

TRAINING COURSE HANDOUT



Course Name

Data Analysis with Excel and Power BI

Discover How We Can Drive Your Success

www.clslearn.com

Training course handout

Course Name:

Data Analysis with Excel and Power BI

Course Overview

Unlock the power of data with two of the most in-demand tools in the business world—Excel and Power BI. This course is designed for professionals, students, and career changers who want to master data analysis and build a strong foundation in business intelligence.

Whether you're new to data or looking to sharpen your analytics skills, this hands-on course will guide you step-by-step through the entire data workflow—from data collection and cleaning to advanced visualizations and dashboards.

75 hours

of extensive learning
Gain in-depth knowledge through a mix of instructor-led training and hands-on practice.

Training Benefits

Job-Ready Skills
Hands-On Training
Top-rated Expert Instructors
Career Mentorship & Support
Industry-Recognized Certificate

What You Will Learn

Excel for Data Analysis

- Data cleaning, sorting, and filtering
- PivotTables and PivotCharts
- Advanced formulas & functions (LOOKUPS, IFs, etc.)
- Data validation and conditional formatting
- Descriptive statistics and basic trend analysis

Power BI for Business Intelligence

- Data import and transformation with Power Query
- Creating data models and relationships
- DAX functions for calculations and KPIs
- Building interactive dashboards
- Publishing and sharing reports in Power BI Service

Career Prospects:

Upon completion of this course, you'll be ready to step into roles such as:

- Data Analyst
- Business Analyst
- Reporting Analyst
- BI Developer
- Operations Analyst

Practical Workshops Sessions

Gain hands-on experience with tools and techniques in interactive workshops.

Certification with Credibility

Showcase your skills with a aggregated certificate to enhance your professional profile.

Industry-Relevant Curriculum

Learn practical tools and techniques tailored to solve real-world business challenges.

Skills You'll Gain

Dashboard

Matplotlib

Exploratory

Data Analysis

Machine Learning

Time Series Analysis and Forecasting

Database Management

SQL

Dashboard

Audience profile

Business Professionals & Managers:
University Students & Fresh Graduates
IT & Technical Professionals
Aspiring Data Analysts:
Career Shifters:
Entrepreneurs & Freelancers:

Prerequisites

- Basic Knowledge of Excel.
- Understanding of Data Concepts.
- Analytical mindset.

Course Outline

Data Analysis in Excel

- Classic Data Analysis with Excel
- Excel Pivot Tables
- Limitations of Classic Data Analysis
- Describe classic data analysis with Excel
- Describe Excel pivot tables
- Describe the limitations of classic data analysis with Excel

The Excel Data Model

- Using an Excel Data Model
- DAX
- Describe an Excel data model
- View data within an Excel data table
- Describe DAX

Importing Data from Files

- Importing Data into Excel
- Shaping and Transforming Data
- Loading Data
- Import data into excel.
- Shape and transform data.
- Load data.

Importing Data from Databases

- Available Data Sources
- Previewing, Shaping, and Transforming Data
- Table Relationships and Hierarchies
- Loading Data
- Identify available data sources.
- Preview, shape, and transform data.

Explain table relationships and hierarchies.
Load data from various sources.

Importing Data from Excel Reports

- Importing Data from Excel Reports
- Transforming Excel report Data
- Import data from Excel reports.
- Transform Excel report data.

Creating and Formatting Measures

- DAX
- Measures
- Advanced DAX Functions
- Explain what DAX is and when to use it.
- Describe a measure.
- Use some of the advanced functions within DAX.

Visualizing Data in Excel

- Pivot Charts
- Cube Functions
- Charts for Cube Functions
- Create and refine a pivot chart.
- Describe cube functions and when to use them.
- Describe a number of charts for use with cube functions.

Using Excel with Power BI

- Power BI
- Uploading Excel Data to Power BI
- Power BI Mobile App
- Describe Power Bi and the various versions available.



Upload Excel data to Power BI.
Describe the Power BI App.

