttons
- G. Introduction to SQL
- H. Switchboards

V. Introduction to Visual Basic for Applications

- A. Events
- B. Procedures
- C. Modules
- D. Creating a Function in a Standard Module
- E. Creating an Event Procedure

VI. Managing and Securing a Database

- A. Performance Analyzer
- B. Documenter
- C. Linked Table Manager
- D. Database Replication
- E. Splitting a Database
- F. Database Startup options
- G. Securing a Database
- H. Establishing User-Level Security

REQUIRED TEXTBOOKS AND MATERIALS:

Pratt and Adamski. Concepts of Database Management. 5th ed. Thomson/Course Technology. ISBN 0619215291

Adamski and Finnegan. Microsoft Access 2002. Thomson/ Course Technology. ISBN 061902089X

Bundle of above: ISBN 1418808350

STATEMENT FOR STUDENTS WITH DISABILITIES:

Students who require academic accommodations due to any physical, psychological, or learning disability are encouraged to request assistance from a disability services counselor within the first two weeks of class. Likewise, students who potentially require emergency medical attention due to any chronic health condition are encouraged to disclose this information to a disability services counselor within the first two weeks of class. Counselors can be contacted by calling 686-3652 or by visiting the Student Development Office in the Phail Wynn Jr. Student Services Center, room 1309.