Databricks Data Engineering Training

100% Hands-On, Job Oriented

Databricks Data Engineering Course Plan:
👉▒ **Module 1: MSSQL & TSQL Queries**
👉▒ **Module 2: Databricks (Python, Spark, PySpark..)**
👉▒ **Module 3: Realtime Project**
👉▒ **Total Duration: 2 Months**

🔥Why SQL School: 🔥	🔥We assure you: 🔥
☑ Exclusively into SQL, AI Technologies	☑ Step-by-step Practical Classes
☑ 19+ Years of Continued Trust	☑ 100% Interactive, Detailed Notes
☑ ISO Certified, MSME Regd.	☑ Real-Time Projects
☑ 120+ MNC Clients	☑ Resume & Job Assistance

🔥 Detailed Course Content 🔥

This detailed content with 100% Hands-On, Daily Assignments make you 100% Job ready !

Module 1: SQL Server TSQL (MS SQL) Queries

Ch 1: Databricks Job Roles
- ✓ **Introduction to Data**
- ✓ **Databricks Job Roles**
- ✓ **Cloud Engineer Job Roles**
- ✓ **Databricks and Cloud Concepts**

Ch 2: Database Intro & Installations
- ✓ **Database Types (OLTP, DWH, ..)**
- ✓ **DBMS: Basics**
- ✓ **SQL Server 2025 Installations**
- ✓ **SSMS Tool Installation**

- ✓ **Server Connections, Authentications**

Ch 3: SQL Basics V1 (Commands)
- ✓ **Creating Databases (GUI)**
- ✓ **Creating Tables, Columns (GUI)**
- ✓ **SQL Basics (DDL, DML, etc..)**
- ✓ **Creating Databases, Tables**
- ✓ **Data Inserts (GUI, SQL)**
- ✓ **Basic SELECT Queries**

Ch 4: SQL Basics V2 (Commands, Operators)
- ✓ **DDL: Create, Alter, Drop, Add, modify, etc..**
- ✓ **DML: Insert, Update, Delete, select into, etc..**
- ✓ **DQL: Fetch, Insert.. Select, etc..**
- ✓ **SQL Operations: LIKE, BETWEEN, IN, etc..**

Ch 5: Data Types
- ✓ **Integer Data Types**
- ✓ **Character, MAX Data Types**
- ✓ **Decimal & Money Data Types**
- ✓ **Boolean & Binary Data Types**
- ✓ **Date and Time Data Types**
- ✓ **SQL_Variant Type, Variables**

Ch 6: Excel Data Imports
- ✓ **Data Imports with Excel**
- ✓ **SQL Native Client**
- ✓ **Order By: Asc, Desc**
- ✓ **Order By with WHERE**
- ✓ **TOP & OFFSET**
- ✓ **UNION, UNION ALL**

Ch 7: Schemas & Batches
- ✓ **Schemas: Creation, Usage**
- ✓ **Schemas & Table Grouping**
- ✓ **Real-world Banking Database**
- ✓ **2 Part, 3 Part & 4 Part Naming**
- ✓ **Batch Concept & "Go" Command**

Ch 8: Constraints, Keys & RDBMS – Level 1
- ✓ **Null, Not Null Constraints**
- ✓ **Unique Key Constraint**
- ✓ **Primary Key Constraint**
- ✓ **Foreign Key & References**
- ✓ **Default Constraint & Usage**
- ✓ **DB Diagrams & ER Models**

Ch 9: Normal Forms & RDBMS – Level 2
- ✓ **Normal Forms: 1 NF, 2 NF**
- ✓ **3 NF, BCNF and 4 NF**
- ✓ **Adding PK to Tables**
- ✓ **Adding FK to Tables**
- ✓ **Cascading Keys**
- ✓ **Self Referencing Keys**
- ✓ **Database Diagrams**

Ch 10: Joins & Queries
- ✓ **Joins: Table Comparisons**
- ✓ **Inner Joins & Matching Data**
- ✓ **Outer Joins: LEFT, RIGHT**
- ✓ **Full Outer Joins & Aliases**
- ✓ **Cross Join & Table Combination**
- ✓ **Joining more than 2 tables**

Ch 11: Views & RLS
- ✓ **Views: Realtime Usage**
- ✓ **Storing SELECT in Views**
- ✓ **DML, SELECT with Views**
- ✓ **RLS: Row Level Security**
- ✓ **Important System Views**

