



COURSE SYLLABUS

COURSE TITLE: 55120AC SQL Server Integration Services 2012
FORMAT: Instructor-Led
CERTIFICATION EXAMS: 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.

ELEMENTS OF THIS SYLLABUS ARE SUBJECT TO CHANGE.

ABOUT THE COURSE

This two-day course is one of the popular new Quick series of courses and has been designed with an emphasis on lab work and demonstrations by the instructor with very short lectures preceding the demonstration and labs. The course contains 30 labs. The intended delivery is a short lecture followed by a demonstration of the concept by the instructor then the lab for the student to practice what they just saw demonstrated.

AUDIENCE

This course is intended for IT Professionals.

AT COURSE COMPLETION

After completing this course, students will be able to:

- ▶ Understand packages.
- ▶ Manage with Control Flow.
- ▶ Move data with Data Flow.
- ▶ Understand variables.
- ▶ Understand parameters.
- ▶ Create and configure a simple Data Flow.
- ▶ Utilize the Import/Export Wizard.
- ▶ Work in the Explore window.
- ▶ Create SQL Server Integration Services packages.
- ▶ Utilize Connection Managers.
- ▶ Understand and code the Script Task.
- ▶ Understand and utilize data preparation tasks.
- ▶ Understand and use the workflow tasks.
- ▶ Optimize sources for extraction.
- ▶ Understand the transformations and other tasks (about 25 of them).
- ▶ Understand and utilize Sort.
- ▶ Understand and utilize Aggregate.
- ▶ Understand and utilize Conditional Split.
- ▶ Understand and utilize Data Conversion.
- ▶ Understand and utilize Derived Column.
- ▶ Understand and utilize Lookup.
- ▶ Understand and utilize Merge.
- ▶ Understand and utilize Merge Join.
- ▶ Understand and utilize Multicast.
- ▶ Understand and utilize Union All.
- ▶ Understand and utilize variables and parameters.



- ▶ Understand and utilize Expression Builder.
- ▶ Understand and utilize Expression Task in Control Flow.
- ▶ Understand and utilize dynamic Connection Managers.
- ▶ Understand and utilize containers.
- ▶ Understand and utilize sequences in a container.
- ▶ Understand and utilize For Loop container.
- ▶ Understand and utilize Foreach Loop container.
- ▶ Understand and utilize Precedent Constraints.
- ▶ Understand and utilize Logging.
- ▶ Understand and utilize Events.
- ▶ Understand and utilize Deploy.

PREREQUISITES

Before attending this course, students must have:

- ▶ None

ADDITIONAL READING

To help you prepare for this class, review the following resources:

- ▶ None

MODULE 1: COURSE OVERVIEW

This module explains how the class will be structured and introduces course materials and additional administrative information.

Lessons

- ▶ Introduction
- ▶ Course Materials
- ▶ Facilities
- ▶ Prerequisites
- ▶ What We'll Be Discussing

Lab 1: COURSE OVERVIEW

- ▶ None

After completing this module, students will be able to:

- ▶ Successfully log into their virtual machine.
- ▶ Have a full understanding of what the course intends to cover.

MODULE 2: SQL SERVER INTEGRATION SERVICES ARCHITECTURE

In this module we will explore architecture and version changes of SQL Server Integration Services. We'll then cover the building blocks needed to understand packages and how they are created.

Lessons

- ▶ Version Changes of SSIS From 2008-2012
- ▶ The SQL Server Integration Service
- ▶ Understanding Packages
- ▶ Managing with Control Flow
- ▶ Moving Data with Data Flow
- ▶ Understanding Variables
- ▶ Understanding Parameters

Lab 1: SQL SERVER INTEGRATION SERVICES ARCHITECTURE

- ▶ A Simple Data Flow

After completing this module, students will be able to:

- ▶ Understand packages.



- ▶ Manage with Control Flow.
- ▶ Move data with Data Flow.
- ▶ Understand variables.
- ▶ Understand parameters.
- ▶ Create and configure a simple Data Flow.

MODULE 3: SQL SERVER INTEGRATION SERVICES TOOLS

In this module we will learn about and utilize the tools available to assist with package creation.

Lessons

- ▶ Utilizing the Import/Export Wizard
- ▶ Working in the Explore Window
- ▶ Creating SQL Server Integration Services Packages
- ▶ Utilizing Connection Managers

Lab 1: SQL SERVER INTEGRATION SERVICES TOOLS

- ▶ Utilizing the Import/Export Wizard
- ▶ Working in the Explore Window
- ▶ Creating SQL Server Integration Services Packages
- ▶ Utilizing Connection Managers

After completing this module, students will be able to:

- ▶ Utilize the Import/Export Wizard.
- ▶ Work in the Explore window.
- ▶ Create SQL Server Integration Services packages.
- ▶ Utilize Connection Managers.