Discover Data Analytics

Overview of data analysis
Roles in data
Tasks of a data analyst

Get started building with power bi

Use Power BI
Building blocks of Power BI
Tour and use the Power BI service

Get data in power bi

Get data from files
Get data from relational data sources
Create dynamic reports with parameters
Get data from a NoSQL database
Get data from online services
Select a storage mode
Get data from Azure Analysis Services
Fix performance issues
Resolve data import errors

Clean, transform, and load data in power bi

Shape the initial data
Simplify the data structure
Evaluate and change column data types
Combine multiple tables into a single table
Profile data in Power BI
Use Advanced Editor to modify M code

Design a data model in power bi

Work with tables
Create a data table
Work with dimensions
Define data granularity
Work with relationships and cardinality
Resolve modeling challenges

Add measures to power bi desktop models

Create simple measures
Create compound measures
Create quick measures
Compare calculated columns with measures

Add calculated tables and columns to power bi desktop models

Create calculated columns
Learn about row context
Choose a technique to add a column

Use DAX time intelligence functions in power bi desktop models

Use DAX time intelligence functions
Additional time intelligence calculations

Optimize a model for performance in power bi

Review performance of measures, relationships, and visuals
Use variables to improve performance and troubleshooting
Reduce cardinality
Optimize Direct Query models with table level storage
Create and manage aggregations

Design power bi reports

Design the analytical report layout
Design visually appealing reports
Report objects
Select report visuals
Select report visuals to suit the report layout
Format and configure visualizations
Work with key performance indicators

Configure power bi report filters

Apply filters to the report structure
Apply filters with slicers
Design reports with advanced filtering techniques
Consumption-time filtering
Select report filter techniques
Case study – Configure report filters based on feedback

Enhance power bi report designs for the user experience

Design reports to show details
Design reports to highlight values
Design reports that behave like apps
Work with bookmarks
Design reports for navigation
Work with visual headers
Design reports with built-in assistance
Tune report performance



Optimize reports for mobile use

Perform analytics in power bi

- Introduction to analytics
- Explore statistical summary
- Identify outliers with Power BI visuals
- Group and bin data for analysis
- Apply clustering techniques
- Conduct time series analysis
- Use the Analyze feature
- Create what-if parameters
- Use specialized visuals

Create and manage workspaces in power bi

- Distribute a report or dashboard
- Monitor usage and performance
- Recommend a development life cycle strategy
- Troubleshoot data by viewing its lineage
- Configure data protection

Manage datasets in power bi

- Use a Power BI gateway to connect to on-premises data sources
- Configure a dataset scheduled refresh
- Configure incremental refresh settings
- Manage and promote datasets
- Troubleshoot service connectivity
- Boost performance with query caching (Premium)

Create dashboards in power bi

- Introduction to dashboards
- Configure data alerts
- Explore data by asking questions
- Review Quick insights
- Add a dashboard theme
- Pin a live report page to a dashboard
- Configure a real-time dashboard
- Configure data classification
- Set mobile view

Implement row-level security

- Configure row-level security with the static method
- Configure row-level security with the dynamic method

Why Clients Trust CLS Learning Solutions ?

CLS Learning Solutions has always been a leader in the training and learning community. With 30 years of experience supporting both individual clients, corporates, Organizations and Government authorities .we continue to hold a strong position in the market thanks to our well-known expert trainers and our high trainee satisfaction rates.

We provide the best training quality, delivered by certified, top-tier instructors, while keeping our prices competitive and reasonable



Experience

Since 1995, we have been delivering high-quality training and continuously building our expertise. To date, we have trained over 250,000 individuals across Egypt and the MENA region.

Up to Date

By staying on top of market trends and technological advancements, we continuously update our training programs to meet international standards and prepare trainees for the dynamic global job market.

Friendly customer support

We provide our clients with the best solutions, customized to their specific needs and goals. Our team is highly qualified to answer whatever questions you have.

Reasonable Prices

Our clients, both individuals and corporate organizations, choose our training programs not only for their high quality but also for their cost-effectiveness. We consider our programs a valuable investment in careers and business growth.

Accredited by Leading Vendors

Our training programs are recognized and authorized by top global technology providers, ensuring the highest standards and quality in every program we deliver, while inspiring and preparing you to take international exams and achieve globally recognized certification.

Best Instructors

We select highly qualified instructors certified by trusted international vendors. Beyond delivering structured training programs, they share their professional experience, giving students practical, hands-on insights into the realities of today's job market.

Training Locations

Classroom

Our in-person classrooms bring learning to life through direct interaction with expert instructors. Hands-on training in our cutting-edge labs ensures collaboration, practical experience, and real-world skills.

OnSite

We offer on-site training at your company's premises. Tailored to your business needs, these sessions allow employees to learn without leaving the workplace.

Online

We offer Virtual Interactive Instructor-Led Training with flexible sessions that connect you with expert instructors in real time.

Branches Location:

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