Ch 12: Stored Procedures
- ✓ **Stored Procedures: Realtime Use**
- ✓ **Parameters Concept with SPs**
- ✓ **Procedures with SELECT**
- ✓ **System Stored Procedures**
- ✓ **Metadata Access with SPs**
- ✓ **SP Recompilations**
- ✓ **Stored Procedures, Tuning**

Ch 13: User Defined Functions
- ✓ **Using Functions in MSSQL**
- ✓ **Scalar Functions in Real-world**
- ✓ **Inline & Multiline Functions**
- ✓ **Parameterized Queries**
- ✓ **Date & Time Functions**
- ✓ **String Functions & Queries**
- ✓ **Aggregated Functions & Usage**

Ch 14: Triggers & Automations
- ✓ **Need for Triggers in Real-world**
- ✓ **DDL & DML Triggers**
- ✓ **For / After Triggers**
- ✓ **Instead Of Triggers**

- ✓ **Memory Tables with Triggers**
- ✓ **Disabling DMLs & Triggers**

Ch 15: Transactions & ACID
- ✓ **Transaction Concepts in OLTP**
- ✓ **Auto Commit Transaction**
- ✓ **Explicit Transactions**
- ✓ **COMMIT, ROLLBACK**
- ✓ **Checkpoint & Logging**
- ✓ **Lock Hints & Query Blocking**
- ✓ **READPAST, LOCKHINT**

Ch 16: CTEs & Tuning
- ✓ **Common Table Expression**
- ✓ **Creating and Using CTEs**
- ✓ **CTEs, In-Memory Processing**
- ✓ **Using CTEs for DML Operations**
- ✓ **Using CTEs for Tuning**
- ✓ **CTEs: Duplicate Row Deletion**

Ch 17: Indexes Basics, Tuning
- ✓ **Indexes & Tuning**
- ✓ **Clustered Index, Primary Key**
- ✓ **Non-Clustered Index & Unique**
- ✓ **Creating Indexes Manually**
- ✓ **Composite Keys, Query Optimizer**
- ✓ **Composite Indexes & Usage**

Ch 18: Group By Queries
- ✓ **Group By, Distinct Keywords**
- ✓ **GROUP BY, HAVING**
- ✓ **Cube( ) and Rollup()**
- ✓ **Sub Totals & Grand Totals**
- ✓ **Grouping( ) & Usage**
- ✓ **Group By with UNION ALL**

Ch 19: Joins with Group By
- ✓ **Joins with Group By**
- ✓ **3 Table, 4 Table Joins**
- ✓ **Join Queries with Aliases**
- ✓ **Join Queries & WHERE**
- ✓ **Join Queries & Group By**
- ✓ **Joins with Sub Queries**
- ✓ **Query Execution Order**

Ch 20: Sub Queries
- ✓ **Sub Queries Concept**

- ✓ **Sub Queries & Aggregations**
- ✓ **Joins with Sub Queries**
- ✓ **Sub Queries with Aliases**
- ✓ **Sub Queries, Joins, Where**
- ✓ **Correlated Queries**

Ch 21: Cursors & Fetch
- ✓ **Cursors: Realtime Usage**
- ✓ **Local & Global Cursors**
- ✓ **Scroll & Forward Only Cursors**
- ✓ **Static & Dynamic Cursors**
- ✓ **Fetch, Absolute Cursors**

Ch 22: Window Functions, CASE
- ✓ **IIF Function and Usage**
- ✓ **CASE Statement Usage**
- ✓ **Window Functions (Rank)**
- ✓ **Row_Number ()**
- ✓ **Rank (), DenseRank ()**
- ✓ **Partition By & Order By**

Ch 23: Merge (Upsert) & CASE, IIF
- ✓ **Merge Statement**
- ✓ **Upsert Operations with Merge**
- ✓ **Matched and Not Matched**
- ✓ **IIF & CASE Statements**
- ✓ **Merge Statement inside SPs**
- ✓ **Merge with OLTP & DWH**

Module 2: Databricks
Ch 1: Databricks Introduction
- ✓ Cloud ETL, DWH
- ✓ Cloud Computing
- ✓ Databricks Concepts
- ✓ Databricks Advantages
- ✓ Databricks Key Features
- ✓ Big Data in Cloud
- ✓ Databricks Account

