



Advanced Excel and Power Query for Business Intelligence Training Course

Ref: #BUI2319



Course Introduction / Overview:

In today's data-driven landscape, the ability to transform raw data into actionable intelligence is a critical competitive advantage. This course is meticulously designed to bridge the gap between standard Excel usage and the powerful world of modern self-service business intelligence. We move beyond basic spreadsheets to explore the robust capabilities of Power Query for data extraction, transformation, and loading (ETL), and Power Pivot for sophisticated data modeling and analysis. As highlighted by authors like Rob Collie in his book "Power Pivot and Power BI", the integration of these tools within the familiar Excel environment democratizes data analysis, empowering professionals to build scalable and automated reporting solutions without extensive IT dependency. This program, offered by BIG BEN Training Center, provides a comprehensive, hands-on journey through the entire BI workflow. Participants will learn to clean messy data, build relational data models, and write powerful DAX formulas to uncover deep insights. The curriculum is structured to equip you with the practical skills needed to automate repetitive tasks, create dynamic dashboards, and ultimately make more informed, data-backed business decisions, transforming your proficiency in data manipulation and visualization.

Target Audience / This training course is suitable for:



- Data Analysts and Business Analysts.
- Financial Analysts and Accountants.
- Marketing and Sales Professionals.
- IT Professionals involved in data management.
- Project Managers and Team Leaders.
- Operations Managers and Supply Chain Analysts.
- Human Resources Professionals who handle data.
- Anyone seeking to automate reporting and enhance their data analysis skills.

Target Sectors and Industries:

- Banking and Financial Services.
- Healthcare and Pharmaceuticals.
- Retail and E-commerce.
- Manufacturing and Engineering.
- Telecommunications and Technology.
- Consulting and Professional Services.
- Governmental and Public Sector Organizations.
- Logistics and Supply Chain Management.

Target Organizations Departments:

- Finance and Accounting Departments.
- Marketing and Sales Departments.
- Operations and Logistics Departments.
- Human Resources Departments.
- Information Technology (IT) Departments.
- Business Intelligence and Analytics Teams.
- Strategic Planning and Corporate Development Departments.
- Procurement and Supply Chain Departments.



Course Offerings:

By the end of this course, the participants will have able to:

- Automate data cleaning and transformation processes using Power Query.
- Connect to and import data from a wide variety of sources seamlessly.
- Build robust and scalable data models using Power Pivot.
- Establish relationships between different data tables to create a unified model.
- Write complex DAX (Data Analysis Expressions) formulas to create powerful calculations.
- Develop insightful calculated columns and measures for advanced analysis.
- Design and create interactive dashboards and reports within Excel.
- Utilize PivotTables, Pivot Charts, and Slicers for dynamic data visualization.
- Implement time intelligence functions to analyze trends over time.
- Optimize query performance and manage data refresh settings efficiently.

Course Methodology:



The training methodology at BIG BEN Training Center is centered on active, hands-on learning to ensure participants can immediately apply their new skills in a real-world context. This course moves beyond theoretical lectures and focuses on practical application through a series of guided exercises, business case studies, and interactive problem-solving sessions. Each module is designed to build upon the last, creating a logical and cohesive learning journey from data ingestion to final dashboard creation. Participants will work with sample datasets that mirror common business challenges, allowing them to practice data transformation, modeling, and DAX formula creation in a supportive environment. The instructor will facilitate group discussions and collaborative projects, encouraging peer-to-peer learning and the sharing of diverse perspectives. Continuous feedback and Q&A sessions are integrated throughout the course to address individual challenges and reinforce key concepts. This immersive, practical approach ensures a deep understanding of the tools and techniques, empowering participants to confidently tackle complex data analysis tasks in their own professional roles.

Course Agenda (Course Units):

Unit One: Foundations of Modern BI in Excel

- Introduction to Self-Service Business Intelligence (BI).
- Understanding the Power Platform ecosystem within Excel (Power Query, Power Pivot, Power View).
- Navigating the Power Query Editor interface.
- Importing data from various sources (Excel, CSV, Text, Folders).
- Performing basic data transformation steps.
- Understanding data types and applying formatting.
- Removing duplicates, filtering rows, and splitting columns.



Unit Two: Advanced Data Transformation with Power Query

- Appending and merging queries from multiple data sources.
- Pivoting and unpivoting data for proper modeling.
- Using Group By for data aggregation and summarization.
- Adding conditional and custom columns.
- Introduction to the M language and the Advanced Editor.
- Implementing basic error handling techniques.
- Best practices for organizing and documenting queries.

Unit Three: Introduction to Data Modeling with Power Pivot

- Activating and navigating the Power Pivot environment.
- Understanding the difference between Excel data and a Data Model.
- Importing data into the Power Pivot Data Model.
- Creating relationships between tables using the Diagram View.
- Understanding cardinality and filter direction.
- Building hierarchies for intuitive drill-down analysis.
- Creating calculated columns using basic DAX syntax.

Unit Four: Mastering Data Analysis Expressions (DAX)

- Understanding the core concepts of DAX evaluation context.
- The difference between calculated columns and measures.
- Writing fundamental aggregation and iterator functions (SUM, AVERAGE, SUMX).
- Utilizing the powerful CALCULATE function to modify filter context.
- Implementing logical functions like IF and SWITCH.
- Introduction to time intelligence functions (TOTALYTD, SAMEPERIODLASTYEAR).
- Best practices for writing clean and efficient DAX code.

Unit Five: Building Interactive Dashboards and Reports



- Creating advanced PivotTables and Pivot Charts from the Data Model.
- Designing interactive dashboards using Slicers and Timelines.
- Applying advanced conditional formatting for visual insights.
- Leveraging Cube Functions to create highly customized reports.
- Principles of effective data visualization and dashboard design.
- Configuring data refresh settings for automated reporting.
- Final project. building a comprehensive BI report from start to finish.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

How might the decentralization of business intelligence, enabled by tools like Power Query, impact traditional data governance structures within an organization?

What unique qualities does this course offer compared to other courses?



This course distinguishes itself by focusing on the complete, end-to-end business intelligence workflow within the familiar Excel environment, rather than treating each component in isolation. While many courses may teach Excel functions or basic Power Query steps, this program integrates data transformation, data modeling, advanced analytics with DAX, and interactive visualization into a single, cohesive narrative. The curriculum is built around solving realistic business problems, moving beyond abstract technical exercises to provide context and practical relevance. We emphasize the "why" behind the techniques, exploring data modeling theory and DAX concepts to foster deep understanding, not just rote memorization of functions. The hands-on, case-study-based methodology ensures that participants learn by doing, building a comprehensive BI solution from the ground up over the five days. This holistic approach empowers attendees not just as tool users, but as strategic data analysts capable of designing and implementing robust, automated, and insightful reporting solutions that drive tangible business value.