



Enterprise Computing Solutions - Education Services

## TRAINING OFFERING

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**Puoi raggiungerci qui**

Arrow ECS Srl - Via Lancia 6/a - 39100 Bolzano

Email: [training.ecs.it@arrow.com](mailto:training.ecs.it@arrow.com)

Phone: +39 0471 099 134



# Analyzing Data with Power BI

**CODE:**

MCS\_DA-100T00

**LENGTH:**

32 Hours (4 days)

**PRICE:**

Request Price

**Description**

This course will discuss the various methods and best practices that are in line with business and technical requirements for modeling, visualizing, and analyzing data with Power BI. The course will also show how to access and process data from a range of data sources including both relational and non-relational data. This course will also explore how to implement proper security standards and policies across the Power BI spectrum including datasets and groups. The course will also discuss how to manage and deploy reports and dashboards for sharing and content distribution. Finally, this course will show how to build paginated reports within the Power BI service and publish them to a workspace for inclusion within Power BI.

**Objectives**

- Ingest, clean, and transform data
- Model data for performance and scalability
- Design and create reports for data analysis
- Apply and perform advanced report analytics
- Manage and share report assets
- Create paginated reports in Power BI

**Audience**

The audience for this course are data professionals and business intelligence professionals who want to learn how to accurately perform data analysis using Power BI. This course is also targeted toward those individuals who develop reports that visualize data from the data platform technologies that exist on both in the cloud and on-premises

**Prerequisites**

Successful Data Analysts start this role with experience of working with data in the cloud. Specifically:

- Understanding core data concepts.
- Knowledge of working with relational data in the cloud.
- Knowledge of working with non-relational data in the cloud.
- Knowledge of data analysis and visualization concepts.
- You can gain the prerequisites and a better understanding of working with data in Azure by completing Microsoft Azure Data Fundamentals before taking this course.

**Programme****Module 1: Get Started with Microsoft Data Analytics**

This module explores the different roles in the data space, outlines the important roles and responsibilities of a Data Analysts, and then explores the landscape of the Power BI portfolio.

**Lessons**

Data Analytics and Microsoft  
Getting Started with Power BI

**Lab : Getting Started**

Getting Started

After completing this module, you will be able to:

Explore the different roles in data  
Identify the tasks that are performed by a data analyst  
Describe the Power BI landscape of products and services  
Use the Power BI service

## **Module 2: Prepare Data in Power BI**

This module explores identifying and retrieving data from various data sources. You will also learn the options for connectivity and data storage, and understand the difference and performance implications of connecting directly to data vs. importing it.

### **Lessons**

Get data from various data sources  
Optimize performance  
Resolve data errors

### **Lab : Preparing Data in Power BI Desktop**

Prepare Data

After completing this module, you will be able to:  
Identify and retrieve data from different data sources  
Understand the connection methods and their performance implications  
Optimize query performance  
Resolve data import errors

## **Module 3: Clean, Transform, and Load Data in Power BI**

This module teaches you the process of profiling and understanding the condition of the data. They will learn how to identify anomalies, look at the size and shape of their data, and perform the proper data cleaning and transforming steps to prepare the data for loading into the model.

### **Lessons**

Data shaping  
Enhance the data structure  
Data Profiling

### **Lab : Transforming and Loading Data**

Loading Data

After completing this module, students will be able to:  
Apply data shape transformations  
Enhance the structure of the data  
Profile and examine the data

## **Module 4: Design a Data Model in Power BI**

This module teaches the fundamental concepts of designing and developing a data model for proper performance and scalability. This module will also help you understand and tackle many of the common data modeling issues, including relationships, security, and performance.

### **Lessons**

Introduction to data modeling  
Working with tables  
Dimensions and Hierarchies

### **Lab : Data Modeling in Power BI Desktop**

Create Model Relationships  
Configure Tables  
Review the model interface  
Create Quick Measures

### **Lab : Advanced Data Modeling in Power BI Desktop**

Configure many-to-many relationships  
Enforce row-level security

After completing this module, you will be able to:  
Understand the basics of data modeling  
Define relationships and their cardinality  
Implement Dimensions and Hierarchies  
Create histograms and rankings

## **Module 5: Create Measures using DAX in Power BI**

This module introduces you to the world of DAX and its true power for enhancing a model. You will learn about aggregations and the concepts of Measures, calculated columns and tables, and Time Intelligence functions to solve calculation and data analysis problems.

## **Lessons**

Introduction to DAX

DAX context

Advanced DAX

### **Lab : Introduction to DAX in Power BI Desktop**

Create calculated tables

Create calculated c

olumns

Create measures

### **Lab : Advanced DAX in Power BI Desktop**

Use the CALCULATE() function to manipulate filter context

use Time Intelligence functions

After completing this module, you will be able to:

Understand DAX

Use DAX for simple formulas and expressions

Create calculated tables and measures

Build simple measures

Work with Time Intelligence and Key Performance Indicators

## **Module 6: Optimize Model Performance**

In this module you are introduced to steps, processes, concepts, and data modeling best practices necessary to optimize a data model for enterprise-level performance.

