

**AUSTIN COMMUNITY COLLEGE  
CONTINUING EDUCATION**

**INTERMEDIATE DATABASE/FILE AMANGEMENT  
(Microsoft Access Intermediate)**

(9 hours)

**ITSW 1055**

**COURSE SYLLABUS**

**Course Description:** Instruction in data validation, data manipulation, browsing through records, records selection and query, indexing, and sorting. Topics include modifying tables, using database wizards, creating action queries, working with subforms and subreports. Prerequisites: Access Introduction or equivalent experience.

**Objectives:** Every student will be able to:

- Use templates and different views
- Modify field properties in tables
- Work with related tables
- Create, delete, and modify relationships
- Create different types of queries
- Create and use forms and subforms
- Use advanced form features
- Create and use reports and subreports
- Use advanced report features
- Create and run macros
- Import, export and link data

**Rationale:** MS Access is one of the most popular database programs used in the business community. This course will enable students to enhance their database skills and create professionally looking document.

**Required Material:** None

**Type of Course:** Short Course

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**Evaluation:** Students will be evaluated on their competency in performing a variety of hands-on exercises throughout the course. In order to grant CEU credit for a course the students must be able to complete assessment exercises for each part of the course given by the instructor. The instructor will validate each participant's achievement of the course objectives by signing and awarding individual certificates of completion.

**Course Outline:**

- I. WHAT'S NEW
  - 1. New features in Access 2007
  - 2. Database templates
  - 3. Using local templates
  - 4. Downloading templates
  - 5. Enhanced Datasheet View
  - 6. New Layout View
  - 7. Improved Interface
  
- II. SECURITY ISSUES & THE TRUST CENTER
  - 1. Security warnings
  - 2. Trusted Locations - Trust Centre
  - 3. Setting the default folder location within Access
  
- III. TABLES
  - 1. MODIFYING FIELDS
    - a. Applying and modifying data types
    - b. Modifying column data types
    - c. Formatting Text data type
    - d. Formatting Memo data type
    - e. Examples of formatting a text box or memo
    - f. Formatting Hyperlink data type
    - g. Formatting Currency data type
    - h. Formatting Date/Time data type
    - i. Database object naming conventions
    - j. Data types

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- k. Converting between data types
  - l. Changing a field to a different data type
  - 2. LOOKUP FIELDS
    - a. Creating and editing a lookup in a field or column
    - b. Creating a lookup from values in a table or query
    - c. Creating a lookup from values you type in
  - 3. VALIDATION RULES
    - a. Creating a validation rule within a field
  - 4. INPUT MASKS
    - a. Creating an input mask in a field
  - 5. DEFAULT VALUES
    - a. Applying a default value to a field
  - 6. MANDATORY FIELDS
    - a. Setting a required field
  - 7. CREATING A TABLE
    - a. Creating a new table
- IV. RELATIONSHIPS
- 1. BASICS OF RELATIONSHIPS
    - a. Issues relating to creating valid relationships
    - b. Identifying a related table
    - c. Creating a relationship
    - d. Deleting a relationship
    - e. Creating a primary key and a composite key
  - 2. TYPES OF JOINS IN A RELATIONSHIP
    - a. One-to-one
    - b. One-to-many
    - c. Many-to-many
  - 3. CREATING RELATIONSHIPS
    - a. Creating a one-to-one relationship
    - b. Modifying one-to-one relationship
    - c. Creating a one-to-many relationship
    - d. Modifying one-to-many relationship
    - e. Creating many-to-many relationships

