informatech

IT MANAGEMENT AND CYBER SECURITY | IMCS-003

Power BI: Data Mining and Big Data Analytics

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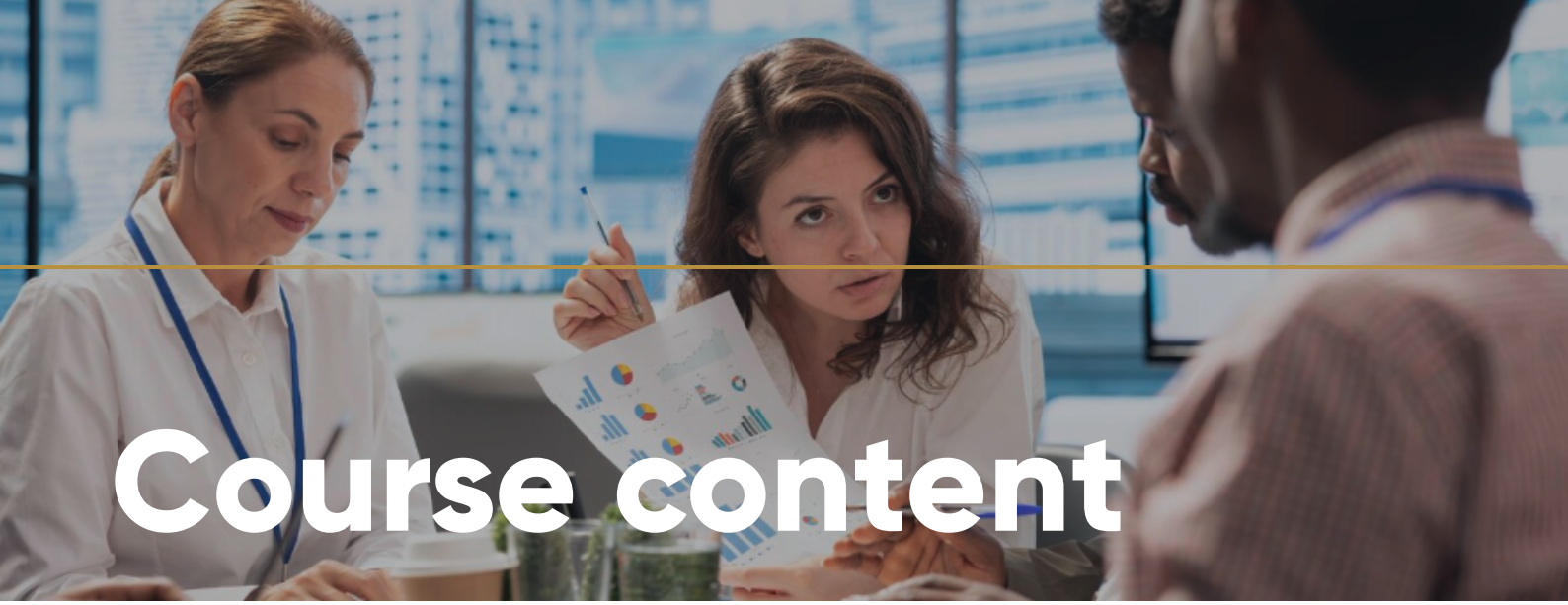


Course content

Why Attend

Training Course Overview

As businesses increasingly generate vast amounts of data, the ability to transform this information into actionable insights has become a key competitive advantage.

Data mining and big data analytics offer organizations the ability to uncover hidden patterns, forecast future trends, and make informed decisions that drive growth and operational efficiency.

The Power BI: Data Mining and Big Data Analytics training course is designed to equip professionals with the skills needed to leverage the full potential of big data using Microsoft Power BI, one of the most powerful and intuitive tools for business intelligence and data analysis. This Course covers everything from importing and processing large datasets to applying advanced data mining techniques within Power BI. Participants will learn how to model and visualize complex data, identify significant patterns and relationships, and integrate predictive analytics using AI features. With a strong emphasis on practical application, the course is ideal for data analysts, business intelligence professionals, and decision-makers looking to extract valuable insights from big data and apply them to real-world challenges.

