

Digi**Siksha**

6 Months - Data Analytics

( Data Analytics Mastery Program )

Excel ■ Power BI ■ SQL ■ Python

## Course Objectives

Learn Data Cleaning

H Visualization & Interpretation

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## **1: Excel Mastery**

### **| Module 1: Excel Fundamentals & IF Logic**

- > 1.1 - Microsoft Excel Introduction
- > 1.2 - Data Entry in Excel
- > 1.3 - Basic Formulas in Excel
- > 1.4 - Conditional Formatting
- > 1.5 - Advance Conditional Formatting
- > 1.6 - IF Condition Formulas
- > 1.7 - Sheet Options of Excel
- > 1.8 - Assignment on IF Formula

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### **| Module 2: Data Handling Efficiency Techniques**

- > 2.1 - Sorting Data in Excel
- > 2.2 - Filtering Techniques in Excel
- > 2.3 - Advance Filter
- > 2.4 - Paste Special in Excel
- > 2.5 - Go To Special in Excel
- > 2.6 - Find and Replace in Excel
- > 2.7 - Assignment Sort and Filter and Replace in Excel

### **Module 3: Data Transformation and Analysis Tools**

- ▶ 3.1 - Flash Fill
- ▶ 3.2 - Text to Columns and Remove Duplicates Consolidate
- ▶ 3.3 – What if Analysis Scenario Manager Goal Seek
- ▶ 3.3 - Data Validation
- ▶ 3.4 - Group and Ungroup and Subtotal
- ▶ 3.5 - Assignment related Subtotal Data table

### **Module 4: Mastering Pivot Tables**

- ▶ 4.1 - Introduction of Pivot Table
- ▶ 4.2 - Pivot Chart and Design
- ▶ 4.3 - Slicer in Pivot table
- ▶ 4.4 - Time line in Pivot table
- ▶ 4.5 - Top Bottom Analysis
- ▶ 4.6 - Pivot Table Analyze Options
- ▶ 4.7 – Calculated Field
- ▶ 4.8 – Auto Refresh
- ▶ 4.7 - Dynamic range
- ▶ 4.9 – Multiple Pivot
- ▶ 4.10 – Show Value As in Pivot Table
- ▶ 4.6 - Pivot Table Assignment

## **Module 5: Advanced Lookup and Reference Formulas**

- > 5.1 - V lookup Formula Introduction
- > 5.2 - Fetching info From Large Data
- > 5.3 - V lookup With Match
- > 5.4 - Use of Approx Match
- > 5.5 - V lookup Formula Find Matching
- > 5.6 - Double V lookup
- > 5.7 - Match and Index
- > 5.8 - Assignment on V lookup Formula
- > 5.9 - X lookup Formula Mastery

## **Module 6: Statistical, Text and Financial Insights**

- > 6.1 - Count CountA Count if Formulas
- > 6.2 - SUMIF and SumIFS Formulas
- > 6.3 - AveragelF MAXIFS And MINIFS
- > 6.4 - Formulas For Insights SORT FILTER
- > 6.5 - Assignment on SORT FILTER
- > 6.6 - Useful Text Formulas
- > 6.7 - Date Formulas for Analysis
- > 6.8 - Financial formulas for Analysis

## **Module 7: Practice with Industry Level Projects**

- > Industry Level End to End Excel Projects

## 2: Power BI Mastery

### Module 1: Getting Started with Power BI

- > 1.1 - Power BI Introduction
- > 1.2 - How to Load Data in Power BI
- > 1.3 - Transform Data
- > 1.4 - Canvas Page Settings

### Module 2: Basics of Visualization

- > 2.1 - Let's Start Visualization
- > 2.2 - Format Visuals
- > 2.3 - Format Visuals General

## Module 3: Advanced Visualizations

- > 3.1 - Line Area and Ribbon Chart
- > 3.2 - View And Save Visuals As PDF
- > 3.3 - Water and Funnel Chart
- > 3.4 - Scatter Chart
- > 3.5 - Pie Donut and Tree Map Chart
- > 3.6 - Map filled Map Shape Map
- > 3.7 - Azure Map
- > 3.8 - Gauge Chart
- > 3.9 - Card Multi Row Card
- > 3.10 - Table Visual
- > 3.11 - (KPI) Key Performance indicator
- > 3.12 - Matrix Visual
- > 3.13 - Decomposition Tree
- > 3.14 - Key influencer and Smart Narrative
- > 3.15 - Conditional Formatting
- > 3.16 - Filter Options in Power BI
- > 3.17 - Drill Through in Power BI
- > 3.18 - Edit Interaction in Power BI
- > 3.19 - Bookmarks Pane
- > 3.20 - Use Cards as Text Cards