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4. APPLYING INNER AND OUTER JOINS
    - a. Applying an inner join
    - b. Applying an outer join
  5. APPLYING AND USING REFERENTIAL INTEGRITY
    - a. Setting referential integrity
  6. APPLYING AUTOMATIC DELETION OF RELATED RECORDS
    - a. Setting cascading options
- V. QUERIES
1. QUERY TYPES
    - a. Enabling the content
    - b. Creating and using a query to update data in a table
    - c. Populating data in the tables
    - d. Creating an Update Query
    - e. Creating and using a query to delete data within a table
    - f. Creating a Delete Query
    - g. Creating and using a query to save the selected information as a table
    - h. Creating a Make-Table Query
    - i. Appending records to a table using query
    - j. Creating an Append Query
  2. GROUPING INFORMATION IN A QUERY
    - a. Using Aggregate Functions
    - b. Counting column values using the COUNT function
    - c. Summing column values using the SUM function
    - d. Averaging column values using the AVG function
    - e. Finding minimum column values using the MIN function
    - f. Finding maximum column values using the MAX function
    - g. Using a crosstab query
    - h. Creating a crosstab query
    - i. Creating a crosstab query using Crosstab Wizard
    - j. Using wildcards as parameters
  3. USING ARITHMETIC OR LOGICAL EXPRESSIONS IN A QUERY
    - a. Creating an arithmetic calculation within a query
    - b. Creating a logical (condition based) expression within a query

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4. REFINING A QUERY
  - a. Finding duplicates using the Find Duplicates Query Wizard
  - b. Finding unmatched values using the Find Unmatched Query Wizard
  - c. Finding the lowest range of values within a query
  - d. Finding the highest range of values within a query
  - e. Creating a parameter query
  - f. Finding Null values
  - g. Finding NOT values
  
- VI. FORMS
  1. CREATING BOUND AND UNBOUND CONTROLS
    - a. Creating an unbound control
    - b. Creating a bound control
  2. CREATING A COMBO BOX, LIST BOX, CHECK BOX & OPTION GROUPS
    - a. Creating a combo box
    - b. Creating a list box
    - c. Creating a check box
    - d. Creating an option button
    - e. Creating an option group
  3. CREATING ARITHMETIC / LOGICAL EXPRESSION CONTROLS
    - a. Creating an expression control
    - b. Creating an arithmetic expression control
    - c. Creating a logical expression control
  4. CREATING A FORM USING THE FORM WIZARD
    - a. Creating a form with Form Wizard
  5. SETTING SEQUENTIAL ORDER OF CONTROLS ON A FORM
    - a. Setting tab index for controls on a form
  6. CREATING FORM HEADERS OR FOOTERS
    - a. Creating a form header and footer area
    - b. Numbering a form page
  7. CREATING A SUBFORM AND LINKING TO THE MAIN FORM
    - a. Using a subform
    - b. Adding a subform to a form

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8. MODIFYING THE SUBFORM TO CHANGE RECORDS DISPLAYED
  - a. Bringing a subtotal from a subform to a main form
  
- VII. REPORTS
  1. CREATING ARITHMETIC / LOGICAL CALCULATION CONTROLS
    - a. Placing a control on a report
    - b. Creating an arithmetic expression control
    - c. Creating a logical expression control
  2. USING FORMULAS AND EXPRESSIONS
    - a. Using common functions in a report
    - b. Using count and sum calculations within a report
    - c. Using sum min, max and average calculations within a report
    - d. Concatenating (combining) values within an expression
  3. CREATING RUNNING SUMMARIES
    - a. Creating a report with running summaries
  4. PRESENTATION
    - a. Creating page headers and footers
    - b. Creating report headers and footers
    - c. Grouping records on a report
  5. FORCING PAGE BREAKS FOR GROUPS ON REPORTS
    - a. Forcing page breaks after each group of records
  
- VIII. MACROS
  1. Creating a new macro
  2. Running a macro
  3. Using the single step method to run a macro
  4. Attaching a macro to a form control
  5. Attaching a macro to a report control

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- IX. IMPORTING, EXPORTING AND LINKING DATA**
- 1. IMPORTING DATA**
    - a. Importing from a text file
    - b. Importing from an Excel spreadsheet
    - c. Importing from a dBase file
    - d. Importing from a Paradox file
  - 2. EXPORTING DATA**
    - a. Exporting data to a text file
    - b. Exporting data as an Excel spreadsheet file
    - c. Exporting data to a dBase file
    - d. Exporting data to a Paradox file
    - e. Linking external data to a database
    - f. Linking to an external text file
    - g. Linking to an Excel worksheet