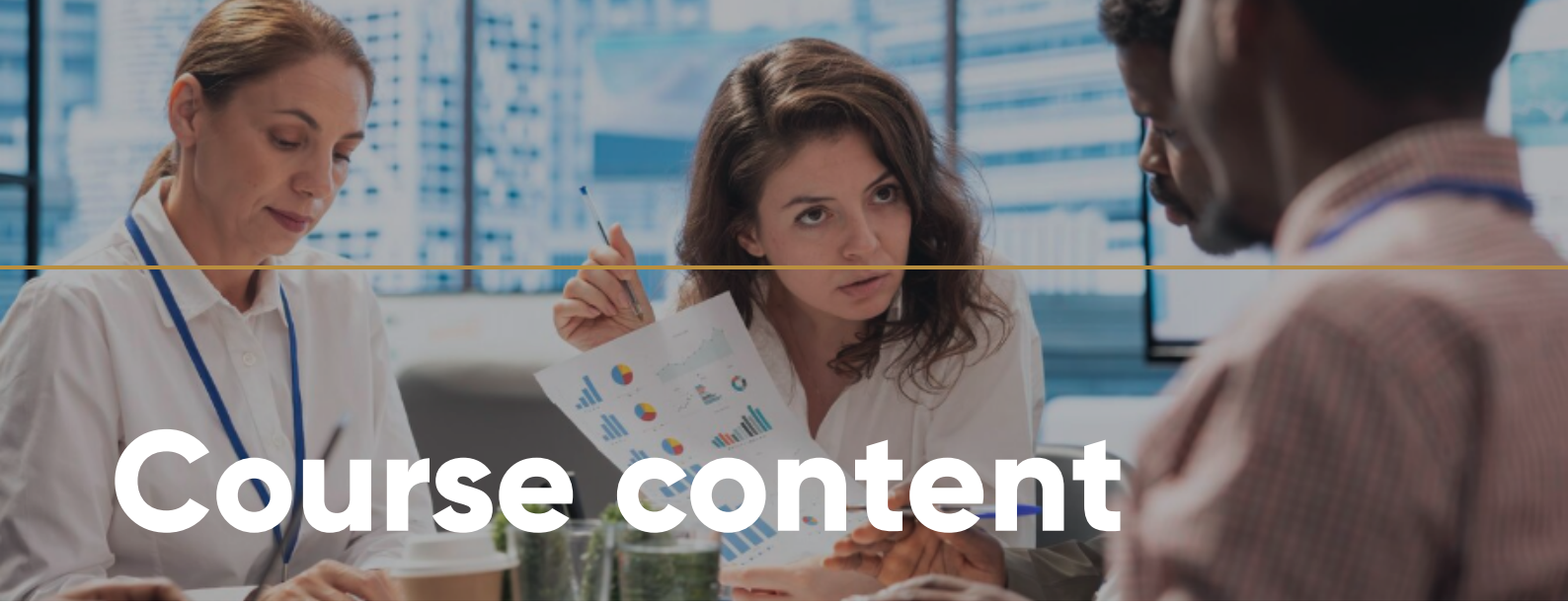
By the end of the course, attendees will have the expertise to tackle big data challenges, utilize advanced DAX functions for customized analytics, and design visually compelling dashboards that provide clear insights for strategic decision-making.

This training enables participants to not only analyze large datasets but also to drive data-driven initiatives within their organizations, turning data into a valuable competitive asset.

This training course will feature:

- Overview of data mining and big data analytics in today's data-centric world
- Understanding the role of Power BI in analyzing large datasets
- Key objectives of the course and expected outcomes for participants

Course Objectives



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Course Objectives

By attending this training course, delegates will be able to:

• Equip participants with skills to process, visualize, and analyze large datasets using Power BI

• Understand data mining techniques and how they can be applied in Power BI

• Teach best practices for handling big data, from importing to transforming and visualizing

• Enable participants to use advanced analytics features, including predictive analytics and clustering

• Develop the ability to identify patterns, trends, and insights from large datasets

Designed for

This training course is suitable to a wide range of professionals but will greatly benefit:

• Data analysts, business intelligence professionals, and IT specialists interested in big data analysis

• Business managers and decision-makers seeking to leverage big data insights for strategic planning

• Professionals in marketing, finance, operations, and research fields aiming to apply data mining techniques

