**Module 50: Data-Centric Applications and ADO.NET**

 The Managed provider

 ADO.NET SQL Server managed Provider

 OLEDB Managed Provider

 Understanding ADO.NET Architecture

**Module 51: Connecting to Data Sources**

 Choosing a .NET data Provider

 Defining a Connection

 Managing a Connection

 Handling Connection Exceptions

 Connection Pooling

**Module 52: Performing Connected Database Operations**

 Working in a Connected Environment

 Building Command Objects

 Executing Commands That Return a Single Value

 Executing Commands That Return Rows

 Executing Command That Doesn’t Return any Value

 Using Transactions

 Applications Using All These Features

**Module 53: Building Datasets**

 Working in a Disconnected Environment

 Building DataSets and DataTables

 Building and Saving DataSets

 Defining Data Relationship

 Modifying Data in a Data Table

 Sorting and Filtering

 Application Using All These Features

**Module 54: Reading and Writing XML with ADO.NET**

 Overview of XML Architecture in .Net

 Creating XSD schemas

 Loading Schema and Data into Dataset

 Writing XML from Dataset

**Module 55: Introduction to LINQ**

 The Role and Scope of LINQ

 Use of Extension Methods / Lambdas with LINQ

 Core LINQ Assemblies / Namespaces / Project Types

 Examining LINQ Query Operators

 The Query Operator - LINQ type relationship

 Building LINQ Query Expressions

 LINQ Over Objects

**Module 56: LINQ to SQL**

 DLINQ-Centric Attributes and Types

 The Role of Entity Classes

 Creating Entity Classes using sqlmetal.exe / Visual Studio

 The Role of the DataContext

 Submitting Queries to Relational Databases

**Module 57: Entity Framework**

 Building Entity Data Models

 Using Code First, DB First and Model First Approach

 Querying Entity Data

 Creating, Updating, and Deleting Entity Data