

COURSE OVERVIEW IE1092-4D
Data Analysis & Reporting Using Power BI

Course Title

Data Analysis & Reporting Using Power BI

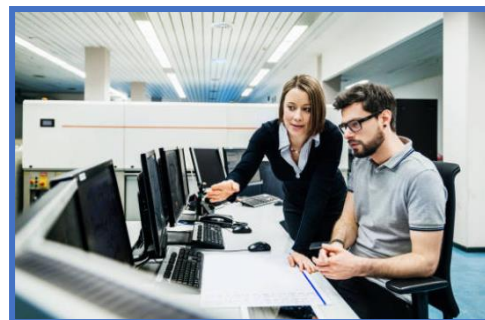
Course Reference

IE1092-4D

Course Duration/Credits

Four days/2.4 CEUs/24 PDHs

Course Date/Venue



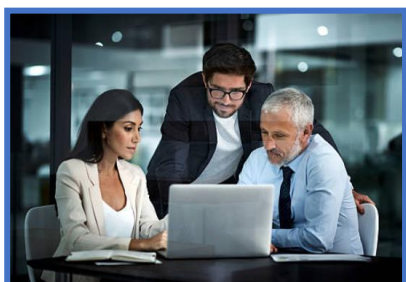
Session(s)	Date	Venue
1	February 05-08, 2024	Club B Meeting Room, Ramada Plaza by Wyndham Istanbul City Center, Istanbul, Turkey
2	May 06-09, 2024	Ajman Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE
3	August 12-15, 2024	Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
4	November 04-07, 2024	Al Aziziya Hall, The Proud Hotel Al Khobar, Al Khobar, KSA

Course Description



This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using the “Microsoft Power BI” application.

Power BI is a robust business analytics and visualization tool from Microsoft that helps data professionals bring their data to life and tell more meaningful stories.



This course is a guide to working with data in Power BI and is perfect for professionals. You'll become confident in working with data, creating data visualizations, and preparing reports and dashboards.



This course is designed to provide participants with a detailed and up-to-date overview of data analysis and reporting using Power BI. It covers the extent of Power BI and turning of data into business insights; the key benefits and differentiators of Power BI including the types of data; the VAnArdsel, Power BI data model, Power BI data flow and exploration of data set; the basic data modelling and designing of a good data model; the Power BI advanced data modelling and basic data modelling; the Power BI desktop internals, DAX calculated columns and measures, DAX level set, Dax foundations and DAX evaluation contexts; and the advanced DAX time intelligence functions and Power BI support resources.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain a comprehensive knowledge on data analysis and reporting using Power BI
- Determine the extent of Power BI and turn data into business insights
- Identify the key benefits and differentiators of Power BI including the types of data
- Get started with Power BI desktop as well as go from data to insight to action
- Describe VAnArdsel, Power BI data model and Power BI data flow as well as explore data set
- Carryout basic data modelling and design a good data model
- Employ Power BI advanced data modelling and basic data modelling
- Recognize Power BI desktop internals, DAX calculated columns and measures, DAX level set, Dax foundations and DAX evaluation contexts
- Utilize advanced DAX time intelligence functions and Power BI support resources

Who Should Attend

This course provides a basic overview of all significant aspects and considerations of data analysis and reporting using Power BI for risk managers, financial analysts, accountants, strategic planners and treasury, budgeting and planning specialists.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Fee


Istanbul	US\$ 5,000 per Delegate + VAT . This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Abu Dhabi	US\$ 4,500 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day
Dubai	US\$ 4,500 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Al Khobar	US\$ 4,500 per Delegate + VAT . This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations


Certificates are accreditation by the following international accreditation organizations:

-  The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units (CEUs)** in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **2.4 CEUs** (Continuing Education Units) or **24 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

-  British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.



Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Ms. Berna Dogru (German), MSc, BSc, MCT, MCSA, is an **International Expert in Microsoft Power BI** with extensive years of industrial digital experience. Her expertise widely covers in the areas of **Data Science & Analytics**, **Advanced Microsoft Power BI**, **Automated Power BI Reports**, **Power BI & Complex Measures** using Data Analysis Expression Language (**DAX**), **Self-Service BI**, **Advanced DAX**, **Advanced Microsoft Excel**, **Advanced Power Apps**, **Advanced Power Automate**, **Python**, **Basic R**, **Advanced SPSS Statistics**, **SQL Server Analysis Services (SSAS)**, **Azure SQL**, **Azure Synapse Analytics**, **Microsoft SQL Server**, **Azure Blob Storage**, **Advanced Power Query**, **SAP Payroll Software**, **Data Handling**, **Retail and Non-Retail Business Analysis**, **Analysing & Visualizing Data with Microsoft Excel**, **Data Science with Python**, **Communicating Data Science Results**, **Data Analysis & Presentation** and **Internet of Things (IOT)**. Further, she is also well-versed in logistics, supply chain, finance, accounting, marketing, sales, operations and procurement cost savings. She is currently the **Technical Product Owner & Project Manager** wherein she is responsible for improving internal data management and reporting process. She is also a **Microsoft Certified Associate in BI** reporting specialized in **Power BI** and **PowerApps**.

During her career life, Ms. Dogru has gained her practical and field experience through her various significant positions and dedication as the **Senior Power BI Developer & Trainer**, **Senior Business Intelligence Consultant/Trainer**, **Power Platform Developer**, **Certified Microsoft Trainer**, **International Finance Analyst & Consultant**, **SAP Analyst**, **Strategy & Programme Analyst**, **Trainee Assessment & Development** and **HR Consultant** for companies like the Reckitt and Benckiser, Jitsuin, Uniserve, Laminar, Hays and AUDI.

Ms. Dogru has a **Master's degree (Cum Laude)** in **Industrial and Organizational Psychology** and a **Bachelor's degree** in **Clinical and Organizational Psychology** from the **University of Brussels, Belgium**. Further, she is a **Certified Instructor/Trainer**, a **Microsoft Certified Trainer (MCT)**, a **Microsoft Certified Associate (MCSA): BI Reporting** and holds various certifications in **Analyzing & Visualizing Data with Microsoft Power BI: Exam 778**; **Visualizing Data with Microsoft Power BI: Exam 779**; **Data Science with Python**; **Communicating Data Science Results**; **Data Analysis & Presentation Skills** and **Successful Negotiation: Essential Strategies & Skills**. She is also a member of the **Registered & Chartered Organizational & Industrial Psychologist** from the **Belgian Commission of Psychologists** and has further delivered numerous trainings, courses, seminars, conferences and workshops internationally.



Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1

0730 - 0800	Registration & Coffee
0800 - 0815	Welcome & Introduction
0815 - 0830	PRE-TEST
0830 - 1000	Introducing Microsoft Power BI
1000 - 1015	Power BI is a Cloud-Based Business Analytics Service
1015 - 1030	Get Started Now at www.powerbi.com
1030 - 1035	Break
1035 - 1130	Today, BI Extends to Everyone 1st wave (Technical BI) - IT to End User • 2nd Wave (Self-service BI) - Analyst to End User • 3rd Wave (End user BI) - Everyone
1130 - 1200	Turning Data into Business Insights is Challenging
1200 - 1230	Power BI - Experience Your Data - Any Data, Anyway, Anywhere
1230 - 1300	Key Benefits & Differentiators of Power BI Pre-Built Dashboards & Reports for Popular SaaS Solutions • Real-Time Dashboard Updates • Secure, Live Connection to Your Data Sources, On-Premises & in the Cloud • Intuitive Data Exploration Using Natural Language Query • Integrated with Familiar Microsoft Products & Utilizes Commitment for Scale & Availability in Azure • Fast Deployment, Hybrid Configuration, Secure & Integrated with Existing IT Systems
1300 - 1315	Break
1315 - 1420	Power BI Overview Data Sources (SaaS Solutions, On-Premises Data, Organizational Content Packs, Azure services, Excel Files, Power BI Desktop Files) • Power BI Service (Content Packs, Live Dashboards, Visualizations, Reports, Datasets, Data Refresh, Natural Language Query, Sharing & Collaboration, Workspaces & Apps, Power BI REST APIs, Power BI Embedded)
1420 - 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day One

