

Data Analytics

ITDP Certificate Program

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Data Analytics Program Overview

This programme has been designed to provide IT graduates with the knowledge they need to understand industry best practices across each of the major functions of a data and analytics team. They will also learn about the importance of data analytics teams focusing on delivering business value and how best to achieve that goal. By the end of the course participants will have the foundational knowledge they need to bring best practice to their role in IT and to grow into a data leadership role in the future.

During this programme participants will learn how to:

- Implement and operationalise data analytics in an organisation
- Provide direct strategic value to the business
- Architect and build a modern data analytics platform
- Collect and manage the right data the right way
- Implement a robust data governance framework
- Spur a data-driven culture within an organisation

Program Roadmap



Classroom



eLearning



Assessment

Part 1
Pre-learning

Research activities & Pre-reading

Part 2
Classroom learning

Module 1 Foundations of Data Analytics (D&A)

Module 6 Data Governance and Quality

Module 2 How to Solve Common Business Problems Using Analytics

Module 5 Communicating with Data

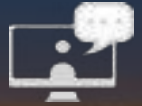
Module 3 Programming 1: SQL for Data Analytics

Module 4 Programming 2: Python for Data Analytics

Part 3
Assessment

Group Project Final Assessment

Part 1: Pre-Learning



PRE-WORK

Before attending the workshop, we recommend that you dive into our curated selection of articles and guides. These resources will provide you with valuable insights into the importance of business analytics and how you can leverage data and analytics to answer critical business questions and improve operational efficiencies.

By going through these materials, you'll be better equipped to participate in the workshop discussions and activities. You'll also gain a deeper understanding of how data analytics can drive business growth and enable you to make informed decisions based on data-driven insights.

Part 2: Data Analytics Workshop Overview



CLASSROOM
SESSIONS

Features



Breakout Room Exercises



Case Studies



Real-world Examples



Polling



Q&A

Overview

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Instructor: Charles Ellis

Learning Objectives

- A data vision and strategy
- Architecture documentation showing a target design for the platform
- Identify the roles and responsibilities needed on the data and analytics team
- Data governance artefacts for the provided sample dataset

Target Audience: New Recruits

Part 3: Workshop Outline



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SESSIONS

Day 1

Principles of Modern Analytics

1. Current state of the industry
2. Highlight current and future trends
3. What does it take to be successful
4. Common challenges in data analytics and how to mitigate them
5. Difference between data and metrics
6. The data analytics process
7. The different types of analytics and where they can add value

Building Your Data Vision

1. Creating your vision for data and analytics
2. Identifying core business objectives

Day 2

Data and Analytics Techniques

1. Storytelling with data
2. Types of Analytics
3. Data Science and Machine Learning

Crafting Your Data Strategy

1. Identifying core business objectives
2. Identifying business value drivers
3. Understanding the data lifecycle
4. Establishing your data strategy roadmap

Part 3: Workshop Outline



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SESSIONS

Day 3



Data Governance

1. What is data governance?
2. The importance of implementing a robust data governance framework
3. Foundations of good data governance
4. Data governance framework design
5. Data governance roles and responsibilities
6. Key artefacts that should be maintained

Data Architecture

1. Goal of data architecture
2. Data architecture artefacts
3. Useful tools

7. Data Quality

1. Important data quality metrics
2. Essentials for business value:
3. How to implement data quality checks
4. What to do when data is of poor quality?

Data Modelling

1. Business drivers
2. Goals of data modelling
3. Modelling approaches
4. Data modelling concepts
5. Data modelling schemes
6. Roles and responsibilities

Part 3: Workshop Outline



CLASSROOM
SESSIONS

Day 4

Data Warehousing

1. Business drivers for a data warehouse
2. Goals of a data warehouse
3. What is data warehousing
4. What are the main approaches
5. Data warehouse components

Data Engineering

1. Important dependencies
2. Data integration components
3. Designing data integration solutions
4. Data storage
 - Goals of effective data storage
 - Core principles of effective data storage
 - Essential database terminology
 - Key deliverables for data storage and operations
 - On-premise vs cloud databases
 - Database environments
 - Common database processes to consider in your procedure
5. Reference and master data
6. Defining procedures and standards

Day 5

10.Important Non-Technical Skills for IT Teams

- Agile project management
- Business requirements gathering
- Successful stakeholder engagement
 - Engaging with business teams
 - Building data literacy programmes

Wrap-Up

Question & Answer



IN PRACTICE

Each group will present a project to design a best-in-class data and analytics function from the ground up to include:

1

A data and analytics vision and strategy

2

A list of initiatives that can be undertaken to deliver business value and answer specific business questions

