

**AUSTIN COMMUNITY COLLEGE
CONTINUING EDUCATION**

**ADVANCED DATABASE/FILE MANAGEMENT
(Access Advanced)**

(12 hours)

ITSW 2047

COURSE SYLLABUS

Course Description: Advanced concepts of relational database management, hierarchical models, network models, relational models, table merging, relational capabilities, report generation, security features, data file transfer, graphics support, and macro commands. Learn how to create switchboards, how to use hyperlinks, how to create and run macros, how to use database utilities. Prerequisites: Access Intermediate or equivalent experience.

Objectives: Every student will be able to:

- Identify differences in various data models
- Generate reports based on complex queries
- Implement security features to address security issues relating to database management
- Write macro commands to automate database management tasks
- Use advanced tools and controls
- Customize forms
- Create different types of forms
- Create and customize reports and subreports
- Create, edit and delete switchboard
- Customize Access

Rationale: MS Access is one of the most popular database programs used in the business community. This course will help students to use this application to create and manage professional databases.

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:

1. RELATIONSHIPS – REVIEW

- 1.1. What Is A One-To-One Relationship?
- 1.2. Creating A One-To-One Relationship
- 1.3. Modifying A One-To-One Table Relationship
- 1.4. Deleting A One-To-One Table Relationship
- 1.5. What Is A One-To-Many Table Relationship?
- 1.6. Creating A One-To-Many Relationship
- 1.7. Modifying A One-To-Many Relationship
- 1.8. Deleting A One-To-Many Relationship
- 1.9. What Is A Many-To-Many Relationship?
- 1.10. Creating A Many-To-Many Relationship Using A Junction Table
- 1.11. Modifying Or Deleting A Many-To-Many Relationship
- 1.12. What Is Referential Integrity?
- 1.13. Enforcing Referential Integrity
- 1.14. Applying Automatic Updating Of Related Fields
- 1.15. Applying Automatic Deletion Of Related Records

2. FORMS

- 2.1. Types Of Form Controls
- 2.2. Bound Controls Vs. Unbound Controls
- 2.3. Creating, Modifying And Deleting Bound Controls: Text Box
- 2.4. Creating, Modifying And Deleting Bound Controls: Combo Box
- 2.5. Creating Modifying And Deleting Bound Controls: List Box
- 2.6. Creating Bound Controls: Check Box
- 2.7. Modifying And Deleting Bound Controls: Check Box
- 2.8. Manipulating Bound Controls: Option Groups
- 2.9. Applying Bound Control Properties: Limit To List
- 2.10. Applying Bound Control Properties: Distinct Values

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- 2.11. Manipulating Unbound Controls Containing Arithmetic Expressions
- 2.12. Manipulating Unbound Controls Containing Logical Expressions
- 2.13. Modifying The Tab Order Within A Form
- 2.14. What Is A Sub-Form?
- 2.15. Creating A Sub-Form
- 2.16. Linking A Sub-Form
- 3. **REPORTS**
 - 3.1. Formatting Arithmetic Calculation Controls To Display A Percentage
 - 3.2. Formatting Arithmetic Calculation Controls To Display Currency
 - 3.3. Formatting Arithmetic Calculation Controls To Display Specific Decimal Places
 - 3.4. Applying A Running Sum For A Group Or Over All
 - 3.5. What Is Concatenation?
 - 3.6. Concatenating Fields Within A Report
 - 3.7. Inserting A Data Field In A Report Group
 - 3.8. Inserting A Data Field In A Report Page
 - 3.9. Inserting A Data Field In Report Headers And Footers
 - 3.10. Sorting And Grouping Records In A Report By Field(S)
 - 3.11. Forcing Page Breaks For Groups In A Report
 - 3.12. Creating A Linked Sub-Report
- 4. **MACROS**
 - 4.1. Macro To Close An Object And Open Another Object
 - 4.2. Macro To Open And Maximize An Object
 - 4.3. Macro To Print And Close An Object
 - 4.4. Assigning A Macro To A Command Button
 - 4.5. Assigning A Macro To An Object
 - 4.6. Assigning A Macro To A Control
- 5. **LINKING DATA**
 - 5.1. Linking External Data In An Excel Workbook To A Database
 - 5.2. Linking External Text Data In A Txt File To A Database
 - 5.3. Linking External Text Data In A Csv File To A Database
 - 5.4. Linking External Data To A Database Using Existing Database Files

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6. IMPORTING DATA

- 6.1. Importing An Excel File Into A Database
- 6.2. Importing A Csv Text Into A Database
- 6.3. Importing A Txt File Into A Database
- 6.4. Importing An Xml File Into A Database
- 6.5. Importing An Existing Database File Into A Database