

POWER BI COURSE CONTENT

Why Power BI Training?

Power BI is one of the newest additions to Office 365. In this course you will learn Power BI from beginner to advance. Power BI Course enables you to perform Simple Data Analysis as well as Complex Business intelligence scenarios and advanced dash boarding. This power BI course will cover five major components of power BI: Power Pivot and Power Query. The other two are for data visualization: Power View and Power Map.

Power BI is the newest Microsoft BI tool for data mash up, build modeling, and visualize it effectively. It supports mobile devices, it support self-service, and along with its great functionalities, it doesn't require heavy development or production system.

Module 1: Introduction to Power BI

- Power BI Architecture
- Power BI introduction and overview
- Introduction Power BI desktop and Power BI in Excel
- Connecting with Data
- Introduction to Power BI Components: Power Query, Power Pivot, Power View &Power Map

Module 2: Power Query for Data Transformation

- Installation, Requirements, and Configuration
- Different versions of Power Query
- Power Query Introduction
- Query Editor
- Transformation GUI
- Row Transformations
- Column Transformations
- Data Type
- Adding Column
- Text Transformations
- Number Column Calculations
- Date and Time Calculations

- Data types, Lists, Records, and tables in M
- M built-in functions

Module 3: Power Pivot and Data Sources

- Using SQL Server data.
- Loading data from cubes.
- Load data from text files.
- Using data from Excel sheets.
- Loading data via data feeds.

Module 4: Building PivotTables on Power Pivot

- Building pivot tables on top of Power Pivot.
- Using Pivot Charts.
- Working with Slicers.
- Building custom sets.
- Combine Power Pivot data with Sparklines.
- Deploying PivotTables to Excel Services.

Module 5: Introduction Power View

- From personal BI to corporate BI.
- Power View reports in Excel and SharePoint.

Module 6: Authoring Power View reports

- Create tables and Matrices.
- From table to chart.
- Interactive sorting, filtering and highlighting.
- Working with bubble charts.
- Slicers, cards and multiples.
- Adding maps to Power View.
- Working with multi-view reports.
- Improving Power Pivot models for Power View reporting.

Module 7: Deploying Power View reports

- Saving Power View reports in document libraries.
- Power Pivot Gallery functionality.
- Printing the report.
- Export to PowerPoint functionality.

Module 8: Power Map

- Mapping geographical data.
- Exploring visualization options.
- Working with multiple scenes.

SSAS

What is SSAS ?

- SQL Server 2008 Analysis Services (SSAS) is the multidimensional online analytical processing (OLAP) component of Microsoft SQL Server 2008 that integrates relational and OLAP data for business intelligence (BI) analytical solutions. SSAS is an enterprise-level Extract, Transform and Load (ETL) Development tool.

What are the benefits of SSAS?

- User friendly BIDS (Business Intelligence Development Studio) editor helps you to create, maintain and deploy, process SSAS cubes.
- Monitoring Analysis Services Using Windows Reliability and Performance Monitor
- Analysis Services Dynamic Management Views

Prerequisites:

- This course assumes that Students have already been introduced to any one database software like Access, Oracle, MySQL, SQL Server etc.

Career Path:

- After completing this course you will be able to take up the roles of
- SSAS Developer

Lesson 1 - Introduction to SSAS

- Overview of SSAS
- Attributes in Data Analysis
- Hierarchies in Data Analysis
- Dimensions in Data Analysis
- Understanding Fact Table
- Understanding Dimension Tables

- Surrogate Keys
- Multidimensional OLAP

Lesson 2 - Developing Cubes

- Understanding the development environment
- Creating Data Sources
- Creating Data Source Views
- Creating cubes
- Browsing Cubes

Lesson 3 - Developing Cubes

- Creating a Cube
- Creating Named Calculations
- Creating Named Queries

Lesson 4 - Aggregations

- Introduction
- Aggregation Concepts
- Using Aggregations
- Aggregation Wizard Optimizations
- Aggregation Designer

Lesson 5 - Creating Partitions

- Introduction
- Partitioning Strategy
- Partition Storage
- Configuring Storage Modes
- Partition Design
- Using the Partition Wizard
- Merging Partitions

Lesson 6 - Creating KPI's, Perspectives, Translations

- Developing KPI's
- Creating Perspectives
- Creating Translations

Lesson 7 - Working with Actions

- Attaching Drill-Through Actions
- Creating Reporting Actions
- Creating Regular Actions

Lesson 8 - Security

- User Security
- Dimension Security
- Applying Dimension Security
- Working with Multiple Roles
- Working with a Default Member
- Cell Security
- Administrator Security
- Service Account Configuration

Lesson 9 - Deployment

- Overview
- BIDS Deployment
- Project Properties
- Understanding the Deployment Process
- Deployment Wizard
- Storage Modes
- Configuring the Storage Mode
- Process Options
- Processing a Cube

Lesson 10 - Using MDX Queries

- Basic syntax
- Using the MDX query editor in SQL Server Management Studio
- Working with MDX Functions

SSIS

What is SSIS?

