Logical Operations™

Data Analysis and Visualization

with Microsoft® Excel®

HDTC Training

HDTC Management Development Academy

+971 52 861 3479
+966 55 285 5213

www.hdtcacademy.com
info@hdtc-academy.com

Course Description:

Excel definition:

A software program created by Microsoft that uses spreadsheets to organize numbers and data with formulas and functions.
Excel analysis is ubiquitous worldwide and used by businesses of all sizes to perform financial analysis.

Excel is widely used in the industry.
It is a powerful data analysis tool, and almost all big and small businesses use It in their daily operations.

The course is designed for two kinds of learners:

Those who have very little functional knowledge of Excel and those who use Excel regularly but at a peripheral level and wish to enhance their skills.
It takes you from basic operations, such as reading data into Excel using various data formats and organizing and manipulating data, to some of the more advanced functionalities of Excel.

As a data analyst

You are on a journey.
Think about all the daily data generated in an organization, from transactional data in a traditional database to telemetry data from services you use to signals you get from different areas like social media.

For example

Today's retail businesses collect and store massive amounts of data that track the items you browsed and purchased, the pages you've visited on their site, the aisles you buy products from, your spending habits, and much more.

With data and information as a business's most strategic asset, the underlying challenge today is understanding and using their data to positively affect change within the business. Companies continue to need help to use their data in a meaningful and productive way, which impacts their ability to act.

The key

To unlocking this data is telling a story with it.
In today's highly competitive and fast-paced business world, crafting reports that suggest that story helps business leaders act on the data.
Business decision-makers depend on an accurate story to drive better business decisions.
The faster a business can make precise decisions, the more competitive it will be and the better its advantage will be.
Without the story, it isn't easy to understand what the data is trying to tell you.

However

Having data alone is not enough. You need to be able to act on the data to effect change within the business.
That action could involve reallocating resources within the industry to accommodate a need or identifying a failing campaign and knowing when to change course.
In these situations, telling a story with your data is essential.

Course Content:

Lesson 1 Data Analysis Fundamentals

- **Topic A:** Data Analysis Scenarios
- **Topic B:** Tables
- **Topic C:** Sort and Filter Data

Lesson 2 Visualizing Data with Excel

- **Topic A:** Visualize Data with Charts
- **Topic B:** Modify and Format Charts
- **Topic C:** Best Practices for Selecting Charts

Lesson 3 Analyzing Data with Formulas and Functions

- **Topic A:** Analyze Data with Formulas
- **Topic B:** Analyze Data with Functions
- **Topic C:** Analyze Data with Data Validation, Forms, and Controls
- **Topic D:** Create Conditional Visualization with Lookup Functions

Career Path:

Data Analyst/Entry-Level Analyst:

- Start your career as a data analyst or entry-level analyst.
- Collect, clean, and analyze data using Microsoft Excel®.
- Create basic charts, graphs, and visualizations to present data insights.
- Assist in generating reports and providing data-driven recommendations.

Data Analyst/Advanced Analyst:

- Gain experience in handling larger datasets and more complex analysis.
- Develop proficiency in advanced Excel® function and formulas.
- Utilize pivot tables, conditional formatting, and data
- validation techniques.
- Enhance your data visualization skills by creating interactive dashboards and dynamic charts in Excel®

Data Visualization Specialist:

- Specialize in data visualization techniques and tools.
- Master Excel® features for advanced visualizations, such as sparklines, advanced charts, and slicers.
- Explore add-ins and plugins that enhance Excel's visualization capabilities.
- Acquire knowledge of design principles and best practices for effective data communication.

Business Intelligence Analyst:

- Expand your skills beyond Excel® and incorporate other business intelligence tools like Power BI.
- Develop data modeling, extraction, and transformation expertise using Power Query.
- Build interactive dashboards and reports that integrate data from multiple sources.
- Collaborate with stakeholders to understand business requirements and deliver actionable insights.

Data Scientist:

- Deepen your analytical skills by learning statistical analysis and machine learning techniques.
- Utilize Excel® for data preprocessing, exploratory data analysis, and hypothesis testing.
- Combine Excel® with programming languages like Python or R to leverage their advanced data analysis libraries.
- Apply predictive modeling and data science algorithms to solve complex business problems.

Data Analytics Manager/Lead:

- Progress into a managerial or leadership role in data analytics.
- Oversee a team of data analysts and visualization specialists.
- Define strategies for data analysis and visualization projects.
- Collaborate with cross-functional teams to drive data-driven decision-making at the organizational level.

Data Strategy/Analytics Consultant:

- Transition to a consulting role, offering data strategy and analytics expertise.
- Advise organizations on best practices for data-driven decision-making, data governance, and analytics.
- Help clients optimize their data analysis and visualization processes using Excel® and other relevant tools.
- Provide training and mentorship to individuals and teams on Excel® data analysis and visualization techniques.

Prerequisites:

To ensure success, you should have baseline skill using Microsoft Excel worksheets, particularly in creating workbooks with formulas and functions. You can obtain this level of knowledge and skill by taking the following or any similar equivalent Logical Operations course

Microsoft® Excel® for Office 365 (Desktop or Online)

Course-specific Technical Requirements

Hardware Recommendations:

For this course, you will need one computer with the following minimum hardware configurations:

- 1 gigahertz (GHz) 64-bit (x64) processor.
- 2 gigabytes (GB) of Random-Access Memory (RAM).
- 32 GB available storage space.
- Monitor capable of a screen resolution of at least 768 × 1,024 pixels. A second monitor is recommended, but not required, for an ideal learning experience.
- learning experience.
- Keyboard and mouse.
- Internet access

Software:

- Microsoft® Office Professional Plus 2019 or Office 365
- Microsoft® Windows® 10 Professional or Enterprise