## Module 4: Building Dashboards and Measures

- ▶ 4.1 - Creating Dashboards Using Visualization
- ▶ 4.2 - Creating Table Relationship in Power BI
- ▶ 4.3 - Creating Measures in Power BI
- ▶ 4.4 - Measure With IF Condition
- ▶ 4.5 - Basic Measure in Power BI
- ▶ 4.6 - Measure With Emoji

## Module 5: Data Modelling in Power BI

- ▶ 5.1 - What is DATA Model
- ▶ 5.2 - Data Concepts Data Normalization
- ▶ 5.3 - Managing Relationship
- ▶ 5.4 - Filter Flow 2 Way Filter
- ▶ 5.5 - Properties in Model

## Module 6: DAX Functions & Advanced Analytics

- > 6.1 - DAX Functions Introduction
- > 6.2 - Implicit Vs Explicit Measures
- > 6.3 - Ways to Adding Columns and Measures
- > 6.4 - Quick Measures and Suggestions
- > 6.5 - DAX Syntax
- > 6.6 - DAX Operators
- > 6.7 - DAX Date Time Functions
- > 6.8 - Logical and Conditional Functions
- > 6.9 - Sum Vs SUMX
- > 6.10 - Rank DAX In Power BI
- > 6.11 - Difference Between COUNTX And COUNTAX
- > 6.12 - Create Own Calendar Using Formula
- > 6.13 - MTD QTD YTD Functions
- > 6.14 - Same Period Last Year DAX Function
- > 6.15 - Previous Month Quarter Year DAX
- > 6.16 - DATESBETWEEN AND DATESPERIOD DAX
- > 6.17 - Dax Functions Related
- > 6.18 - Has One Value DAX Function
- > 6.19 - Selected Value and Switch DAX
- > 6.20 - What are Variables in DAX
- > 6.21 - Practical Use of Variables

## Module 7: Power BI Pro Tips

- > 7.1 - Create Unique Layout
- > 7.2 - Add-image-without-image-visual
- > 7.3 - Add-image-as-tooltip

## Module 8: Practice With Industry Level End to End Projects

> End-to-End Business Dashboard Projects

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## 3: SQL Mastery

### Module 1: Getting Started With SQL

- ▶ 1.1 - Introduction of SQL
- ▶ 1.2 - SQL Server Installation
- ▶ 1.3 - Interface of pgAdmin IDE Tool
- ▶ 1.4 - Types of Commands in SQL

### Module 2: Creating And Managing Databases

- ▶ 2.1 - CREATE DATABASE AND TABLE
- ▶ 2.2 - SIMPLE WAY TO CREATE TABLE
- ▶ 2.3 - DATA TYPES CONSTRAINTS IN SQL
- ▶ 2.4 - Use of Alter Command In SQL
- ▶ 2.5 - Inserting Data into Table
- ▶ 2.6 - Deleting Data From Table

### Module 3: Modifying And Managing Data

- ▶ 3.1 - Update Data into Table
- ▶ 3.2 - Update Data Without Commands
- ▶ 3.3 - Query Toolbar
- ▶ 3.4 - Difference Between Delete Truncate and Drop

### Module 4: Importing Data Into

- ▶ 4.1 - Auto Assigned ID Using identify Constraint
- ▶ 4.2 - Importing Data from CSV to SQL Direct Method

## Module 5: Writing SQL Queries

- > 5.1 Basic SQL Queries
- > 5.2 Basic SQL Queries II
- > 5.3 Basic SQL Queries III
- > 5.4 Basic SQL Queries IV
- > 5.5 Practice SQL Queries with new Data
- > 5.6 Logical Operators AND OR Details Use
- > 5.7 Use of not null and not in
- > 5.8 Use of Union Operators
- > 5.9 Group By and Having in SQL

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## Module 6: Working With Functions

- > 6.1 Basic Date Functions in Excel
- > 6.2 Basic Date Functions in SQL II
- > 6.3 Use of Age Function
- > 6.4 String Functions in SQL

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## Module 7: Mastering SQL Joins

