

# Microsoft Access 2016/2013/2010

## Level 2

### Course Overview

In this 2-day course, you will learn advanced techniques for designing tables and working with queries, and you will also create basic forms. First, you will learn how to make modifications to the design of a table, including setting data entry restrictions. Then, you will review the three types of table relationships: One-to-Many, Many-to-Many, and One-to-One. You will then learn how to enhance these relationships to provide automatic data updates and deletes. You will learn how to approach the task of designing a system of related tables by learning the formal rules of table design. These rules (called Normal Forms) must be applied in order to create well-designed tables. You will use query wizards to find erroneous data. You will also import and export data into and out of an Access database. Additionally, you will learn how to use Action queries to modify data on a mass scale. You will also split one table into several tables to fix data duplication problems. You will use functions to perform advanced calculations in queries. You will create basic a form to add and edit data in a table. Finally, you will begin to develop user-friendly forms by adding dropdown lists (combo boxes), radio buttons (option groups), tabs, and calculations. Prerequisite Course: Access Level 1.



### Course Topics

#### Changing the Design of a Table

- Naming Conventions
- Opening a Table in Design View
- Adding a Field Description
- Renaming a Field
- Moving a Field
- Deleting a Field
- Adding Fields
- Changing Field Sizes
- Changing a Field's Data Type
- Setting Default Values

#### Controlling Data Entry

- Setting an Input Mask Using a Wizard
- About Custom Input Masks
- Creating a Custom Input Mask
- Setting Required Fields
- Specifying a Validation Rule
- Testing the Rules
- Setting a Single-Field Primary Key
- Setting a Multiple-Field Primary Key

#### Creating Table Relationships

- About One-to-Many Relationships
- About Many-to-Many Relationships
- About One-to-One Relationships
- Setting Table Relationships
- About Referential Integrity
- Enforcing Referential Integrity
- Testing Referential Integrity
- Using Cascade Update and Delete

#### Theory of Table Design

- Getting Started
- History of Relational Database Design
- About Primary and Foreign Key Fields
- First Normal Form
- Second Normal Form
- Third Normal Form
- Recapping the Normal Forms
- Additional Design Considerations

#### Using Query Wizards to Find Problems

- Finding Duplicate Values
- Finding Unmatched Records

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### **Exporting and Importing Data**

- Exporting an Access Query to Excel
- Exporting an Access Report to a PDF File
- Importing from Another Access Database
- Importing Data from Excel to Access

### **Using Action Queries**

- Select Queries vs. Action Queries
- Creating a Make Table Query
- Creating a Delete Query
- Creating an Append Query
- Creating an Update Query

### **Splitting a Table to Eliminate Duplicate Data**

- Splitting a Table to Eliminate Duplication
- Finalizing the New Table
- Deleting the Original Fields
- Splitting a Table and Creating ID Numbers
- Relating the New Tables

### **Using Functions in Queries**

- Calculating Price Increases
- Rounding Numbers
- Calculating Employee Vested Status
- Calculating Monthly Income
- Using Criteria with Calculations
- The Sequence of a Query
- Finding Help on Functions

### **Creating Basic Forms**

- Creating a Form Using the Form Wizard
- Viewing Data Through a Form
- Modifying a Form Using Design View
- Changing the Tab Order
- Generating the Next ID Number Without an AutoNumber Field
- Creating a Combo Box from a Table
- Creating a Combo Box from a Query
- Creating an Option Group
- Adding Tabs to a Form