Ch 2: Databricks Architecture
- ✓ Unified Cloud Platform
- ✓ Unity Catalog
- ✓ Apache Spark
- ✓ LakeHouse (Cloud)
- ✓ Volumes, Files & Tables
- ✓ Control Pane, Compute Pane

- ✓ Deployment Modes
- ✓ Cloud Providers: Azure/AWS/Google
- ✓ Azure Cloud: Advantages
- ✓ Databricks Runtime (DBR)
- ✓ RDD & DAG Components
- ✓ Databricks One: Hadoop, Map Reduce

Ch 3: Spark Cluster Architecture (Cloud Computing)
- ✓ Spark Components
- ✓ Apache Spark Clusters
- ✓ Cloud Computing Concepts
- ✓ Classic Cluster Types
- ✓ Serverless Clusters
- ✓ Compute Operations
- ✓ Apache Spark Ecosystem
- ✓ Drive Node, Worker Node
- ✓ Cluster Manager & Executors

Ch 4: Unity Catalog
- ✓ Unity Catalog Concepts
- ✓ Region, Properties
- ✓ Databricks Workspace UI
- ✓ Organizing Workspace Objects
- ✓ File Uploads
- ✓ Spark Table Creations
- ✓ Creating Volumes
- ✓ UI: Limitations

Ch 5: Spark SQL - 1
- ✓ Spark SQL Notebooks
- ✓ Creating Schemas, Tables
- ✓ Spark Data Types
- ✓ Data Partitioning
- ✓ Managed Tables
- ✓ SQL Queries with the PySpark API
- ✓ Union, Views in Spark
- ✓ Dropping Objects

Ch 6: Spark SQL - 2
- ✓ Spark Joins
- ✓ Aggregations
- ✓ Math, Sort Functions
- ✓ String, DateTime Functions
- ✓ Conditional Statements
- ✓ SQL Expressions with expr()
- ✓ Spark SQL Aggregations

Ch 7: Spark SQL - 4
- ✓ Spark Time Travel
- ✓ Data Recovery & Undo
- ✓ Version Number
- ✓ Describe
- ✓ Describe Extented
- ✓ TimeStamp As Of Concept

Ch 8: Python Intro & Print
- ✓ Python Introduction
- ✓ Python Versions
- ✓ Python Implementations
- ✓ Python in Spark (PySpark)
- ✓ Python Print()
- ✓ Single, Multiline Statements

Ch 9: Python Variables
- ✓ Defining Variables
- ✓ Using Variables
- ✓ Printing Variables
- ✓ Display Variables
- ✓ Variable Types
- ✓ Multi Value Variables
- ✓ Multi Value Assigning
- ✓ If ... Else Statement

Ch 10: Python Operators
- ✓ Integer Operators
- ✓ String Operators
- ✓ Arithmetic Operators
- ✓ Assignment Operators
- ✓ Comparison Operators
- ✓ Formatted Strings
- ✓ Indexing Operators
- ✓ Short Hand If, OR, AND
- ✓ ELIF and ELSE IF Statements

Ch 11: Python Data Types
- ✓ Python Data Types
- ✓ Integer / Int Data Types
- ✓ Float, String Data Types
- ✓ List Data Type
- ✓ List Items, Indexes
- ✓ Tuple Data Type
- ✓ Dictionary Data Type

Ch 12: Python Dataframes
- ✓ Pandas Module (Python)
- ✓ Dataframes from Lists
- ✓ Dataframe from Dict
- ✓ Pandas Dataframes
- ✓ Dataframe print, display
- ✓ Dataframe from Files
- ✓ spark.read.csv()
- ✓ spark.read.format()

Ch 13: Medallion Architecture
- ✓ Understanding Medallion Concepts
- ✓ Bronze, Gold and Silver
- ✓ Raw Data
- ✓ Data Preparation (Prepping)
- ✓ Temporary Views
- ✓ Aggregated Data Flow
- ✓ Big Data Analytics

Ch 14: PySpark: Medallion Loads - 1
- ✓ Reading from Volumes
- ✓ Dataframes, Temp Views
- ✓ Data Prep (Silver)
- ✓ Filtering DataFrame Records
- ✓ Removing Duplicate Records
- ✓ Sorting and Limiting Records
- ✓ Spark SQL Dataframes
- ✓ Gold Layer Implementation
- ✓ Testing Aggregated Loads