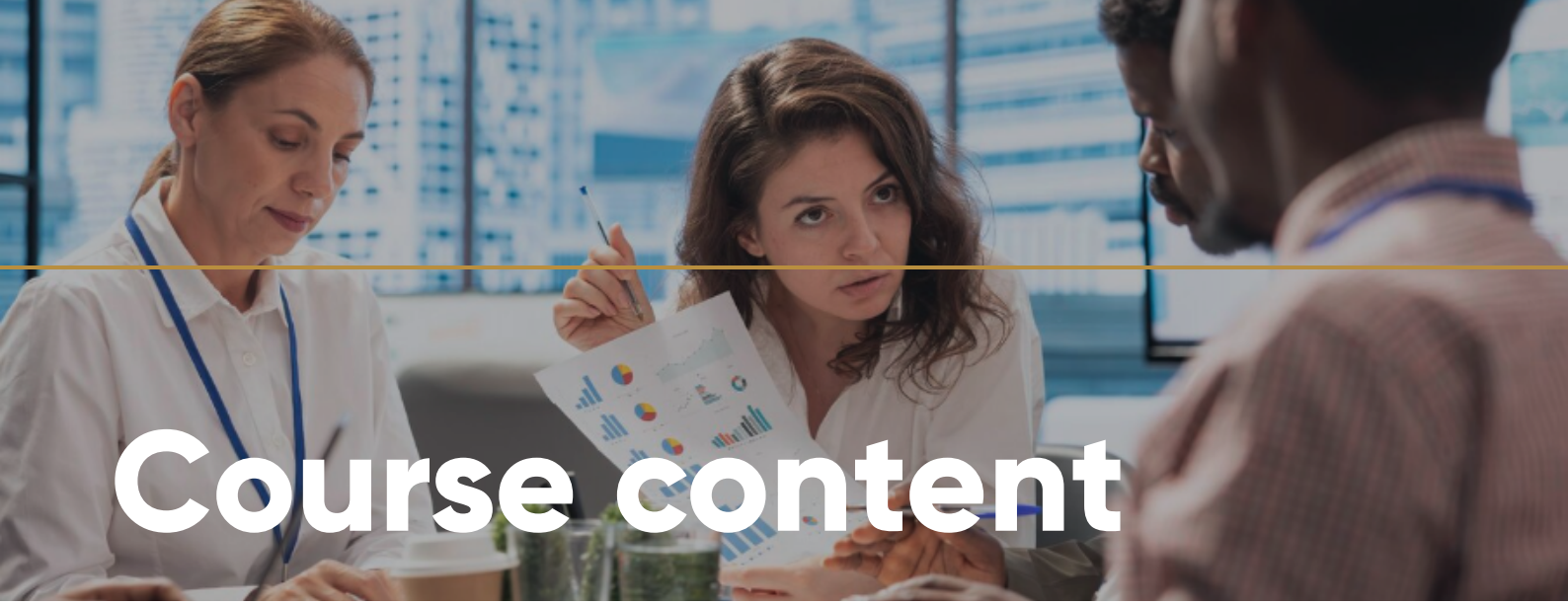
Learning Methods

This training course will utilise a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented.

This includes theoretical presentation of the concepts, but the emphasis will be on the exercises performed by the delegates with the guidance of the instructor.

The delegates will be "learning by doing" as the training course is designed for them to use the software on the real problems and real data applying each of the techniques themselves.

Delivery will be by presentation, group syndicate investigations, training e-manual and interactive seminars, as well as group discussion on the results of the exercises.



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Course outline

Day One: Introduction to Big Data and Power BI Essentials

- Understanding big data and its applications in business
- Overview of Power BI and its relevance to big data analytics
- Connecting to large data sources and managing data ingestion (SQL, Hadoop, Azure, etc.)
- Introduction to Power Query for data transformation and cleansing
- Hands-on: Loading and preparing a large dataset in Power BI

Day Two: Data Modeling and Advanced Data Mining Techniques

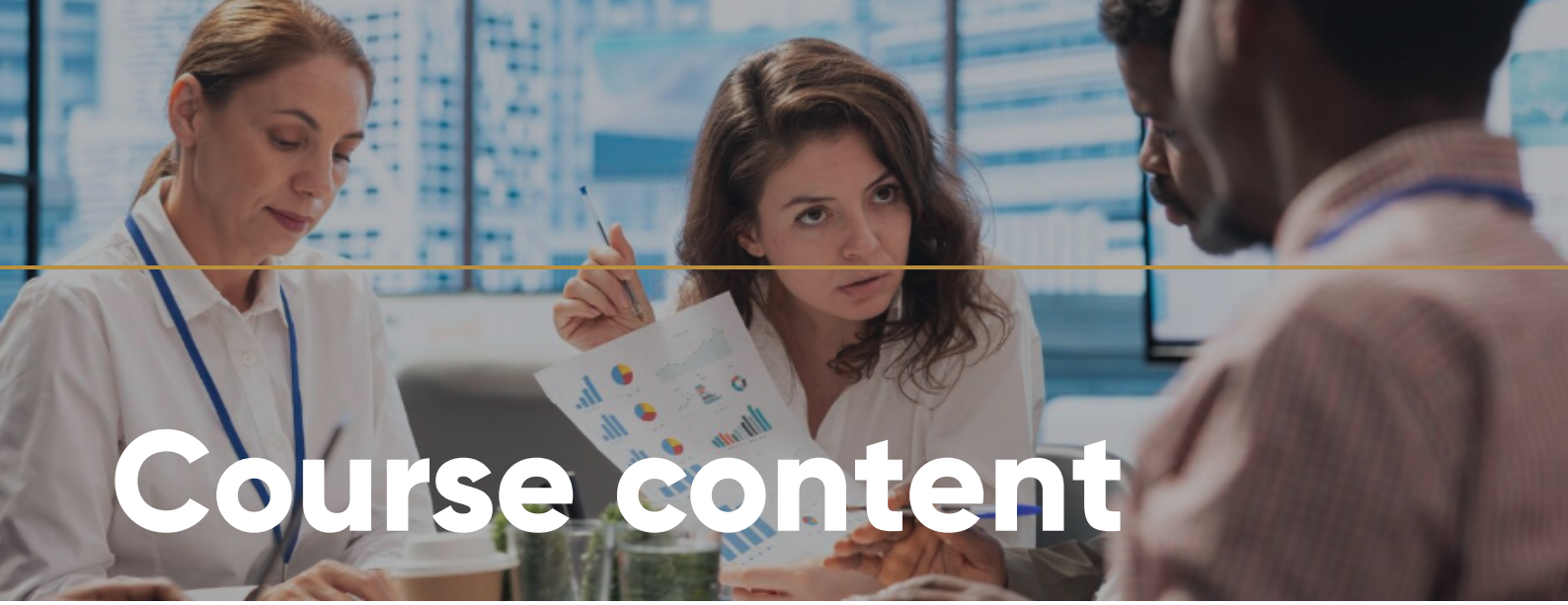
- Building efficient data models to handle large datasets
- Introduction to data mining concepts: classification, clustering, and association
- Using DAX (Data Analysis Expressions) for calculated fields and complex measures
- Applying data mining techniques with DAX in Power BI
- Hands-on: Creating data models and applying DAX for data mining