- > 7.1 Joins In SQL
- > 7.2 Left Join in SQL
- > 7.3 Right and Full Join in SQL
- > 7.4 Joins Overview
- > 7.5 Self Join in SQL
- > 7.6 Union and Union All

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## **Module 8: Subqueries in SQL**

- ▶ 8.1 - Sub Query in SQL
- ▶ 8.2 - Sub Query with IN Operator
- ▶ 8.3 - Assignment on Sub Query

## **Module 9: Window Functions**

- ▶ 9.1 - SQL Aggregate Window Functions
- ▶ 9.2 – SQL Analytic Window Functions
- ▶ 9.3 - SQL Ranking Window Functions
- ▶ 9.4 - Assignment on Window Function

## **Module 10: Advanced SQL Statements**

- ▶ 10.1 - Case Statement in SQL
- ▶ 10.2 - Case Statement Multiple Statement
- ▶ 10.3 - Case With Where Clause
- ▶ 10.4 – Case with Values only

## **Module 11: Practice With Industry Level Projects**

- ▶ Project 1 – Data Analysis Using SQL

## 4: Python Mastery

### Module 1: Introduction & Fundamentals of Python

- ▶ 1.1 - Introduction of Python
- ▶ 1.2 - Download and Install Python
- ▶ 1.3 - Write Your First Code
- ▶ 1.4 - Python Workflow
- ▶ 1.5 - What are Variables in Python
- ▶ 1.6 - Data Types in Python

### Module 2: Operators Type Casting and Slicing

- ▶ 2.1 - All About Operators in Python
- ▶ 2.2 - Assignment on Operators
- ▶ 2.3 - Type Casting in Python
- ▶ 2.4 - Input Function
- ▶ 2.5 - Assignment on Input Function
- ▶ 2.6 - String Slicing and Methods

### Module 3: IF Else and Nested IF

- ▶ 3.1 - IF And Else Condition
- ▶ 3.2 - Nested If Condition
- ▶ 3.3 - Assignment On Nested IF

## Module 4: Loops In Python

- ▶ 4.1 - While Loop in Python
- ▶ 4.2 – Looping in Python FOR Loop
- ▶ 4.3 - Nested Loop in Python
- ▶ 4.4 – Assignment on FOR Loop

## Module 5: All About List in Python

- ▶ 5.1 - All About List
- ▶ 5.2 - Updating Adding, Removing Items
- ▶ 5.3 - Most Used List Methods
- ▶ 5.4 - Built in Functions Work on List

## Module 6: OOPs Concept

- ▶ 6.1 - OOPs Concept
- ▶ 6.2 - Modules And Packages

## Module 7: Numpy Library

- ▶ 7.1 - Introduction of Numpy
- ▶ 7.2 - Creating Array
- ▶ 7.3 - Multidimensional Array
- ▶ 7.4 - Assignment on Array
- ▶ 7.5 - Different Types of Arrays
- ▶ 7.6 - Random Array in Numpy
- ▶ 7.7 - Array Attributes
- ▶ 7.8 - Assignment
- ▶ 7.9 - Indexing Slicing and More
- ▶ 7.10 - Data Cleaning with Numpy

## Module 8: Pandas Library

- ▶ 8.1 - Python Pandas Introduction
- ▶ 8.2 - Pandas Data Series and DataFrame in Python
- ▶ 8.3 - Pandas Reading Data from CSV
- ▶ 8.4 - Pandas Work with Series
- ▶ 8.5 - Pandas Assignment
- ▶ 8.6 - Pandas Working on CSV File
- ▶ 8.7 - Pandas Accessing Data
- ▶ 8.8 - Pandas Sorting and Adding Columns
- ▶ 8.9 - Pandas Updating Records
- ▶ 8.10 - Pandas Grouping Save and Export

## Module 9: Matplotlib Library

- > 9.1 - Introduction to Matplotlib
- > 9.2 - Terms You Should Know
- > 9.3 - Understanding Pyplot
- > 9.4 - Pyplot Functions
- > 9.5 - Plotting Bar Charts, Pie Charts, Histograms, Vector Graphs
- > 9.6 - Subplot Layout Adjustments
- > 9.7 - Saving Figures
- > 9.8 - Visualization Data of Netflix Using Pandas And Matplotlib

## Module 10: Practice With Industry Level End to End Projects

- > End-to-End Data Analytics Projects using Python

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