### **Lessons**

Optimize the model for performance

Optimize DirectQuery Models

Create and manage Aggregations

After completing this module, you will be able to:

Understand the importance of variables

Enhance the data model

Optimize the storage model

Implement aggregations

## **Module 7: Create Reports**

This module introduces you to the fundamental concepts and principles of designing and building a report, including selecting the correct visuals, designing a page layout, and applying basic but critical functionality. The important topic of designing for accessibility is also covered.

### **Lessons**

Design a report

Enhance the report

### **Lab : Designing a report in Power BI**

Create a live connection in Power BI Desktop

Design a report

Configure visual fields and format properties

### **Lab : Enhancing Power BI reports with interaction and formatting**

Create and configure Sync Slicers

Create a drillthrough page

Apply conditional formatting

Create and use Bookmarks

After completing this module, you will be able to:

Design a report page layout

Select and add effective visualizations

Add basic report functionality

Add report navigation and interactions

Improve report performance

Design for accessibility

## **Module 8: Create Dashboards**

In this module you will learn how to tell a compelling story through the use of dashboards and the different navigation tools available to provide navigation. You will be introduced to features and functionality and how to enhance dashboards for usability and insights.

## **Lessons**

- Create a Dashboard
- Real-time Dashboards
- Enhance a Dashboard

### **Lab : Designing a report in Power BI Desktop - Part 1**

- Create a Dashboard
- Pin visuals to a Dashboard
- Configure a Dashboard tile alert
- Use Q&A to create a dashboard tile

After completing this module, students will be able to:

- Create a Dashboard
- Understand real-time Dashboards
- Enhance Dashboard usability

## **Module 9: Create Paginated Reports in Power BI**

This module will teach you about paginated reports, including what they are how they fit into Power BI. You will then learn how to build and publish a report.

### **Lessons**

- Paginated report overview
- Create Paginated reports

### **Lab : Creating a Paginated report**

- Use Power BI Report Builder
- Design a multi-page report layout
- Define a data source
- Define a dataset
- Create a report parameter
- Export a report to PDF

After completing this module, you will be able to:

- Explain paginated reports
- Create a paginated report
- Create and configure a data source and dataset
- Work with charts and tables
- Publish a report

## **Module 10: Perform Advanced Analytics**

This module helps you apply additional features to enhance the report for analytical insights in the data, equipping you with the steps to use the report for actual data analysis. You will also perform advanced analytics using AI visuals on the report for even deeper and meaningful data insights.

### **Lessons**

- Advanced Analytics
- Data Insights through AI visuals

### **Lab : Data Analysis in Power BI Desktop**

- Create animated scatter charts
- Use teh visual to forecast values
- Work with Decomposition Tree visual
- Work with the Key Influencers visual

After completing this module, you will be able to:

- Explore statistical summary
- Use the Analyze feature
- Identify outliers in data
- Conduct time-series analysis
- Use the AI visuals
- Use the Advanced Analytics custom visual

## **Module 11: Create and Manage Workspaces**

This module will introduce you to Workspaces, including how to create and manage them. You will also learn how to share content, including reports and dashboards, and then learn how to distribute an App.

## Lessons

Creating Workspaces  
Sharing and Managing Assets

### Lab : Publishing and Sharing Power BI Content

Map security principals to dataset roles  
Share a dashboard  
Publish an App

After completing this module, you will be able to:

Create and manage a workspace  
Understand workspace collaboration  
Monitor workspace usage and performance  
Distribute an App

### Module 12: Manage Datasets in Power BI

In this module you will learn the concepts of managing Power BI assets, including datasets and workspaces. You will also publish datasets to the Power BI service, then refresh and secure them.

#### Lessons

Parameters  
Datasets

After completing this module, you will be able to:

Create and work with parameters  
Manage datasets  
Configure dataset refresh  
Troubleshoot gateway connectivity

### Module 13: Row-level security

This module teaches you the steps for implementing and configuring security in Power BI to secure Power BI assets.

#### Lessons

Security in Power BI

Understand the aspects of Power BI security

After completing this module, you will be able to: Configure row-level security roles and group memberships

## Session Dates

Su richiesta. Contattaci al n.ro +39 0471 099134 oppure via mail a [training.ecs.it@arrow.com](mailto:training.ecs.it@arrow.com)

## Informazioni aggiuntive

[Questa formazione è disponibile anche come formazione in loco. Per favore, contattaci per saperne di più.](#)