Ch 15: PySpark: Medallion Loads - 2
- ✓ Azure SQL DB Connections
- ✓ JDBC & Credentials
- ✓ SQL Queries in PySpark
- ✓ Data Prep (Silver)
- ✓ Filtering Null Values
- ✓ Grouping and Aggregating
- ✓ Spark SQL Dataframes
- ✓ Gold Layer Implementation
- ✓ Testing Aggregated Loads

Ch 16: PySpark: Delta Tables
- ✓ Delta Tables (Spark)
- ✓ Parquet Versus Delta
- ✓ Deleting and Updating Records
- ✓ Table Utility Commands
- ✓ Delta Transaction Log

Ch 17: PySpark: SCD
- ✓ Slowly Changing Dimension
- ✓ Parquet Versus Delta
- ✓ Deleting and Updating Records
- ✓ Table Utility Commands
- ✓ Merge Into Statement
- ✓ Incremental Loads
- ✓ Merge with OLTP Data Sources
- ✓ Merge Temp Views & Spark Table

Ch 18: PySpark: Widgets
- ✓ Need for Widgets
- ✓ Text Widgets
- ✓ User Parameters
- ✓ Manual Executions
- ✓ Parameters & JSON

Ch 19: Lake Flow Jobs
- ✓ Worksflows & CRON
- ✓ Job Compute, Running Tasks
- ✓ Python Tasks (Notebooks)
- ✓ Parameters into Notebook Tasks
- ✓ Parameters into Python Script Tasks
- ✓ Concurrent Executions, Dependencies
- ✓ Branching Control with the If-Else Task

Ch 20: Databricks Tuning
- ✓ OPTIMIZE
- ✓ VACUUM
- ✓ Lazy Evaluation
- ✓ Caching, Data Shuffling
- ✓ Broadcast Joins
- ✓ Data Skipping
- ✓ Z Ordering
- ✓ Liquid Clustering
- ✓ Spark Configurations

Ch 21: Databricks Security
- ✓ Databricks Security
- ✓ MFA (Multi Factor Authentication)
- ✓ IAM (Identity & Access Management)
- ✓ ACL Concepts
- ✓ Workspace Users & Groups
- ✓ Workspace Security
- ✓ Notebook Security
- ✓ Job Security
- ✓ Cluster Access Control

Ch 22: Auto Loader - 1
- ✓ File Incremental Loads
- ✓ Cloud Files
- ✓ Cloud File Processing
- ✓ Checkpoint Files
- ✓ Creating Directories in Volumes
- ✓ Reading Streams with Auto Loader
- ✓ Workspace Modules
- ✓ Testing Auto Loader (Initial Loads)

Ch 23: Auto Loader - 2
- ✓ Metadata & WithColumns
- ✓ Schema Evolution
- ✓ addNewColumns
- ✓ Rescue
- ✓ FailOnNewColumns
- ✓ Writing to a Data Stream
- ✓ Testing Auto Loader (Incremental Loads)

Ch 24: Delta Lake & SDP (LakeFlow)
- ✓ Delta Lake Concepts
- ✓ Lakeflow SDP
- ✓ Declarative Pipelines
- ✓ Streaming Tables
- ✓ CDC: Change Data Capture
- ✓ Bronze Tables
- ✓ Silver Tables, Timestamp
- ✓ Gold Tables
- ✓ Big Data Analytics
- ✓ SDP (Spark Data Pipelines)
- ✓ Exploratory Data Analysis

Ch 25: Version Control & GitHub
- ✓ Local Development
- ✓ Runtime Compatibility
- ✓ Git and GitHub Pre-requisites
- ✓ Git and GitHub Basics
- ✓ Linking GitHub and Databricks
- ✓ Databricks Git Folders
- ✓ Project Code to GitHub
- ✓ Adding Modules to the Project Code
- ✓ Databricks Job Updates, Runs

Ch 26: Realtime Project @ Ecommerce / Banking / Sales
- ✓ Detailed Project Requirements
- ✓ Project Solutions
- ✓ Project FAQs
- ✓ Project Flow
- ✓ LakeBridge
- ✓ Interview Questions & Answers
- ✓ Resume Guidance (1:1)

👉 **Reach Us today for Free Demo!**
👉 **www.sqlschool.com**
👉 **+919666640801**