Day Three: Data Visualization and Identifying Patterns in Big Data

- Exploring visualizations optimized for big data in Power BI
- Using Power BI visuals to identify trends, patterns, and anomalies
- Interactive dashboards and drill-down features for big data insights
- Advanced visual techniques for clustering, classification, and segmentation
- Hands-on: Building a big data dashboard with advanced visualizations

Day Four: Advanced Analytics and AI Integration in Power BI

- Introduction to AI features in Power BI for predictive analysis and forecasting
- Leveraging the Key Influencers visual to detect trends and factors impacting outcomes



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- Using Power BI's Q&A and AI-driven clustering to enhance data mining
- Applying machine learning models and integrating Azure Machine Learning with Power BI
- Hands-on: Implementing AI-powered analytics and predictive insights in Power BI

Day Five: Optimizing, Publishing, and Sharing Big Data Insights

- Optimizing big data reports and dashboards for performance and accessibility
- Publishing and securely sharing Power BI dashboards with stakeholders
- Integrating Power BI reports with Microsoft Teams and SharePoint for collaboration
- Case studies: Real-world applications of big data analytics using Power BI
- Final Hands-on Project: Creating and presenting a comprehensive big data analytics dashboard

Seminar dates

Available seminar dates

Live dates and pricing for Power BI: Data Mining and Big Data Analytics generated from the course details page.

Date	Location	Format	Fee
9 - 13 November 2026	Barcelona - Spain	Classroom	**€3,080.-**
14 - 18 December 2026	Paris - France	Classroom	**€3,600.-**
9 - 13 November 2026	Frankfurt - Germany	Classroom	**€2,600.-**
14 - 18 December 2026	Rome - Italy	Classroom	**€3,400.-**
18 - 22 January 2027	Munich - Germany	Classroom	**€3,400.-**
15 - 19 February 2027	Amsterdam - Netherlands	Classroom	**€3,400.-**
15 - 19 March 2027	London - U.K	Classroom	**€3,360.-**
19 - 23 April 2027	Istanbul - Turkey	Classroom	**€2,280.-**
17 - 21 May 2027	Vienna - Austria	Classroom	**€3,400.-**
21 - 25 June 2027	Barcelona - Spain	Classroom	**€3,080.-**
19 - 23 July 2027	Cape Town - South Africa	Classroom	**€2,272.-**
16 - 20 August 2027	Munich - Germany	Classroom	**€3,400.-**
20 - 24 September 2027	Amsterdam - Netherlands	Classroom	**€3,400.-**
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16 - 20 November 2026	Barcelona - Spain	Classroom	**€3,080.-**
21 - 25 December 2026	Dubai - UAE	Classroom	**€4,200.-**
18 - 22 January 2027	Cape Town - South Africa	Classroom	**€3,600.-**
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19 - 23 July 2027	Frankfurt - Germany	Classroom	**€2,600.-**
16 - 20 August 2027	Kuala lumpur - Malaysia	Classroom	**€1,800.-**
20 - 24 September 2027	Rome - Italy	Classroom	**€3,400.-**
18 - 22 October 2027	Vienna - Austria	Classroom	**€3,400.-**
15 - 19 November 2027	Geneva - Switzerland	Classroom	**€4,200.-**
20 - 24 December 2027	Madrid - Spain	Classroom	**€3,400.-**

Live online option	Online delivery is available at €1,850.-.