MORINGA
Future-Ready Tech Skilling



Applied Data Engineering

Introduction

Excel and Power BI got you started. Now it's time to level up. Data analysts turn data into insights; data engineers build the pipelines that make those insights possible. Stop exporting data and start engineering the pipelines.

This 14-week, part-time course is built for working data professionals. Starting from the Excel, Power Query and Power BI skills you already use, you'll learn Python, SQL and the modern data stack to pull data from multiple sources, clean and combine it automatically, and bring it together into one reliable source of truth. From your first week, you'll build a practical pipeline and extend it throughout the course until it delivers analysis-ready data straight to your Power BI dashboard.

Who is this course for?

- Data analysts who build reports in Excel and Power BI
- Data scientists who need reliable data from several systems
- BI and reporting specialists
- Finance, operations and research professionals in data-heavy roles
- Moringa alumni: Data Analytics, Advanced Data Analytics and Data Science graduates

Learning Outcomes

By the end of this course, you will be able to:

- Connect to virtually any data source
- Automate data preparation
- Build a central source of truth- load and organize data in a cloud warehouse such as BigQuery or Snowflake
- Model, transform, and test your data with dbt
- Orchestrate end-to-end pipelines with Apache Airflow
- Deliver analysis-ready data

What are the entry requirements?

1. Working experience with Excel and Power BI: building formulas, cleaning data, and creating or refreshing a Power BI report
2. Currently working in a data, analytics, reporting or research role
3. No prior Data engineering or Cloud experience required
4. Proficiency in spoken and written English
5. A stable internet connection and a laptop (Intel Core i5 11th Gen, 8GB RAM, 500GB storage)

Course Overview

Part-Time Evening Classes

Duration: 14 weeks

Mode: 100% live & remote classes | Tues & Thurs 6 pm - 9 pm E.A.T

Tuition Fees: Ksh 70,000

Fee Payment Options Available

1. Upfront Full Fee Payment
2. Fee installment plans

Course Outline

Onboarding & Orientation	Course overview, system configurations and installations, onboarding
Module 1: From Spreadsheets to Pipelines	Set up your tools, see the pipelines already hidden in your Excel and Power BI work, and run your first pipeline. Learn Python from the Excel formulas you know, reproduce Power Query steps in pandas and pull data from files, APIs and databases.
Module 2: SQL	Query databases with confidence, from joins and aggregations to window functions and CTEs, and make slow queries fast. Connect Power BI straight to the database.
Wellness Break	
Module 3: Data Modelling	Design transactional and star schemas, track history with slowly changing dimensions, and document your model.
Module 4: Data Ingestion and Pipeline Building	Ingest data incrementally from databases, APIs and spreadsheets with validation and quarantine, then package it into a tested pipeline that reruns safely and fails cleanly.

Course Outline

Module 5: **Cloud Storage, Warehousing and Serving**	Move your pipeline to the cloud: object storage, a BigQuery or Snowflake warehouse, access control, personal data masking and cost control, served to Power BI.
Module 6: **Transformation, Testing and Orchestration**	Build a tested, documented dbt project, then schedule and monitor the whole pipeline with Apache Airflow, ending with a Power BI refresh.
Module 7: **Capstone Project**	Final group project using a real Kenyan business case studies

Contact Details

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