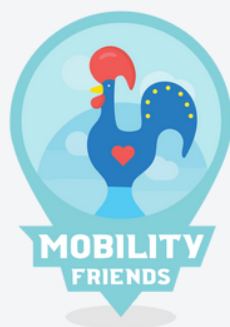**STEM AND TECHNOLOGICAL INNOVATION**

Data Science

EXCEL AND POWER BI: COMPLETE DATA ANALYSIS AND REPORTING

Your Mobility Partner

PIC Number: 948037649 | **Organisation ID:** E10207576

COURSE OVERVIEW

This comprehensive course provides a practical introduction to data analysis and reporting using Microsoft Excel and Power BI. Participants will learn how to efficiently manage, analyze, and visualize data to support informed decision-making. Starting with foundational Excel skills such as formulas, functions, and pivot tables, the course progresses to Power BI's powerful data modeling and interactive dashboard capabilities. Through hands-on exercises and real-world projects, learners will develop the confidence to transform raw data into meaningful insights, tailored for business and professional contexts.

TARGET AUDIENCE

This course is designed for professionals, students, and individuals who want to develop comprehensive skills in data analysis and reporting using Excel and Power BI. It is suitable for beginners and intermediate users in business, finance, marketing, operations, and other fields where data-driven decision making is essential. No prior experience with Power BI is required, but basic knowledge of Excel will be beneficial.

REQUIREMENTS

To take part in the course, participants must meet the following requirements:
- Have at least a B1 level of English (independent user);
- Complete and submit the registration form before the start of the training;
- Bring a laptop or tablet to use during the sessions;
- Commit to active participation and attend at least 80% of the course.

COURSE OBJECTIVES

The objectives of the course are:
- Understand key data analysis concepts and workflows in Excel and Power BI.
- Use Excel to organize, clean, and analyze data with formulas, functions, and pivot tables.
- Create effective data visualizations and summaries in Excel.
- Import, transform, and model data within Power BI.
- Build interactive dashboards and reports using Power BI visuals and tools.
- Combine Excel and Power BI skills to deliver comprehensive data analysis solutions.
- Communicate data insights clearly to support business decision-making.

CONTACTS AND REGISTRATION

For registrations, additional information, or budget requests, please contact our team by email at trainingcourses@mobilityfriends.org or visit our website at www.mobilityfriends.org .

LEARNING OUTCOMES

Upon successful completion of this course, learners will be able to:

1. Navigate and utilize Excel's interface and core functionalities effectively.
2. Apply formulas, functions, and pivot tables to analyze datasets.
3. Clean and organize data in Excel to prepare for analysis.
4. Create charts and visual summaries to present data insights.
5. Connect to data sources and import data into Power BI.
6. Use Power Query to transform and clean data within Power BI.
7. Build data models and establish relationships in Power BI.
8. Design interactive dashboards with visuals, slicers, and filters.
9. Publish and share Power BI reports securely with stakeholders.
10. Combine Excel and Power BI tools to produce comprehensive reports.

METHODOLOGY

The course is structured around a rigorous methodology that combines theoretical exposition, practical work, and applied demonstrations. This approach ensures a thorough understanding of the subject matter and its direct application in real-world contexts.

Theoretical sessions provide essential foundations, while practical work and demonstrations facilitate the development of technical skills and familiarity with the specific tools and procedures relevant to the course.

Continuous monitoring through individualized feedback allows for tracking learners' progress and ensures the achievement of the set objectives, preparing participants to face professional challenges with competence and precision.

ASSESSMENT

Assessment is carried out continuously throughout the course, using a holistic and learner-centered approach that reflects both participation and performance. Each participant is evaluated based on their overall engagement, regular attendance, punctuality, interest in the topics covered, ability to apply knowledge during practical tasks, and interaction with peers in individual and group activities.

The evaluation process includes a variety of classroom-based tasks (oral and written), short daily assignments, role-plays, and simulations. Trainers provide ongoing, individualized feedback to support progress and encourage active learning.

A Certificate of Participation is awarded to participants who attend at least 80% of the sessions and demonstrate consistent involvement and commitment during the training.

