KOENIG
step forward

KOENIG SOLUTIONS · COURSE OUTLINE

Business Analytics: Excel, Power BI & SQL

Learn to analyse business data with Excel, Power BI and SQL, from cleaning and visualizing data to building integrated reporting solutions.

5 Days	19	61	10
8 HOURS A DAY	MODULES	TOPICS	HANDS-ON ACTIVITIES

COURSE OVERVIEW

This course covers the fundamentals of data analytics and Excel, including data types, formatting, and core business functions. It then examines Excel tools for data analysis, such as lookup and logical functions, data cleaning, exploratory analysis, and PivotTables. The course moves on to Power BI for data import, modelling, visualization, and dashboard design, followed by SQL for querying, filtering, joining, and manipulating data across tables. It concludes by integrating Excel, Power BI, and SQL through connected reporting workflows and a capstone project applying these tools to a business case study.

WHO THIS COURSE IS FOR

Business Analysts | **Data Analysts** | **Financial Analysts** | **Reporting Professionals** | **Excel Users** | **HR Analysts**

LEARNING OBJECTIVES

- Explain the data analytics life cycle and its business applications
- Apply Excel functions such as SUMIFS, VLOOKUP, and IF for analysis
- Clean and prepare messy data using Excel tools such as Flash Fill
- Build PivotTables and interactive dashboards in Excel
- Configure data models and visuals in Power BI
- Write SQL queries using SELECT, JOIN, and GROUP BY clauses
- Develop subqueries and case statements for conditional logic
- Integrate SQL, Excel, and Power BI into a reporting solution

COURSE SYLLABUS

19 Modules, 61 Topics

DAY 1 Introduction to Data Analytics & Excel Fundamentals

Building a foundation in analytics thinking and Excel skills.

01

Introduction to Data Analytics

TOPICS

- What is Data Analytics?
- Importance in Business Decision-Making
- Data Analytics Life Cycle (Collect → Clean → Analyze → Visualize → Decide)
- Types of Data Analytics (Descriptive, Diagnostic, Predictive, Prescriptive)
- **Real-World Examples:** Banking, Retail, and HR Analytics

02

Understanding Data

TOPICS

Data vs Information · Types of Data (Quantitative, Qualitative) · Structured vs Unstructured Data · Data Sources in Business

03

Excel Refresher: Basics to Business Use

TOPICS

Understanding Excel Interface · Formatting, Sorting, and Filtering · Conditional Formatting for Insights · Data Validation & Drop-Down Lists · Tables and Named Ranges

Practice Workshop — 2 Hands-ons

DAY 2 Excel for Data Analysis & Business Insights

Turning raw data into insights using Excel tools.

01

Data Analysis Features in Excel

TOPICS

- **Using Functions:** SUMIFS, AVERAGEIFS, COUNTIFS
- **Text Functions:** LEFT, RIGHT, MID, FIND, CONCAT
- **Logical Functions:** IF, AND, OR, IFS
- **Lookup Functions:** VLOOKUP, XLOOKUP, INDEX-MATCH

02

Data Cleaning and Preparation

TOPICS

Removing Duplicates, Handling Errors · Flash Fill & Text to Columns · Using TRIM, CLEAN, SUBSTITUTE for messy data

03

Exploratory Data Analysis (EDA)

TOPICS

- **Descriptive Statistics:** Mean, Median, Mode, Variance, Std. Dev
- Using Data Analysis ToolPak
- Creating Summary Tables

04

PivotTables & Charts

TOPICS

Creating Dynamic PivotTables · Slicers, Timelines, and Drill-downs · Building Pivot Charts for Visual Insights

Practice Workshop

Hands-on

DAY 3 Power BI for Business Data Visualization

Transforming and visualizing data with Power BI.

01

Introduction to Power BI

TOPICS

- What is Power BI and Why It's Important
- Power BI vs Excel for Analytics
- **Understanding Power BI Components:** Power Query, Power Pivot, Power View

02

Power BI Interface & Data Import

TOPICS

- Connecting to Excel and CSV Files
- Data Modeling Concepts (Tables, Relationships, Keys)
- Cleaning and Transforming Data in Power Query

03

Visualizing Data

TOPICS

Building Basic Charts (Bar, Line, Pie) · Using Cards, Slicers, and Filters · Formatting Visuals and Color Themes · Hierarchies and Drill-Downs

04

Dashboard Design

TOPICS

Layout Principles and Storytelling with Data · Publishing Reports to Power BI Service

Practice Workshop Hands-on

DAY 4 SQL for Business Data Analysis

Learning to extract and manipulate data using SQL.

01

Introduction to Databases

TOPICS

What is a Database and Why Businesses Use SQL · Tables, Records, and Fields Explained · Understanding Primary and Foreign Keys

02

Basic SQL Commands

TOPICS

- SELECT, FROM, WHERE, ORDER BY
- Filtering Data with AND, OR, NOT, LIKE, IN, BETWEEN

03

Intermediate SQL

TOPICS

- **Aggregate Functions:** SUM, AVG, COUNT, MIN, MAX
- GROUP BY and HAVING
- **Joining Tables:** INNER JOIN, LEFT JOIN, RIGHT JOIN

04

Data Manipulation

TOPICS

Using Subqueries · Working with Aliases · Case Statements for Conditional Logic

Practice Workshop

Hands-on

DAY 5

Integrating Excel, Power BI & SQL for Business Decisions

Applying all tools to real business problems.

01

Connecting SQL and Excel

TOPICS

- Importing SQL Data into Excel
- Refreshing Data and Using Queries for Reporting

02

Connecting SQL and Power BI

TOPICS

Direct Query vs Import Mode · Building Reports from SQL Data Sources

03

Business Case Study

TOPICS

- **Scenario:** Analyzing Company Sales Across Regions
- Combine Data from Multiple Sources
- Create Reports & Visual Dashboards
- Draw Business Insights and Recommendations

Capstone Project

5 Capstone Activities

05

Wrap-Up & Next Steps

TOPICS

Summary of Learning Outcomes · Real-World Analytics Career Paths · Recommended Certifications & Further Learning

HANDS-ON ACTIVITIES

Practise What You Learn

#	MODULE	ACTIVITY
04	**Practice Workshop**	HANDS-ON ■ Cleaning and Organizing Sales Data ■ **Mini Case:** Analyzing Monthly Sales of a Retail Store
05	**Practice Workshop**	**Hands-on:** Create an Interactive Sales Dashboard in Excel
05	**Practice Workshop**	**Hands-on:** Build a Sales & Profit Dashboard
05	**Practice Workshop**	**Hands-on:** Writing Queries for a Customer Sales Database
04	**Capstone Project**	CAPSTONE ACTIVITY ■ **Task:** Create an End-to-End Analytics Solution ■ Clean Data in Excel ■ Visualize in Power BI ■ Extract Data using SQL ■ Present Findings

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training | Live Online Classes (ILO) | Fly-Me-A-Trainer (FMAT) | Flexi (Self-Paced) | 1-on-1 Training

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