Day 2

0730 - 0800	Getting Started with Power BI Desktop
0800 - 0930	Go from Data to Insight to Action with Power BI Desktop Advanced Download Options
0930 - 0945	Break
0945 - 1030	Switch to Power BI - Live Introduction Demo
1030 - 1100	Van Arsdel
1100 - 1130	Power BI Data Model
1130 - 1200	Explore Dataset Dataset VanArsdel • The Request
1200 - 1230	Where Do We Start? Ask the Right Questions What Data Do We Need? • What Data Do We Have? • What Data Do We Transform?





1230 - 1245	Break
1245 - 1420	Basic Data Modeling Module Objectives • Power BI Desktop Data Flow • What is a Data Model? • Components of a Data Model • Data Model Brings Facts & Dimensions Together • Flat or Denormalized schema • Star Schema • Snowflake Schema • Granularity & Multiple Fact
1420 - 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Two

Day 3

0730 - 0800	Data Types Numeric Data Types • Date/Time Data Types • Other Data Types
0800 - 0930	Designing Good Data Models
0930 - 0945	Break
0945 - 1100	Power BI Advanced Data Modelling: Enhance your Data Model Prerequisites & Setup Steps
1100 - 1130	Module 1: Basic Data Modeling & Power BI Desktop Internals What is Unique about Power BI Desktop • Let Us Understand Some of the Internals of Power BI Desktop • Columnar Database • In-Memory Database • How Power BI Compresses Data • Practical Example of Compression • Phases in Building a Power BI Desktop File • Key Takeaways to Design a Good Power BI Desktop Data Model • Some Tips & tricks to Save RAM & Increase Speed of Model • Data Types • Hierarchies • Sort by Column
1130 - 1200	Module 1 Lab, Knowledge Check Module 1
1200 - 1230	Module 2: DAX Calculated Columns & Measures DAX Level Set
1230 - 1245	Break
1245 - 1420	DAX Foundations What is a Calculated Column? • Calculated Column in DAX vs Custom Column in "Query Editor" • Calculated Column – Accessing Columns from other Tables in Model • Row Context and Multiple Tables – RELATED Function • RELATED Function Example • When is a Calculated Column Evaluated? • Best Practices with DAX Calculated Columns • What is a Default Summarization? • Why are Default Summarizations useful? • What is a Measure? • Using One Measure in Another • More Complex Calculations • Calculated Column vs. Measure - When to Use What
1420 - 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Three





