This course will prepare students to use MS Office ACCESS to design and create a database by creating tables, determining the Primary keys, any additional fields, and determining and implementing relationships between tables; and design and create queries, forms, and reports. Topics include managing the Access environment; building tables; building forms; creating and managing queries; and designing reports. This course, together with CBA G166, reviews the skills needed to prepare for the ACCESS Core Microsoft Office Specialist Exam (MOS).
COURSE LEVEL STUDENT LEARNING OUTCOME(S) Supported by this course:

1. Describe relational databases; explore a database; create a database, table, and primary keys; relate two tables; enter and edit data. Use the Query Wizard and Query Design View to create queries; work with and sort and find data in a query; filter data, apply AND and OR criteria; and format a datasheet.

2. Create forms by using the Form Wizard and Form Layout View; create a split form, add fields to a form, modify form controls and the tab order; create calculations and insert an image in a form. Use the Report Wizard and Report Layout View to create a report; describe report sections, apply group and sort orders, add subtotals and counts, and resize and align controls; format a report; and create mailing labels.

3. Examine relational databases, design related tables, and create one-to-many relationships; create lookup and attachment fields; modify Short Text, Number and Currency, Data/Time fields, and validation properties. Create multitable queries and apply sorts and view SQL; develop AND and OR criteria in a query; create calculated fields and create a report on a query; build summary and crosstab queries.

4. Create a form using Form View and align control edges; add subforms and combo boxes for data entry and to find records; add command buttons, option groups, and tab controls. Create parameter and summary reports and add subreports to a report; apply conditional formatting, add lines, use Format Painter and themes, and modify section properties to reports.

COURSE OBJECTIVES:

1. Create and manage a database and configure the navigation pane.
2. Create and modify tables, fields, records, primary keys, and relationships.
3. Create and modify forms using form design tools and formatting controls.
4. Create and manage queries, manipulate fields, calculate totals and generate calculated fields.
5. Create and design reports using report design tools and the Report Wizard, and sort and filter records for reporting.

COURSE CONTENT:

LECTURE CONTENT:

A. Introduction to Access
   1. Databases are everywhere
      a. Navigating among the objects in an Access database
      b. Understanding the difference between working in storage and memory
      c. Practicing good database file management
      d. Backing up, compacting, and repairing Access files
   2. Filters, sorts, and Access versus Excel
      a. Creating filters
      b. Sorting table data on one or more fields
      c. Knowing when to use Access or Excel to manage data
   3. Relational database
      a. Using the relationships window
      b. Understanding relational power

B. Relational databases and queries
   1. Table design, properties, views, and wizards
      a. Designing data
      b. Creating tables
   2. Multiple table databases
      a. Understanding table relationships
      b. Sharing data with Excel
c. Establishing table relationships
3. Single-table queries
   a. Creating a single-table query
   b. Specifying criteria for different data types
   c. Copying and running a query
   d. Using the query wizard
4. Multi-Table Queries
   a. Creating a multi-table query
   b. Modifying a multi-table query

C. Customize, analyze, and summarize query data
1. Calculations, expressions, and functions
   a. Understanding the order of operations
   b. Creating a calculated field in a query
2. Expression builder, functions, and date arithmetic
   a. Creating expressions with the expression builder
   b. Using built-in functions in Access
   c. Performing date arithmetic
3. Aggregate functions
   a. Adding aggregate functions to datasheets
   b. Adding aggregate functions to queries

D. Creating and using professional forms and reports
1. Form basics
   a. Creating forms using the form tools
   b. Modifying a form
   c. Sorting records in a form
2. Form sections, views, and controls
   a. Identifying form sections
   b. Revising forms using form views
   c. Identifying control types in forms
3. Report basics
   a. Creating reports using report tools
   b. Modifying a report
   c. Sorting records in a report
4. Report sections, views, and controls
   a. Identifying report sections
   b. Revising reports using report views
   c. Identifying control types in reports

LABORATORY CONTENT:
A. Managing the Access environment
   1. Create and manage a database by using Save Object As, Open, Save and Publish, Compact & Repair Database, and Encrypt with Password commands, creating a database from a template, and setting Access options.
   2. Configure the Navigation Pane by renaming objects, deleting objects, and setting Navigation options.
   3. Apply Application Parts by using Blank Forms, Quick Start, and user templates.

B. Building Tables
   1. Create tables in Design View.
   2. Create and modify fields by inserting a field, deleting a field, renaming a field, Hide or Unhide fields, Freeze or Unfreeze fields, modifying data types, modifying the field description, and modifying field properties.
3. Sort and filter records by using Find, Sort, and Filter commands.
4. Set relationships by defining Primary Keys, using Primary Keys to create Relationships, and editing Relationships.
5. Import data from a single data file by importing source data into a new table, appending records to an existing table, and importing data as a linked table.

C. Building Forms
1. Create forms using the Form Wizard, creating a Blank Form, using Form Design Tools, and creating Navigation forms.
2. Apply Form Design Tab options by using the Themes, Controls, Header/Footer, and Tools groups.
3. Apply Form Arrange Tab options by using the Table, Move, and Position groups.
4. Apply Form Format Tab options by using the Background and Control formatting groups.

D. Creating and Managing Queries
1. Construct queries by using Select, Make Table, Append, and Crosstab query types.
2. Manage source tables and relationships by using the Show Table and Remove Table commands, and creating ad hoc relationships.
3. Manipulate fields by adding, removing, and rearranging fields, and using Sort and Show options.
4. Calculate totals using the Total row and using Group By.
5. Generate calculated fields by performing calculations, using the Zoom box, and using Expression Builder.

E. Designing Reports
2. Apply Report Design Tab options by using the Themes, Grouping & Totals, Controls, Header/Footer, and Tools groups.
3. Apply Report Arrange Tab options using the Table, Move, Position, and Sizing & Ordering groups.
4. Apply Report Format Tab options by adding color, background images, and conditional formatting.
6. Sort and filter records for reports using the Find, Sort, and Filter commands, and using view types.

METHODS OF INSTRUCTION:

A. Lecture:
B. Lab:
C. Online:
D. Independent Study:

INSTRUCTIONAL TECHNIQUES:

COURSE ASSIGNMENTS:

Reading Assignments

Textbook
SimNet for Office 2010 (optional)

Out-of-class Assignments

Additional challenge exercises may be assigned and completed to further demonstrate competency in using ACCESS.

Writing Assignments

Projects will be completed that demonstrate technology competencies using the Microsoft Access application software.
METHODS OF STUDENT EVALUATION:
Midterm Exam
Final Exam
Short Quizzes
Objective Examinations
Projects (ind/group)
Problem Solving Exercises
Skills Demonstration

Demonstration of Critical Thinking:
Design, develop, and create Access database objects such as tables, queries, forms, and reports.

Required Writing, Problem Solving, Skills Demonstration:
Projects will be completed that demonstrate technology competencies using the Microsoft Access application software.

TEXTS, READINGS, AND RESOURCES:
TextBooks:

Other:
1. Handouts
2. Disk
3. Printer Paper

LIBRARY:
Adequate library resources include:

Comments:

Attachments:
Attached Files