3

Data architecture design of a data and analytics platform, including data engineering pipelines and data warehouse design

4

A target framework for data governance

5

Data quality checks to be implemented

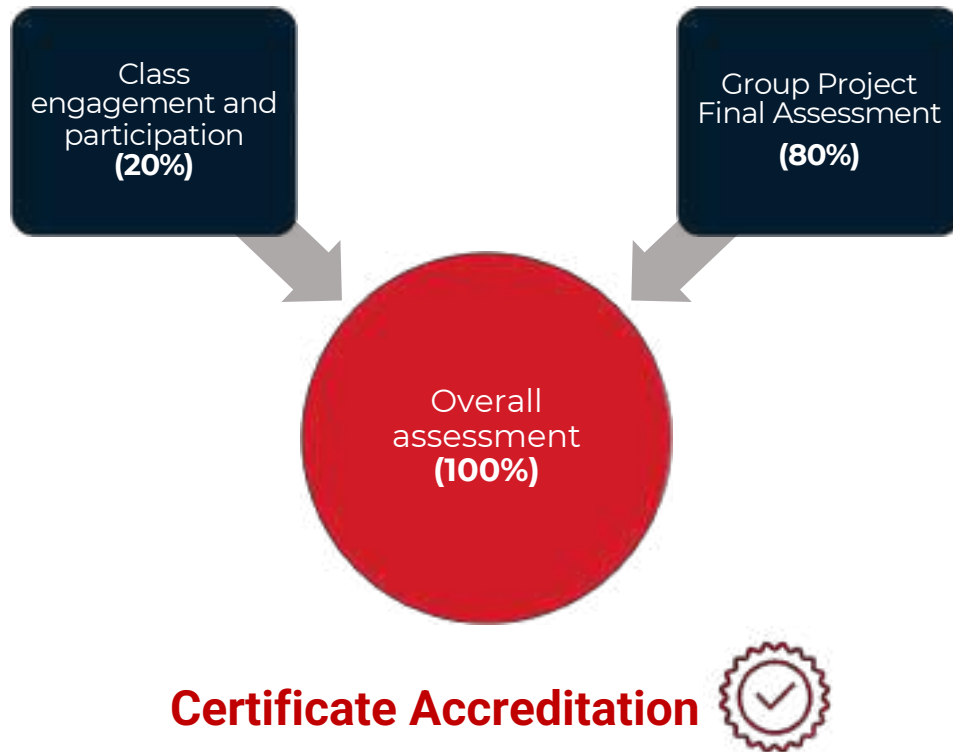


Part 4: Assessment



CLASSROOM
SESSIONS

The Assessment will have 2 components:



Group Project Final Assessment

Will be evaluated by the trainer on the following:

- Applying data and analytics techniques to answer a business question
- Extracting data they need from a database using SQL
- Cleaning and analysing the data
- Building, testing and interpreting a data science model that answers a particular business question
- Designing and building a dashboard to present the key insights from the data in a way that follows data storytelling best practices
- How they can work with the IT team in the future to ensure data quality is maintained

Class Engagement and Presentation

- Will be evaluated by the trainer
- Based on a pre-defined set of criteria

Program Director

Alastair

Alastair is a financial services and professional education expert specialising in Credit Skills and Risk Management. He is Head of Learning Services, EMEA at Intuition responsible for program needs analysis & design, faculty management and classroom delivery. He is Visiting Professor at LIBF where previously he was responsible for their international business. In 2018 he led a project to set up ADGM Academy.

Alastair worked for over twenty-five years in financial services in a range of senior front office roles for major UK banks (Barclays, RBS and Santander) specialising in asset finance (including number of major financings for oil and gas sector). Alastair was a Consultant at Deloitte in the Banking & Capital Markets group where he had a lead role on a Conduct review into one of the major UK international banks. He has taught banking and finance courses in many countries including Cuba, Egypt, KSA, Malaysia, Oman, UAE, UK, US and Uzbekistan. He has authored two textbooks; Corporate Lending (focussed on mid cap companies) and Bank Regulation & Economic Policy and from 2010-19 was the Chief Examiner for Corporate Lending at LIBF. c



Trainer

Charles

With over a decade of expertise in leading data initiatives across a multitude of organisations, Charles brings with him unique management experience as well as a proven track record of success.

His journey has seen him in significant roles such as Head of Analytics for a prestigious European asset manager, Quantitative Strategist, and Head of Global Macro Research for a pioneer in the alternative data industry.

He possesses a deep understanding of the design and implementation of data programmes that seamlessly align with business objectives, maximising the return on investment and fostering growth and profitability.



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