

COURSE OUTLINE

MAP II: Advanced Applications - Access

Course Description

BE 280. MAP II: Advanced Applications - Access. 3 hours credit. Prerequisite: BE 180 or BA 104 with a C or better or consent of instructor. This course will enable the student to apply advanced functions of Microsoft Access. This course will prepare the student to take the Microsoft Certified Application Specialist test.

Course Relevance

The applications learned in this course will allow the student to effectively utilize current database management software. The applications and principles learned in this course are relevant to any career field.

Required Materials

Seguin, D. (2008) *Level 2 Microsoft access 2007* (Windows XP edition). St. Paul, MN: Paradigm Publishing, Inc.

SNAP Training and Assessment for Microsoft Office 2007

512Mb or larger flash drive

Supplemental Materials

Software: Microsoft Office 2007 Professional or Ultimate version, Windows XP or Windows Vista, Internet Access

Learning Outcomes

The intention is for the student to be able to:

1. Utilize database management features to complete tasks.
2. Complete tasks similar to those on the Microsoft Certified Application Specialist test.

Learning PACT Skills that will be DEVELOPED and/or documented in this course

Through involvement in this course, the student will develop ability in the following PACT skill areas:

Analytical Thinking Skills

1. Problem solving
 - By applying skills learned in lessons, the student will use software applications to solve problems associated with databases.

Communication Skills

1. Reception and interpretation of messages
 - By reading and deciphering skill-based tasks, the student will then execute the task.

Technology Skills

1. General computer use
 - Through a variety of activities, the student will utilize current Microsoft Office database software to create, store, retrieve, and modify files to produce and disseminate tables, forms, queries, and reports.

Major Summative Assessment Task(s)

These learning outcome(s) and the Learning PACT skill(s) will be demonstrated by

1. Completing computer (T skill) generated tasks (C skill) using an assessment program to demonstrate the student's ability to solve problems (A skill) by using software applications in a proficient manner.

Course Content

- I. Skills or Competencies – Actions that are essential to achieve the course outcomes:
 - A. Structuring a database in Microsoft Access 2007
 1. Define data needs and types
 2. Define and print table relationships
 3. Add, set, change, or remove primary keys
 4. Split databases
 - B. Creating and formatting database elements in Microsoft Access 2007
 1. Create databases
 2. Create tables
 3. Modify tables
 4. Create fields and modify field properties
 5. Create forms
 6. Create reports
 7. Modify the design of reports and forms
 - C. Entering and modifying data in Microsoft Access 2007
 1. Find and replace data
 2. Attach documents to and detach from records
 3. Import data
 4. Link to external data sources
 - D. Creating and modifying queries in Microsoft Access 2007
 1. Create queries
 2. Modify queries
 - E. Presenting and sharing data in Microsoft Access 2007
 1. Sort data
 2. Filter data
 3. Create and modify charts
 4. Export data
 5. Save database objects as other file types
 - F. Managing and maintaining databases in Microsoft Access 2007
 1. Perform routine database operations
 2. Manage databases
- II. Themes – Key occurring concepts that run throughout this course:
 - A. Proper use of software features
 - B. Technological Tools and Skills

- III. Issues – Key areas of conflict that must be understood in order to achieve the intended outcome:
 - A. Reading comprehension
 - B. Following instructions
 - C. Completing tasks to the degree of approval
- IV. Concepts – Key concepts that must be understood to address the issues:
 - A. Task completion
 - B. Time management
 - C. Keyboarding skills

Learning Units

- I. Designing the structure of tables
 - A. Design the structure of tables to optimize efficiency and accuracy of data
 - B. Select the appropriate field data type based on analysis of source data
 - C. Add captions to fields for descriptive purposes
 - D. Disallow blank field values
 - E. Allow or disallow zero-length strings in a field
 - F. Create a custom format for text, number, and date fields
 - G. Create a custom input mask
 - H. Define rich text formatting for a memo field
 - I. Define and use an attachment field with multiple attachments
- II. Designing and building relationships and lookup fields
 - A. Design relationships between tables including one-to-many, one-to-one, and many-to-many relationships
 - B. Edit relationship options, including specifying the join type
 - C. Define a table with a multiple-field primary key
 - D. Create a lookup field to populate records with data from another table
 - E. Modify a lookup field's properties
 - F. Create a field that allows multiple values
 - G. Create single-field and multiple-field indexes
 - H. Define what is meant by normalization
 - I. Determine if a table is in first, second, and third normal form
- III. Advanced query techniques
 - A. Save a filter as a query
 - B. Create and run a parameter query to prompt for criteria
 - C. Add and remove tables to and from a query
 - D. Create an inner join, left join, and right join to modify query results
 - E. Create a self-join to match two fields in the same table
 - F. Create a query that includes a subquery
 - G. Assign an alias to a table and a field name
 - H. Select records using a multi-valued field in a query
 - I. Create a new table using a make-table query
 - J. Remove records from a table using a delete query
 - K. Add records to the end of an existing table using an append query

L. Modify records using an update query

IV. Creating and using custom forms

- A. Create a custom form in Design view using all three form sections
- B. Add fields individually and as a group
- C. Move, size, and format control objects
- D. Change the tab order of fields
- E. Create tabbed pages in a form and inset a subform on each page
- F. Add and format a calculation to a custom form
- G. Group and ungroup multiple controls
- H. Adjust the alignment and spacing of controls
- I. Add graphics to a form
- J. Anchor a control to a position in the form
- K. Create a datasheet form
- L. Modify form properties to restrict actions allowed in records
- M. Sort records in a form and locate a record using a wildcard character

V. Creating and using custom reports

- A. Create a custom report in Design view using all five report sections
- B. Add bound and unbound control objects to a report
- C. Move, size, format, and align control objects
- D. Apply an AutoFormat to a report
- E. Insert a subreport into a report
- F. Add page numbering, date and time controls
- G. Add graphics to a report
- H. Group records and add aggregate functions and grand totals to a group
- I. Modify section or group properties to control print options
- J. Create and modify charts in a report

VI. Using Access tools and managing objects

- A. Create a new database using a template
- B. Create a new table using a table template
- C. Create a table by copying the structure of another table
- D. Evaluate a table using the Table Analyzer Wizard
- E. Evaluate a database using the Performance Analyzer
- F. Split a database
- G. Print documentation about a database using the Database Documenter
- H. Rename and delete objects

VI. Automating, customizing, and securing Access

- A. Create, edit, and run a macro
- B. Assign a macro to a command button on a form
- C. Create and edit a switchboard form
- D. Configure the database to display a form at startup and show an application title

- E. Show and hide the navigation pane
- F. Customize the navigation pane by hiding objects
- G. Define error checking options
- H. Encrypt a database by assigning a password
- I. Create an .accde database file
- J. View trust center settings

VII. Integrating Access data

- A. Import data from another Access database
- B. Link to a table in another Access database
- C. Determine when to import versus link from external sources
- D. Reset or refresh links using Linked Table Manager
- E. Import data from a text file
- F. Save import specifications
- G. Export data in an Access table or query as a text file
- H. Save and run export specifications
- I. Save an object as an XPS file

Learning Activities

Learning activities will be assigned to assist the student to achieve the intended learning outcome(s) through instructor-led demonstration and class discussion, drills/skill practice and other activities at the discretion of the instructor.

Grade Determination

The student will be graded on learning activities and assessment tasks. Grade determinants may include the following: daily work, quizzes, chapter or unit tests, comprehensive examinations, projects, presentations, class participation, and other methods of evaluation employed at the discretion of the instructor.