Course Name: Business Intelligence Developer Professional Certification Program

Course Overview:

This comprehensive course covers Tableau and Power BI, providing a deep dive into data visualization, preparation, and business intelligence. Starting with Tableau Prep and Desktop, you'll learn to connect datasets, create visualizations, and build interactive dashboards. Advanced topics include DAX functions in Power BI, SQL queries, and data warehousing concepts. You'll master filters, groups, sets, and parameters, along with advanced charting and formatting techniques. The course also includes performance monitoring, data modeling, and security implementation. Real-time projects and a professional internship program offer hands-on experience, preparing you for job interviews, freelancing opportunities, and career advancement in the data analytics field.

What You'll Learn?

In this course, you'll master data visualization with Tableau and Power BI, learn advanced DAX functions, SQL queries, data modeling, and warehousing. You'll also gain hands-on experience through real-time projects and professional internships, preparing you for career advancement.

Internship Program:

In addition to the course, you will participate in a 6-month internship involving 12 live projects. Upon successful completion, you will receive an Internship Certificate.

Letter of Recommendation:

Upon successfully completing the program and internship, you will also receive a Letter of Recommendation (LOR).

Duration:

90 Hours (15 Weeks) + 6 Months (Internship Program)

Requirements:

Microsoft Power BI, Tableau Desktop, Tableau Prep, Tableau Online, Microsoft SQL Management Studio

Pre-requisite:

Basic Excel Knowledge

Curriculum

Module 1. Data Preparation using Tableau Prep

1. What is Tableau?
2. Why Tableau?
3. Tableau Products
4. Data Visualization
5. Business Intelligence tools
6. Tableau Architecture
7. Tableau Server Architecture
8. VizQL
9. Introduction to Tableau Prep
10. Tableau Prep Builder User Interface
11. Data Preparation techniques using Tableau Prep Builder tool

Module 2. Introduction to Tableau Desktop

1. Introduction to Tableau Desktop
2. Start Page
3. Connections and Sheets

Module 3. Connecting to a Dataset

1. Connect to an Excel Data set
2. Preliminary data checks
3. Manage Data Properties
4. Rename a data field
5. Assign an alias to a data value
6. Assign a geographic role to a data field
7. Change data type for a data field (number, date, string, Boolean, etc.)
8. Change default properties for a data field (number format, aggregation, Color, date format, etc.)
9. Explain difference between Live vs Extract
10. Tableau File types

Module 4. Tableau Desktop Walk thru

1. Explain role of Worksheet, Dashboard, Story
2. Dimension and Measures Pane
3. Column and Row Shelves

4. Auto Generated Fields in Tableau
5. Discrete vs Continuous Fields
6. Show Me Feature

Module 5. Understanding Tableau Charts

1. Text Table
2. Highlighter Table
3. Bar chart
4. Line chart
5. Bubble Chart
6. Stacked Chart
7. Side by Side Chart
8. Filled Maps
9. Symbol Maps
10. Bullet chart
11. Tree Map
12. Heat Map
13. Mark Cards
14. Histogram
15. Butterfly Chart
16. Waterfall Chart
17. 10 Advanced Charts

Module 6. Learn About Filters

1. Data source Filters
2. Extract Filters
3. Dimension Filters
4. Measure Filters
5. Context Filters
6. Order of operations
7. Add Date filter to view
8. Customizing Show filters

Module 7. Groups, Sets and Parameters

1. Groups
2. Sets
3. Combined Sets
4. Parameters

Module 8. Sorting and Formatting

1. Sorting
2. Headers
3. Palettes
4. Font and Alignment
5. Marks cards
6. Add Totals, Sub Totals and Grand Totals to Report

Module 9. Advanced Features

1. Reference line
2. Reference Band
3. Reference Distribution
4. Trend Line
5. Forecasting
6. Table Calculations

Module 10. Calculated fields

1. Date Expressions
2. String Expressions
3. Numeric Expressions
4. Logical Expressions

Module 11. Level of Details

1. FIXED
2. EXCLUDE
3. INCLUDE

Module 12. Combining Data

1. Joining multiple tables
2. Union Data
3. Blend
4. Relationship

Module 13. Dashboards

1. Understanding Dashboard Layout
2. Blank Container
3. Add Headers and Borders
4. Horizontal and Vertical Containers

5. Text
6. Image
7. Web Page
8. Navigation
9. Download

Module 14. Advanced Formatting & Story

1. Dashboards for Phone, Tablet
2. Dashboard Actions
3. Filters
4. Story

Module 15. Tableau Online

1. Publishing Workbooks to Tableau Online
2. Interacting with Content on Tableau Online
3. Data Management through Tableau Catalog
4. AI-Powered features in Tableau Online (Ask Data and Explain Data)
5. Understand Scheduling
6. Managing Permissions on Tableau Online
7. Data Security with Filters in Tableau Online

Module 16. Real Time Projects

1. Real time Projects
2. How to analyze the data and get insight from it?
3. How to approach any business scenario/problem?
4. How to solve any business scenario/problem?
5. How to create a story on any business scenario/problem?

