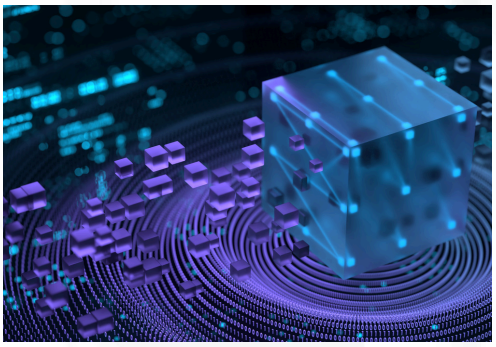


PeopleCert Data Science Foundation and Analyst

Learning Mode:
Online

Duration:
15 Days Training + Post Class Coaching + 2 Day Exam

This course is specifically designed to provide participants with:

- Understand the core principles, methodologies, and key concepts of data science.
- Gain proficiency in Pythonfor programming, data wrangling, visualization, and basic statistical analysis.
- Manage, organize, and analyze data effectively using probability, statistics, and EDA techniques.
- Learn the basics of machine learning including algorithms, models, and introductory AI applications.
- Develop problem solving skills to address real world business challenges with data-driven solutions.
- Enhance the ability to improve efficiency, streamline operations, and predict future trends.
- Identify new revenue opportunities and strengthen strategic decision-making using data insights.
- Complete a mini data analytics project to demonstrate practical competency and application of skills.

Accredited by:

PeopleCert
All talents, certified.

Course Overview

SUMMARY

Program equips participants with essential skills in data science and business intelligence. The course covers Python and R programming, data management, probability and statistics, machine learning, AI, and data governance, alongside Power BI techniques such as data modeling, DAX, and interactive dashboards. By the end of four days, participants will be able to apply exploratory data analysis on real-world datasets, complete a mini data analytics project, and create professional Power BI reports to support data-driven business decisions.

EXAM FORMAT BOTH FOUNDATION & ANALYST

- 40 questions - Multiple choice
- Duration: 60 minutes
- Closed book
- Passing mark: Minimum required score to pass: 70%
- Renewal every 3 years

Course Content

MODULE 1
Introduction to Data Science
- Overview & Definitions
- Key Concepts

MODULE 2
Programming Skills (with R/Python)
- Introduction to Programming

MODULE 3
Data Management
- Relational Databases (RDBMS)
- New Data Management Methods
- Business Intelligence

MODULE 4
Probability & Statistics
- Introduction to Statistics
- Introduction to Probability Theory

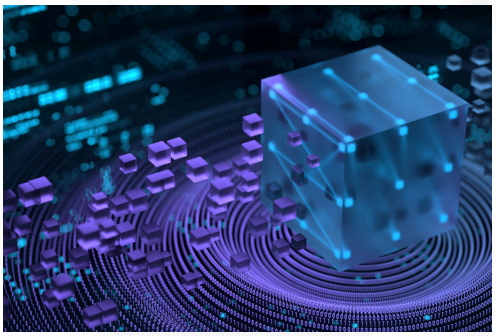
MODULE 5
Machine Learning (ML) and Artificial Intelligence (AI)
- Introduction to Probability Theory

MODULE 6
Visualization
- Introduction to Visualization

MODULE 7
Business Skills
- Data Governance
- Ethics, Data Privacy and Protection

MODULE 8
Introduction to Data Science
- Overview & Definitions
- Key Concepts

MODULE 9
Programming Skills (with R/Python)
- Introduction to Programming
- Basic Programming Skills



PeopleCert Data Science Foundation and Analyst

Course Content (Continue)

MODULE 10
Data Management

- Relational Databases (RDBMS)
- New Data Management Methods
- Business Intelligence

MODULE 11
Probability & Statistics

- Introduction to Statistics
- Advanced Statistical Topics

MODULE 12
Machine Learning (ML) and Artificial Intelligence (AI)

- Machine Learning (ML)
- Artificial Intelligence (AI)

MODULE 13
Visualization

- Introduction to Visualization

MODULE 14
Business Skills

- Data Governance
- Ethics, Data Privacy and Protection

PYTHON FOR DATA ANALYTICS

MODULE 1
Introduction & Python Fundamentals for Analytics

- Overview of Data Analytics
- Python Basics Refresher
- Data Structures in Python
- Hands-On Lab

MODULE 2
Working with Data

- Data Handling with Pandas
- Data Cleaning & Preparation
- Numerical Computation with NumPy
- Hands-On Lab

MODULE 3
Data Visualization & Exploratory Analysis

- Data Visualization Basics
- Exploratory Data Analysis (EDA)
- Hands-On Lab

MODULE 4
Applied Analytics & Mini Project

- Introduction to Statistical Analysis with Python
- Introduction to Machine Learning for Analytics
- Capstone Mini Project
- Wrap-Up & Next Steps

POWER BI BEGINNER

MODULE 1
Power BI

- An introduction to the different Power BI Products
- When to use Power BI Desktop: Free, Pro and Premium
- Online services and databases that Power BI can connect to

MODULE 2
The Business Intelligence Process

- Power BI in the business intelligence industry
- A day in the life of Power BI

MODULE 3
Data Model & Transformation

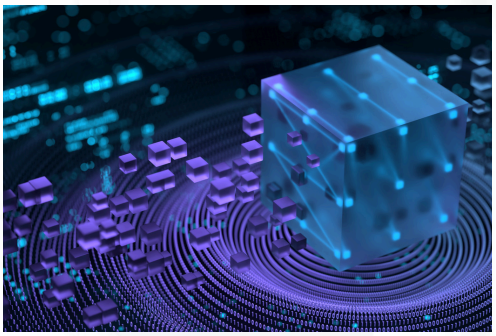
- Data transformation principles
- Data normalisation
- Fact and dimension tables
- The data model
- Star schema
- Snowflake schema
- Optimising the data model

MODULE 4
Get data

- Data sources
- The dataset
- Get data from a SharePoint list
- Get data from an Excel worksheet
- Get data from an Azure SQL database
- Import vs DirectQuery

MODULE 5
Power Query Editor

- Power Query user interface
- Queries pane
- Data pane
- Ribbon
- Query Settings



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Course Content (Continue)

MODULE 6
Modelling Data

- Filter data
- Rename queries
- Group queries
- Remove top rows
- Use first row as headers
- Rename columns
- Duplicate columns
- Split columns
- Rename Applied Steps
- Format data
- Unpivot columns
- Conditional columns
- Fill values
- Reorder columns Combine queries
- Append
- Merge
- Replace values
- Custom columns
- Remove columns
- Evaluate and change column data types

MODULE 7
Check the Data: Profiling

- Column quality
- Column distribution
- Column profile

MODULE 8
Data Transformations

- Auto Date/Time
- Create a date dimension table
- Dynamic date dimension tables
- Extract date components as columns
- Fiscal quarter and fiscal year

MODULE 9
Load Data

- Include in report refresh
- Enable load
- Query dependencies
- Advanced Editor
- Close and Apply

MODULE 10
Data Modelling

- The importance of a good data model
- Manage relationships
- Relationship cardinality
- Cross-filter direction
- Typical cardinality and cross filtering
- The dataset
- Modify data formats

MODULE 11
Data Analysis Expressions

- What is DAX?
- M (Power Query) language vs DAX
- Calculated columns
- Create and use a calculated column
- Measures
- Create and use measures
- Implicit vs explicit measures
- Filter context and measures
- Referring to measures and calculated columns
- Simple DAX functions

MODULE 12
The X Functions

- Calculating values row-by-row in a measure
- X functions vs aggregators and calculated columns

MODULE 13
Quick Measures

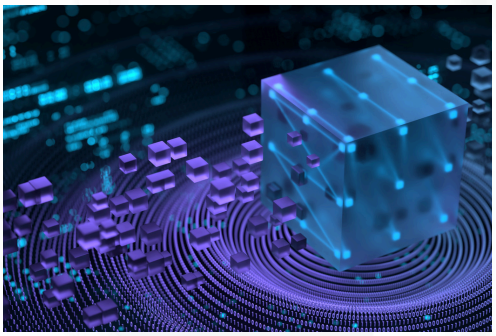
- Quick measure categories
- Aggregate per category
- Filters
- Totals
- Mathematical operations
- Text

MODULE 14
Time Intelligence Quick Measures

- Auto date/time option
- Mark as date table
- Visuals for date/time reporting
- Quick measure using an existing measure

MODULE 15
Secure and Share Data

- Online sharing
- Introduction to row-level security (RLS)
- Multi-row cards
- Testing row-level security
- Power BI workspaces
- Apps
- Add users to RLS roles
- Unpublish an app
- Delete a workspace



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Course Content (Continue)

MODULE 16
Extended Content: More Visualisations

- Combo charts
- Small multiples
- Waterfall charts
- Drill-down charts
- What if
- Bookmarks
- Buttons to navigate bookmarks

MODULE 17
Appendix: Database Normalisation

- The Normal Forms
- 1st Normal Form
- 2nd Normal Form
- 3rd Normal Form
- Primary Keys
- Relationships

REGISTER HERE

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016-2382293 (Ms.Nadia)