

## SQL for Data Analytics

### Course Outline:

#### - Introduction to Data Analytics

- What is Data Analytics
- Types of Data Analytics
- Correlation
- Data Analytics Applications Across Industries
- Data Analytics Life cycle
- Technology Trends

#### - Basic SQL Language

- Intro. Relational Database and SQL
- Introducing SQL
- Types of SQL Commands
- Data Definition Language (DDL)
- Data Manipulation Language (DML)
- Data Query Language (DQL)
- Data Control Language (DCL)
- Data Transactional Commands
- What is Data
- Data Type and it's Importance
- Basic Data Types
- Creating and Altering Table with SQL
- SQL Constraints
- Not Null

- Unique
- Primary Key
- Foreign Key
- Default
- Manipulating Data
- Insert
- Update
- Delete

**- Advanced SQL Language**

- Retrieving Data with SQL
- Select Query
- Case Sensitivity
- Counting the record
- Column Aliases
- Using Operators to Categories Data
- What is an Operator in SQL
- Comparison Operators
- Logical Operators
- Conjunctive Operators
- Negative Operators
- Arithmetic Operators
- Summarizing Data Results
- Using WHERE to Filters Results
- The Group by Clause

- Having Clause
- Restructuring the Appearance of Data
- Character Functions
- Mathematical Functions
- Date Functions
- Joining : Getting Results from Multiple Tables • Inner Join or Equijoins
- Outer Join (Left Join, Right Join)
- Self Join
- Cartesian Product
- Table Aliases
- Sub Queries
- Views

**- Data Visualization with Tableau**

- Basics of Tableau
- Visualizations in Tableau

**- Final Project**