Module 17. Performance Monitoring and Improvement

1. How to track performance of a dashboard?
2. How to understand the output of performance tracker?
3. Best practices to improve dashboard performance
4. Other tips related to performance monitoring and improvement

Module 18: Introduction to Databases and SQL

1. Introduction to Databases
2. Understanding SQL and Its Importance
3. Basic SQL Syntax

4. SELECT Statement: Retrieving Data
5. WHERE Clause: Filtering Data

Module 19. Advanced SQL Queries

1. Sorting Data: ORDER BY Clause
2. Filtering Data: WHERE Clause (continued)
3. Aggregating Data: GROUP BY Clause
4. Joining Tables: INNER JOIN, LEFT JOIN, RIGHT JOIN
5. Subqueries and Derived Tables

Module 20. SQL Functions and Data Manipulation

1. SQL Functions: COUNT, SUM, AVG, MAX, MIN
2. Modifying Data: INSERT, UPDATE, DELETE
3. Data Integrity: Constraints
4. Windows functions (rank, dense rank, etc.)

Module 21. Introduction to Data Warehousing

1. What is Data Warehousing?
2. Data Warehousing Architecture
3. Star Schema and Snowflake Schema
4. ETL (Extract, Transform, Load) Process
5. OLTP vs OLAP

Module 22. Designing a Data Warehouse

1. Identifying Data Sources
2. Data Modeling: Fact Tables and Dimension Tables
3. Design Best Practices
4. Data Warehouse Tools and Platforms
5. Performance Tuning and Optimization
6. Reporting and Dashboards

Module 23. Introduction to Power BI

1. Introduction to Business Intelligence
2. Self-Service Business Intelligence (SSBI)
3. Introduction to Power BI
4. The Flow of Work in Power BI
5. Basic Components of Power BI
6. Introduction to Building Blocks of Power BI
7. Data model and importance of Data Modelling

Module 24. Power BI Desktop and Power Query Editor

1. Power BI desktop overview
2. Data Sources in Power BI Desktop
3. Data connectivity modes
4. Power query editor overview
5. Data transformation in power query editor
6. Data types in Power BI
7. Model optimization in query editor

Module 25. Modelling in Power BI

1. Overview of modelling and schemas
2. Star Schema, Snowflake Schemas
3. Data Cardinality (Relationships) types & Directions of Cardinality
4. Cross filtering and connection type (Active/Inactive)
5. Managing & Editing Data Relationships

Module 26. DAX (Data Analysis Expressions)

1. Introduction to DAX
2. Data Types in DAX
3. Filter Context vs Row Context
4. Calculated columns, measures and quick measures
5. Aggregation, Date & Time, Filter, Logical and Information Functions
6. DAX Syntax, Functions & Operators

Module 27. Visualization in Power BI

1. Introduction to Visuals in Power BI
2. Visualization Charts in Power BI
3. Visual formatting and analytical features
4. Grouping, selection pane, bookmarks, buttons
5. Tooltip, drill down and drill through functionality
6. Matrixes and Tables
7. Slicers and Map Visualizations
8. Gauges Chart, KPI and Single Number Cards
9. Shapes, Text Boxes, and Images
10. Usage of visuals in different Scenarios

Module 28. Power BI Dashboards

1. Introduction to Dashboards

2. Dashboard vs Reports
3. Creating Dashboards
4. Parameters in Power BI
5. Row Level security (RLS) Implementation
6. Power BI Gateway Connection

Module 29. Power BI Services

1. Introduction to workspaces
2. Publishing datasets or reports in Power BI Service
3. Sharing workspace access with Users
4. Scheduling refresh of datasets
5. Exporting data from dashboards in PPT or PDF or Excel

Module 30. Interview, Jobs & Freelance work in Power BI

1. Interview questions with PL-300 Questions
2. Interview tips
3. How to crack job interview
4. How to register for freelancing work
5. How to get freelance work

Module 31. Interview Preparation Jobs & Freelance work in Tableau

1. How to create Tableau Public profile and its importance?
2. Mock-up
3. Tips and tricks in Tableau
4. Interview questions
5. Mock interviews
6. Interview tips
7. How to crack job interview
8. How to register for freelancing work
9. How to get freelance work

Module 32. Microsoft Power BI Professional Internship Program

6 Live Professional Projects

Module 33. Tableau Professional Internship Program

6 Live Professional Projects