



Course Description

This course is designed for students wishing to gain intermediate-level skills or individuals whose job responsibilities include constructing relational databases, performing database maintenance, or creating advanced queries and reports.

Learning Objectives

- Design a relational database.
- Join tables to retrieve data from unrelated tables.
- Validate data entered into a database.
- Use advanced queries to manipulate your data.
- Organize a database for efficiency and performance, and to maintain data integrity.
- Customize reports to organize the displayed information and produce specific print layouts.

Designing a Relational Database

- Relational Database Design
 - Relational Databases
 - The Relational Database Design Process
 - The Statement of Purpose
 - Existing Data
 - Business Rules
 - Primary Keys
 - Foreign Keys
 - Composite Keys
 - Table Relationships
 - One-to-One Relationships
 - One-to-Many Relationships
 - The Relationships Window
 - Guidelines for Designing Databases
- Create a Table
 - Table Views
 - Data Types
 - Calendar for Picking Dates
 - Lookup Fields
 - Lookup Lists
 - Lookup Wizard
 - The Table Properties Dialog Box
- Create Table Relationships
 - Referential Integrity
 - The Edit Relationships Dialog Box
 - Join Lines
 - Relationship Reports
 - Guidelines for Enforcing Referential Integrity

Joining Tables

- Create Query Joins
 - Query Joins
 - Inner Joins
 - The Join Properties Dialog Box
- Relate Data Within a Table
 - Self Joins
 - The Alias Property
- Work with Subdatasheets
- Subdatasheets
- Subdatasheet Detection

Using Data validation

- Use Field Validation
 - Field Validation Overview
 - Field Properties
 - Field Validation Messages
 - Input Masks
 - The Input Mask Wizard
 - Input Mask Characters
 - Expression Builder
- Use Form and Record Validation
 - Form Validation Overview
 - Control Wizards
 - The Combo Box Control
 - The List Box Control
 - The Option Group Control
 - Record Validation Overview

Creating Advanced Queries

- Create Parameter Queries
 - Parameter Queries
 - Wildcards in a Parameter Query
 - The Ampersand Operator
- Summarize Data
 - Crosstab Queries
 - The Crosstab Query Wizard
- Create Subqueries
 - Subqueries
 - Subquery Entered as an Expression
 - Subquery Syntax
- Create Action Queries
 - Action Queries
 - Types of Action Queries
- Create Unmatched and Duplicate Queries
 - Unmatched and Duplicate Records
 - The Find Unmatched Query Wizard
 - The Find Duplicate Query Wizard

Organizing a Database for Efficiency

- Data Normalization
 - First Normal Form
 - Second Normal Form
 - Third Normal Form
 - Denormalization
 - The Table Analyzer Wizard
- Create a Junction Table
 - Many-to-Many Relationships
 - Junction Tables
- Improve Table Structure
 - Table Structure

Using Advanced Reporting Techniques

- Include Control Formatting in a Report
 - Control Formatting
 - Data Bars
- Add a Calculated Field to a Report
 - Calculated Fields
- Add a Subreport to an Existing Report
 - Subreports
 - Subforms on a Report