

# **Implementing ETL with SQL Server Integration Services**

**Modality: On Demand**

**Duration: 24 Hours**

## **About this course:**

Microsoft SQL Server Integration Services (SSIS) features graphical tools and wizards for:

- building and debugging packages
- tasks for performing workflow functions
- executing SQL statements
- data sources and destinations for extracting and loading data
- transformations for cleaning, aggregating, merging, and copying data

In this computer science course, you'll extract data from a wide variety of data sources, such as files and relational data sources, perform data integration and transformation solutions, and load data into single or multiple destinations. You will solve complex business problems using best practices and troubleshooting techniques.

## **Course Objectives:**

- Deciding on full or incremental loading
- Isolating ETL data
- Creating an ETL script
- ETL abstraction layers
- The design environment
- Control flows
- Data sources
- Data transformations
- Data destinations
- Precedence constraints
- Connection managers
- Execute SQL tasks
- Progress/execution results
- Resetting destination database
- Data flows
- Data flow paths
- Error output paths
- Configuring data sources and destinations
- Executing SSIS packages
- Deploying SSIS packages

## **Audience:**

- Computer Science students

## Prerequisites:

- A familiarity with Basic SQL Query and Transactional statements (select, insert, update, delete). Ability to write and execute statements using SQL Server Management Studio. A basic understanding of the Business Intelligence process.

## Course Outline:

### Module 1 | ETL Processing

- ETL Overview
- ETL Tools
- Data Sources and Destinations
- Creating Example Databases
- Module Assessment
- Module Summary

### Module 2 | ETL With SQL Programming

- Welcome Module 2
- ETL Scripts
- Transformations
- Implementing ETL with SQL Objects
- Lab | Programming an ETL Process with SQL
- Module Assessment
- Module Summary

### Module 03 | ETL Processing with SSIS

- Welcome Module 3
- Creating SSIS Projects
- Programming SSIS Packages
- Execute SQL Tasks
- Implementing SSIS Packages
- Lab | Creating an ETL Process with SSIS
- Module Assessment
- Module 3 Summary

### Module 04 | SSIS Data Flows

- Welcome Module 4
- Creating Data Flows
- Data Flow Transformations
- Performance Options
- Lab | Creating an SSIS ETL Package Using Data Flow Tasks
- Module Assessment
- Module 4 Summary

## **Module 05 | Deployment and Troubleshooting**

- Welcome Module 5
- Error Handling
- Deployment
- Module Assessment
- Module 5 Summary

## **Module 06 | Final**

- Welcome Module 6
- Final Assessment
- Bonus Video