- SSIS is an enterprise-level Extract, Transform and Load (ETL) Development tool.
- SSIS is one of the most powerful application for moving data in and out of various databases and file

What are the benefits of SSIS?

- User friendly BIDS (Business Intelligence Development Studio) editor helps you to create, debug and execute SSIS packages.

- Visual data integration with SSIS is a powerful tool for viewing, modifying, and loading data
- SSIS Packages can be optimized for simple maintenance and high performance.

Audience Profile:

This course is equally beneficial for those people who want to learn SSIS from scratch or who are already involved in developing packages using earlier versions of DTS / SSIS.

Lesson 1 - Introduction to SSIS

- SSIS Historical Overview
- The Business Intelligence Development Studio
- Development and Management Tools
- What is an ETL Tool?
- BI Application Life Cycle

Lesson 2 - Data Migration Techniques

- The Import and Export Wizard
- The Import and Export Wizard from BIDS
- The Import and Export Wizard from SSMS
- Working with Packages

Lesson 3 - Working with Data Flow Tasks

- CharacterMap
- Copy Column
- Derived Column
- Percentage Sampling
- Row Sampling

Lesson 4 - Working with Data Flow Tasks

- Sort
- Union All
- Multicast
- Conditional Split
- Data Conversion
- Aggregate

Lesson 5 - Working with Data Flow Tasks

- Audit
- Import Column
- Export Column
- Merge
- Merge Join

Lesson 6 - Working with Data Flow Tasks

- Lookup
- Cache Transform
- Fuzzy Lookup
- Fuzzy Grouping

Lesson 7 - Working with Data Flow Tasks

- OLE DB Command
- Row Count
- Pivot
- Unpivot

Lesson 8 - Working with Data Flow Tasks

- Data Mining Query
- Term Extraction
- Term lookup
- Slowly Changing Dimension

Lesson 9 - Working with ControlFlow

- Data Flow Task
- Bulk Insert Task
- Sequence Container
- Execute Package Task
- Execute Process Task

Lesson 10 - Working with ControlFlow

- File System Task
- FTP Task
- Web Service Task
- XML Task

Lesson 11 - Working with ControlFlow

- Transfer Database task
- Transfer Error Messages Task
- Transfer Jobs Task
- Transfer Logins Task
- Transfer Master Stored Procedures Task
- Transfer SQL Server Objects task

Lesson 12 - Working with ControlFlow

- Execute SQL Task
- Execute DTS 2000 Package Task
- Data Profiling task
- SendMail
- Data Mining Query Task

Lesson 13 - Working with ControlFlow

- For Loop Container
- Foreach Loop Container

Lesson 14 - Working with ControlFlow

- Script Task
- WMI Data Reader Task
- WMI Event Watcher Task

Lesson 15 - Working with ControlFlow

- ActiveX Script Task
- Analysis Services Execute DDL Task
- Analysis Services Processing Task
- Message Queue Task

Lesson 16 - Working with Maintenance Plan Tasks

- Back Up Database Task
- Check Database Integrity Task
- Execute SQL Server Agent Job Task
- Execute T-SQL Statement Task
- History Cleanup Task
- Maintenance Cleanup Task

Lesson 17 - Working with Maintenance Plan Tasks

- Back Up Database Task
- Check Database Integrity Task
- Execute SQL Server Agent Job Task
- Execute T-SQL Statement Task
- History Cleanup Task
- Maintenance Cleanup Task

Lesson 18 - Working with Maintenance Plan Tasks

- Notify Operator Task
- Rebuild Index Task
- Reorganize Index Task
- Shrink Database task
- Update Statistics Task

Lesson 19 - Using Various Data Sources

- ADO NET Source
- Excel Source
- Flat File Source
- OLE DB Source
- XML Source
- Raw File Source

Lesson 20 - Using Various Data Destinations

- ADO NET Destination
- Data Mining Model Training
- DataReader Destination
- Dimension Processing
- Excel Destination
- Flat File Destination
- OLE DB Destination
- Partition Processing
- Raw File Destination
- Recordset Destination
- SQL Server Compact Destination
- SQL Server Destination

Lesson 21 - Variables and Configuration

- Variables Overview
- Variable scope

- SSIS system variables
- Using variables in control flow
- Using variables in data flow
- Using variables to pass information between packages
- Property expressions
- Configuration Overview
- Configuration options
- Dynamic Tasks
- Dynamic Connection Managers
- CheckPoints

Lesson 22 - Error and Event Handling Techniques

- Precedence Constraints
- Event Handling
- Breakpoints
- OnError event handler
- Configuring Package Logging
- Built-in log providers

Lesson 23 - Error and Event Handling Techniques

- Introduction to SSIS scripting
- The SSIS script editor
- The SSIS object model
- Script in Control flow: The Script Task
- Script in Data flow: The Script Component
- Introduction to SSIS component development

Lesson 24 - SSIS Package Deployment

- Configurations and deployment
- The deployment utility
- Deployment options
- Deployment security
- Executing packages – DTEXEC and DTEXECUI

Lesson 25 - SSIS Package Deployment

- The SSIS Service
- Managing packages with DTUtil
- Managing packages with SQL Server Management Studio
- Scheduling packages with SQL Server Agent.

