C-TREC

A Division of Blue Lance

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Course #:	**2792**
Number of Days:	**3**
Format:	**Instructor-Led**
Certification Exams:	**None**
Certification Track:	**None**

This course syllabus should be used to determine whether the course is appropriate for the students, based on their current skills and technical training needs.

Course content, prices, and availability are subject to change without notice.

Course Syllabus

Implementing and Maintaining Microsoft SQL Server 2005 Integration Services

Elements of this syllabus are subject to change.

This three-day instructor-led course teaches students how to implement an Integration Services solution in an organization. The course discusses how to develop, deploy, and manage Integration Services packages.

Audience

This course is intended for information technology (IT) professionals and developers who need to implement data transfer or extract, transform, and load (ETL) solutions by using Microsoft SQL Server 2005 Integration Services.

At Course Completion

After completing this course, students will be able to:

- Describe SQL Server Integration Services and its tools.
- Create an Integration Services package.
- Implement control flow in an Integration Services package.
- Implement data flow in an Integration Services package.
- Implement logging in an Integration Services package.
- Debug and implement error handling in an Integration Services package.
- Implement checkpoints and transactions in an Integration Services package.
- Deploy an Integration Services package.
- Manage and secure an Integration Services package.

Prerequisites

Before attending this course, students must have:

- Exposure to enterprise data import and export scenarios.
- Experience navigating the Microsoft Windows Server environment.
- Experience with Microsoft SQL Server, including:
- SQL Server Agent.
- SQL Server query language (SELECT, UPDATE, INSERT, and DELETE).
- SQL Server System tables.
- SQL Server accounts (users and permissions).

Student Materials

The student kit includes a comprehensive workbook and other necessary materials for this class.

Module 1: Introduction to SQL Server 2005 Integration Services

This module introduces the role that Integration Services plays in extracting, transforming, and loading data. This module also describes the tools that you can use to build and manage Integration Services solutions.

Lessons
▪ Overview of Integration Services Solutions ▪ Integration Services Tools
Lab 1: Using SQL Server Integration Services
▪ Exercise 1: Using the Import and Export Wizard ▪ Exercise 2: Running an Integration Services Package

After completing this module, students will be able to:

- Describe Integration Services solutions.
- Use Integration Services tools.

Module 2: Developing Integration Services Solutions

This module provides an overview of the development tasks that are involved in creating an Integration Services package. After completing this module, you will be able to create a basic package.

Lessons
▪ Creating an Integration Services Solution ▪ Using Variables ▪ Building and Running a Solution
Lab 2: Implementing an Integration Services Solution
▪ Exercise 1: Creating an Integration Services Project ▪ Exercise 2: Implementing a Package ▪ Exercise 3: Building and Running an Integration Services Project

After completing this module, students will be able to:

- Create a SQL Server Integration Services solution.
- Use variables.
- Build and run a solution.

Module 3: Implementing Control Flow

This module introduces the tasks and precedence constraints that you can use to implement control flow in an Integration Services package.

Lessons
▪ Control Flow Tasks ▪ Control Flow Precedence Constraints ▪ Control Flow Containers
Lab 3: Implementing Control Flow
▪ Exercise 1: Creating a Simple Control Flow ▪ Exercise 2: Configuring Precedence Constraints ▪ Exercise 3: Using Containers

After completing this module, students will be able to:

- Configure control flow tasks.
- Configure control flow precedence constraints.
- Configure control flow containers.

Module 4: Implementing Data Flow

This module describes the data flow sources, transformations, and destinations that you can use to implement a data flow task in an Integration Services control flow. It also explains how to use data flow paths to direct valid and invalid rows through the data flow.

Lessons
▪ Data Flow Sources and Destinations ▪ Data Flow Transformations ▪ Data Flow Paths
Lab 4: Implementing Data Flows
▪ Exercise 1: Transferring Data ▪ Exercise 2: Implementing Transformations ▪ Exercise 3: Using Data Viewers ▪ Exercise 4: Configuring Error Output

After completing this module, students will be able to:

- Implement data flow sources and destinations.
- Implement data flow transformations.
- Implement data flow paths.

Module 5: Implementing Logging

This module discusses how to use logging in an Integration Services package, and explains how to configure and use logging providers to generate information about a package's execution.

Lessons
▪ Overview of Integration Services Logging ▪ Implementing Logging
Lab 5: Implementing Logging
▪ Exercise 1: Configuring Logging ▪ Exercise 2: Implementing Custom Logging

After completing this module, students will be able to:

- Describe Integration Services logging.
- Implement logging.

Module 6: Debugging and Error Handling

This module describes how to debug Integration Services packages by using the debugging tools in Business Intelligence Development Studio. It then explains how to implement error-handling logic in an Integration Services package.

Lessons
▪ Debugging a Package ▪ Implementing Error Handling
Lab 6: Debugging and Error Handling
▪ Exercise 1: Debugging a Package ▪ Exercise 2: Implementing Error Handling ▪ Exercise 3: Controlling Failure Behavior

After completing this module, students will be able to:

- Debug a package.
- Implement error handling.

Module 7: Implementing Checkpoints and Transactions

This module explains what checkpoints are and how to implement them. It then discusses transactions, and describes how you can implement transactional data access logic in an Integration Services package.

Lessons
▪ Implementing Checkpoints ▪ Implementing Transactions
Lab 7: Implementing Checkpoints and Transactions
▪ Exercise 1: Implementing Checkpoints in a Package ▪ Exercise 2: Implementing Transactions in a Package ▪ Exercise 3: Implementing a Native Transaction

After completing this module, students will be able to:

- Implement checkpoints.
- Implement transactions.

Module 8: Deploying Packages

This module discusses how to create Package Configurations and how to deploy Integration Services packages to production servers.

Lessons
▪ Package Configurations ▪ Deploying Packages
Lab 8: Deploying Integration Services Packages
▪ Exercise 1: Creating a Package Configuration ▪ Exercise 2: Preparing a Package for Deployment ▪ Exercise 3: Deploying a Package

After completing this module, students will be able to:

- Implement package configurations.
- Deploy packages.

Module 9: Managing and Securing Packages

This module describes the management tasks that relate to Integration Services packages and explains how to perform those tasks by using the Integration Services management tools. It also describes how to secure Integration Services packages.

Lessons
▪ Managing Packages ▪ Securing Packages
Lab 9: Managing and Securing Packages
▪ Exercise 1: Importing a Package ▪ Exercise 2: Configuring and Executing a Package ▪ Exercise 3: Scheduling a Package ▪ Exercise 4: Securing a Package

After completing this module, students will be able to:

- Manage packages.
- Secure packages.