

KOENIG SOLUTIONS • COURSE OUTLINE

Data Cleaning, AI, and Automation in Excel

Learn to clean data, build dashboards, and automate tasks in Excel using Power Query, PivotTables, AI tools, and macros.

24 Hours

DURATION

5

MODULES

51

TOPICS

COURSE OVERVIEW

This course is designed to equip participants with advanced Excel skills, focusing on data cleaning, dashboard creation, analytical tools, AI-driven automation, and macros for enhanced productivity. By the end of the course, attendees will be able to streamline data operations, create dynamic dashboards, utilize Excel add-ins, and automate tasks effectively using macros.

WHO THIS COURSE IS FOR

Data Analysts

Excel Users

Business Analysts

Finance Professionals

Report Developers

PREREQUISITES

- Basic knowledge of Excel.
- Microsoft Office 365 (2022 version) installed on the system.

LEARNING OBJECTIVES

- Apply Power Query to clean and transform raw data
- Build PivotTables and interactive dashboards with slicers
- Use Excel add-ins such as Analysis ToolPak and Solver
- Identify AI tools for automating analysis and reports
- Analyse data trends and patterns using AI-powered tools
- Record and edit macros for repetitive tasks
- Automate tasks across multiple sheets using macros
- Assess data privacy and bias considerations in AI tools

5 Modules, 51 Topics

01

Power Query for Data Cleaning

INTRODUCTION TO POWER QUERY

- What is Power Query?
- Benefits of using Power Query for data cleaning
- Accessing Power Query in Excel

CONNECTING TO DATA SOURCES

- Importing data from Excel, CSV, databases, and web sources
- Understanding query settings and data preview

DATA CLEANING BASICS

- Removing duplicates
- Handling missing or null values
- Filtering rows and columns

ADVANCED DATA TRANSFORMATION

- Splitting and merging columns
- Applying conditional logic for cleaning
- Grouping and summarizing data

POWER QUERY AUTOMATION

- Creating reusable queries
- Updating data connections automatically

BEST PRACTICES FOR POWER QUERY USAGE

- Tips for managing large datasets
- Maintaining data integrity during cleaning

02

Tables and PivotTables for Dashboards

CREATING AND FORMATTING TABLES

- Defining structured tables
- Using table styles and slicers

UNDERSTANDING PIVOTTABLES

- What are PivotTables?
- Building your first PivotTable

CUSTOMIZING PIVOTTABLES

- Sorting, filtering, and grouping data
- Adding calculated fields and items

CREATING INTERACTIVE DASHBOARDS

- