BCS Professional Certificate in Data Analysis Training

Duration: **3 Day**

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Overview

The **BCS Professional Certificate in Data Analysis** is a three-day specialist course designed to help Business Analysts define data requirements in a structured, detailed and rigorous way.

The programme develops the knowledge and techniques required to elicit and analyse data requirements, understand the business rules connected with those requirements and define data structures that support business needs.

The course extends beyond data modelling alone. It also considers the parts of the data lifecycle that commonly fall within the Business Analyst's remit, from identifying suitable data sources and assessing data quality through to cleansing, interpretation and the use of data to support better-informed decisions.

Key areas include:

- Data analysis in a Business Analysis context
- Data modelling with class diagrams
- Defining data requirements
- Data normalisation
- Data sourcing
- Data quality and cleansing
- Descriptive statistics
- Introductory data analytics concepts
- Data protection and data ethics

New course content continues until approximately the middle of the afternoon on day three. Participants should also expect to spend around **one to two hours each evening** on homework, revision and other activities assigned by the instructor.

Prerequisites

It is recommended that participants have knowledge equivalent to:

- The **BCS International Diploma in Business Analysis**, or
- The **BCS Solutions Development Diploma**

before attending.

An understanding of project environments is useful but is not essential.

This three-day specialist programme leads to the **BCS Professional Certificate in Data Analysis**.

Using This Certificate Towards the BCS Advanced Diploma

This certificate is one of the professional qualifications that can contribute towards the **BCS Advanced Diploma in Business Analysis**.

Candidates intending to work towards the Advanced Diploma must already hold the **BCS International Diploma in Business Analysis**.

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In general, the Advanced Diploma requires candidates to:

- Gain certifications in four subject areas across three skill domains
- Provide evidence of at least five years of Business Analysis experience
- Demonstrate engagement with the Business Analysis community

Who Should Attend

The course is designed for professionals who need to understand and apply data analysis within a business change environment.

It is particularly suitable for:

- Business Analysts
- Systems Analysts
- Technical Architects
- Solution Architects
- Professionals responsible for defining or analysing data requirements
- Candidates progressing towards the BCS Advanced Diploma in Business Analysis

What You Will Learn

By the end of the course, participants will be able to:

- Explain the fundamentals of data analysis.
- Understand how data requirements are defined.
- Build and interpret data models using class diagrams.
- Validate data models using Business Analysis artefacts.
- Explain the rationale for data normalisation.
- Recognise different types of data sources.
- Evaluate approaches to data acquisition.
- Identify data quality issues.
- Understand data cleansing techniques.
- Interpret data using descriptive statistics.
- Explain introductory data analytics concepts.
- Understand data protection and data ethics.
- Use data more effectively to support decision-making.

Outline

1. The Context of Data Analysis for Business Analysts

The course begins by establishing the role and purpose of data analysis within Business Analysis.

- Purpose of data analysis

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- Role of data modelling
- Relationship between data requirements and business requirements
- The Business Analyst's role within the data lifecycle
- Data-informed decision-making

2. Data Modelling with Class Diagrams

Participants examine how class diagrams can be used to represent data structures clearly and systematically.

- Components of class diagrams
- Using class diagrams as a data modelling technique
- Structuring a data model
- Representing relationships within the data
- Interpreting an existing data model

The emphasis is on making the data required by the business visible and understandable.

3. Defining Data Requirements

Explore how business needs are translated into explicit data requirements.

- Identifying data requirements
- Connecting requirements with the data model
- Relationship between business rules and data requirements
- Defining data structures that support business needs

4. Validating the Data Model

Examine how a proposed data model can be checked against business and system requirements.

- Interpreting the data model
- Using Business Analysis artefacts for validation
- Comparing data structures with requirements
- Identifying gaps and inconsistencies

5. Data Normalisation

Explore why normalisation can be useful when developing robust data structures.

- Purpose of data normalisation
- Rationale for using normalisation
- Reducing unnecessary data duplication
- Supporting consistent data structures
- The role of normalisation within data modelling

6. Data Sources and Data Acquisition

Consider where organisational data comes from and how it can be obtained.

- Different types of data sources
- Internal and external data sources
- Approaches to data acquisition
- Selecting appropriate data sources

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- Recording and preparing data for use

7. Data Quality and Cleansing

Participants examine how to assess whether data is suitable for analysis.

- Understanding data quality
- Exploring and validating data
- Identifying incomplete or inaccurate information
- Data cleansing
- Preparing data for analysis
- Assessing consistency and accuracy

8. Interpreting Data with Descriptive Statistics

This section introduces basic descriptive statistics as a way of supporting business interpretation and decision-making.

- Summarising data
- Basic statistical interpretation
- Identifying patterns within data
- Using descriptive statistics to support decisions

The focus is not on advanced statistics, but on helping Business Analysts interpret data with greater confidence.

9. Introduction to Data Analytics Concepts

Explore the role of data analytics in modern organisations.

- Introduction to data analytics
- Using analytics to support decisions
- Relationship between analytics and Business Analysis
- Turning data into useful insight

10. Data Protection and Data Ethics

The final subject area considers how data should be handled responsibly and appropriately.

- Data protection principles
- Responsible use of data
- Data ethics
- Data privacy
- Ethical considerations in analysis and interpretation

Exams and Assessments

The course includes the **BCS Professional Certificate in Data Analysis** examination.

Candidates must present valid photographic identification, such as a **passport, driving licence or student card**, before taking the assessment. Candidates who cannot provide acceptable identification will not be

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permitted to sit the exam.

Calculators are not permitted during the examination.