SSRS

What is SSRS?

- SQL Server 2012 Reporting Services (SSRS) is a reporting tool that helps us to design tabular and matrix reports.
- SSRS lets you filter data using parameterized reports

What is the objective of this course?

- User friendly BIDS (Business Intelligence Development Studio) editor helps you to create, maintain and deploy reports.
- SSRS helps you to create Drill-down Reports in a much user friendly manner
- SSRS helps end user to sort the report on any given column at runtime using a feature called as “Interactive Sorting”.

Audience Profile:

This course is equally beneficial for those people who want to learn SSRS from scratch or who are already involved in developing reports using any other reporting tool in the market.

Prerequisites:

This course assumes that Students have already been introduced to any one database software like Access, Oracle, MySQL, SQL Server etc

Career Path:

After completing this course you will be able to take up the roles of

- SSRS Developer

Certification Path:

Those who complete all 3 modules (SSIS, SSAS, SSRS) of this course will be able to prepare for the following Microsoft Certification Exam:

- **Exam 70-467:** Designing Business Intelligence Solutions with Microsoft SQL Server 2012

Lesson 1 - Introduction to SSRS

- Report Development Process
- Reporting Services Architecture
- Configuring Reporting Server
- Reporting Services Editions

Lesson 2 - Developing Reports

- Creating Reports through Wizard
- Creating Reports Manually
- Creating DataSources
- Creating Shared DataSources
- Creating DataSets
- Using Table Data Region

Lesson 3 - Developing Reports

- Using List Data Region
- Developing a MailMerge Report
- Working with Text Box Control
- Working with Embedded Images
- Working with External Images
- Binding Image control with Images from Database
- Using Line,Rectangle Shapes
- Supported Report Output Formats

Lesson 4 - Expressions and Formatting

- Creating Expressions
- Using the Global Collections
- Formatting Items
- Conditional Formatting
- Adding Page Header & Page Footer
- Using Constants,Built-in fields,Parameter Collection
- Using Fields,Datasets Collection
- Using Operators,Built-in functions
- Creating Code Expressions

Lesson 5 - Grouping and Sorting

- Creating Groups through Wizard
- Creating Groups Manually
- Calculating Totals and Percentages
- Creating RunningTotals for Report

- Creating RunningTotals for each group in a Report
- Using RowNum function
- Interactive Sorting
- Creating Drill-Down Reports
- Dynamic Column Visibility

Lesson 6 - Working with Parameters

- Creating a Parameterized Report
- Creating Report Parameters
- Creating a Parameterized Report on Date Columns
- Creating a Parameterized Report on Bool Columns
- Creating Drop-Down Parameters
- Multi-Valued Parameters

Lesson 7 - Working with Parameters

- Creating a Report using Unbound parameters
- Creating a Report using Cascading Parameters
- Parameterized Sorting

Lesson 8 - Working with Matrix Reports

- Creating a Basic Matrix Report
- Adding Row Groups
- Adding Column Groups
- Adding Data Cells
- Adding Totals

Lesson 9 - Working with Chart Control

- Creating a Chart
- Formatting a Chart
- Change Chart Types
- Creating a Color Palette
- Configuring Legends

Lesson 10 - Using Actions

- Using BookMark Action
- Using Goto Report Action

- Using Goto URL Action
- Creating Email Links

Lesson 11 - Using Data Visualization Controls

- Using DataBar
- Using SparkLine
- Using Gauge

Lesson 12 - Using Spatial Data Visualization Controls

- Spatial Data Types
- Using Bing Maps
- Spatial Data Sources
- Map Types
- Map Wizards
- Map Views
- Using ERSI Shape File
- Using Point Layers

Lesson 13 - Managing Reporting Services

- Deploying Reports and Data Sources
- Exporting Reports and Printing
- Using the Web-Based Report Manager
- Using SQL Server Management Studio-based Reporting Services Manager

Lesson 14 - Reporting Services Security

- Reporting Services Security
- Securing Access to Reports
- Data Source Security

Lesson 15 - Programming Reporting Services API

- Reporting Services APIs
- Integrating Reporting Services into Applications using URL Access
- Using the Report Viewer Controls

Lesson 16 - Advanced Reporting Services Programming

- Using the Reporting Services Web Service
- Working with Custom Assemblies

Lesson 17 - Working with Caching, Subscriptions and Snapshots

- Caching and Snapshots
- Creating Standard Subscriptions
- Creating Data-Driven Subscriptions
- Managing Subscriptions

Lesson 18 - Working with Report Builder

- The Report Builder Architecture
- Creating Report Model Projects
- Using Report Builder