Day 4

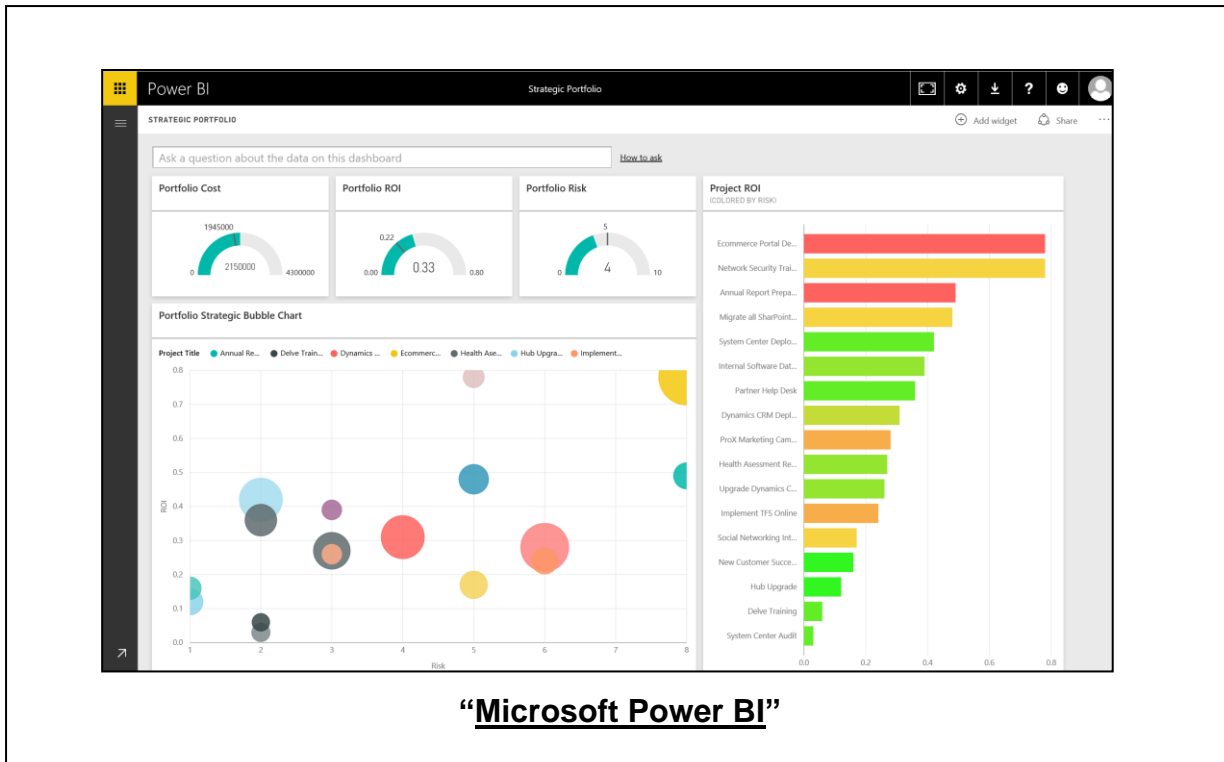
0730 – 08000	Module 2 Lab, Knowledge Check Module 2
0800 - 0930	Module 3: Calculate PATH to DAX Expertise • Why is CALCULATE Useful? • Here is how you do it with CALCULATE • Anatomy of CALCULATE • Steps in Evaluating the CALCULATE Function • The Most Important Function in DAX • Add Filter • Ignore an Existing Filter • Update Existing Filter
0930 – 0945	Break
0945 – 1100	Module 4: DAX Evaluation Contexts PATH to DAX Expertise • Evaluation Context • Row Context in Calculated Column • Filter Context in Measures • Filter Context & Multiple Tables • Filter Context & Multiple Tables – Right Arrow Direction • Filter Context & Multiple Tables – Wrong Arrow Direction • Evaluation Context Multiple Table – Summary & Take Aways • DAX Function Types • Applications of Table Functions • Basic TABLE Functions • Basic Table Functions – Return All Rows • Basic Table Functions – ALL Versions • Basic Table Functions – Return Distinct Rows • Basic Table Functions – Return Filtered Set of Rows • DAX Iterator Functions Take Advantage of Evaluation Context • Table Functions Application – Iterators • Row Context in a Measure – Iterator Functions • Why Can an Iterator be a Better Approach then a Calculated Column? • Iterator Function Example 2 – Dynamic Segmentation • CALCULATE – Converting Row Context to Filter Context (Example 1) • Iterator Function Example 3 • Other Iterator Functions • Table Functions – Summary & Application
1100 - 1200	Module 4 Lab, Knowledge Check Module 4
1200 - 1215	Break
1215 - 1300	Module 5: Advanced DAX Time Intelligence Functions Month Over Month • Monthly Active Users • Other Time Intelligence Functions
1300 – 1320	Advanced DAX Before we get to Time Intelligence (Let Us Apply All of the DAX Techniques, Let Us Apply All of the Data Modelling Techniques)
1320 -1345	Power BI Support Resources
1345 – 1400	Course Conclusion Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course





Hands-on Practical Sessions

Practical session will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using the “Microsoft Power BI”.



Course Coordinator

Kamel Ghanem, Tel: +971 2 30 91 714, Email: kamel@haward.org