MODULE 4: SQL SERVER INTEGRATION SERVICES TASKS

SSIS tasks are the foundation of the Control Flow in SSIS. In this module we will walk through tasks and utilize them.

Lessons

- ▶ Coding the Script Task
- ▶ Utilizing Data Preparation Tasks
- ▶ Using the Workflow Tasks

Lab 1: SQL SERVER INTEGRATION SERVICES TASKS

- ▶ Coding the Script Task
- ▶ Utilizing Data Preparation Tasks
- ▶ Using the Workflow Tasks (Optional)

After completing this module, students will be able to:

- ▶ Understand and code the Script Task.
- ▶ Understand and utilize data preparation tasks.
- ▶ Understand and use the workflow tasks.

MODULE 5: DATA FLOW

The Data Flow task is where the bulk of your data heavy lifting occurs in SSIS. In this module we'll discuss methods for optimizing sources and explain destination options.

Lessons

- ▶ Optimizing Sources for Extraction
- ▶ Examining the Transformation and Other Tasks (about 25 of them)

Lab 1: DATA FLOW

- ▶ Optimizing Sources for Extraction
- ▶ Sort



- ▶ Aggregate
- ▶ Conditional Split
- ▶ Data Conversion
- ▶ Derived Column
- ▶ Lookup
- ▶ Merge
- ▶ Merge Join
- ▶ Multicast
- ▶ Union All

After completing this module, students will be able to:

- ▶ Optimize sources for extraction.
- ▶ Understand the transformations and other tasks (about 25 of them).
- ▶ Understand and utilize Sort.
- ▶ Understand and utilize Aggregate.
- ▶ Understand and utilize Conditional Split.
- ▶ Understand and utilize Data Conversion.
- ▶ Understand and utilize Derived Column.
- ▶ Understand and utilize Lookup.
- ▶ Understand and utilize Merge.
- ▶ Understand and utilize Merge Join.
- ▶ Understand and utilize Multicast.
- ▶ Understand and utilize Union All.

MODULE 6: VARIABLES, PARAMETERS, AND EXPRESSIONS

At one point or another, when utilizing SSIS packages, you will encounter the need for dynamic capabilities. This module aims to give you an understanding of how expressions work, and how variables and parameters set up expressions on your SSIS project.

Lessons

- ▶ Defining and Using Variables and Parameters
- ▶ Creating Dynamic Packages

Lab 1: THE BUSINESS INTELLIGENCE STACK

- ▶ Variables and Parameters
- ▶ Introduction to Expression Builder
- ▶ Expression Task in Control Flow
- ▶ Dynamic Connection Managers

After completing this module, students will be able to:

- ▶ Understand and utilize variables and parameters.
- ▶ Understand and utilize Expression Builder.
- ▶ Understand and utilize Expression Task in Control Flow.
- ▶ Understand and utilize dynamic Connection Managers.

MODULE 7: CONTAINERS

Containers are objects in SQL Server Integration Services that provide structure to packages and services to tasks. In this module we will explain how to create and configure containers, and utilize them effectively.

Lessons

- ▶ Overview of Containers
- ▶ Utilizing Sequences in a Container
- ▶ Utilizing Container Loops

Lab 1: CONTAINERS

- ▶ Utilizing Sequences in a Container
- ▶ Utilizing For Loop Container



- ▶ Utilizing Foreach Loop Container

After completing this module, students will be able to:

- ▶ Understand and utilize containers.
- ▶ Understand and utilize sequences in a container.
- ▶ Understand and utilize For Loop container.
- ▶ Understand and utilize Foreach Loop container.

MODULE 8: SSIS PACKAGES, DEBUGGING AND DEPLOYING

In this module we will explain precedence constraints and the functionality that they provide, then demonstrate their use. We'll also cover logging, events, and deploying while demonstrating how to use them efficiently.

Lessons

- ▶ Utilizing Precedent Constraints
- ▶ Logging
- ▶ Deploying

Lab 1: THE BUSINESS INTELLIGENCE STACK

- ▶ Utilizing Precedent Constraints
- ▶ Logging
- ▶ Events
- ▶ Deploy

After completing this module, students will be able to:

- ▶ Understand and utilize Precedent Constraints.
- ▶ Understand and utilize Logging.
- ▶ Understand and utilize Events.
- ▶ Understand and utilize Deploy.