DURATION

The standard duration of our course is 20 hours (5 days), designed to ensure comprehensive and effective learning. However, this duration can be adjusted, in specific cases, to meet the particular needs of each group, in order to optimize outcomes and better suit the training context.

For further details or to discuss a customized schedule, please get in touch with us.

PRICE AND FUNDING

Each quotation is personalized and depends on several factors, such as the number of participants, the number of training hours, the location of the course, and any additional services requested (accommodation, transport, meals, cultural activities, etc.).

To receive a tailored quotation for your group, please get in touch with us.

The training can be funded through programs such as Erasmus+ (KA1 – Learning Mobility), among other European support mechanisms. For more information about funding, participants should contact their sending organization or their country's National Agency directly.

LOCATION AND COURSE LANGUAGE

We have training rooms in several cities in Mainland Portugal, such as Barcelos (headquarters), Braga, Póvoa de Varzim, and Porto. We also have spaces in the islands of Madeira (Funchal) and the Azores (Ponta Delgada). Additionally, we have facilities in Valencia, Spain.

The course is delivered in English.

CERTIFICATION

A Certificate of Participation is awarded to participants who attend at least 80% of the sessions and demonstrate consistent engagement and commitment throughout the training. Upon completion of the course, a formal certification ceremony will take place, during which the certificates will be presented to the participants.

OTHER SERVICES

To enrich the training experience, Mobility Friends offers a range of additional services, subject to availability and additional cost, which can be arranged for individual participants or groups.

Services include:

- Accommodation in partner residences or hotels
- Meals (lunch and/or dinner)
- Transfers between the accommodation and the training room
- Airport transfers
- Cultural visits

All services are subject to availability and must be requested in advance. For more information and personalised quotes, please contact our team.

COURSE CONTENTS

MODULE 1: FUNDAMENTALS OF DATA ANALYSIS AND EXCEL BASICS

- Introduction to data analysis concepts and process.
- Excel interface overview and navigation.
- Basic data entry and formatting techniques.
- Essential formulas and functions (SUM, AVERAGE, COUNT).
- Data validation and error checking.

MODULE 2: INTERMEDIATE EXCEL SKILLS FOR DATA HANDLING

- Logical functions (IF, AND, OR).
- Lookup functions (VLOOKUP, HLOOKUP, INDEX, MATCH).
- Text functions for data cleaning.
- Using tables and named ranges to organize data.

MODULE 3: DATA SUMMARIZATION AND VISUALIZATION IN EXCEL

- Creating and customizing pivot tables.
- Applying slicers and filters for interactive analysis.
- Designing basic charts (bar, line, pie, combo).
- Using conditional formatting to highlight data insights.

MODULE 4: GETTING STARTED WITH POWER BI

- Introduction to Power BI and its interface.
- Importing data from Excel and other sources.
- Basic data transformation using Power Query.
- Understanding data types and relationships.

*Please note that program content may be subject to change based on input from our trainers.

COURSE CONTENTS

MODULE 5: BUILDING DATA MODELS AND BASIC DAX IN POWER BI

- Concepts of data modeling and relationships.
- Writing simple DAX formulas (calculated columns and measures).
- Using key DAX functions like SUM, CALCULATE, FILTER.

MODULE 6: CREATING INTERACTIVE REPORTS AND DASHBOARDS

- Adding and formatting visual elements (charts, tables, cards).
- Using slicers, filters, and bookmarks for user interaction.
- Setting up drill-through reports and tooltips.
- Customizing report layout and themes.

MODULE 7: PUBLISHING AND SHARING REPORTS

- Publishing reports to Power BI Service.
- Managing workspaces and user access.
- Scheduling data refreshes.
- Exporting reports and integration with Microsoft 365 tools.

MODULE 8: FINAL PROJECT – INTEGRATED DATA ANALYSIS AND REPORTING

- End-to-end project: data preparation in Excel.
- Summarizing data with pivot tables and charts.
- Importing, modeling, and visualizing data in Power BI.
- Publishing and presenting a comprehensive dashboard.

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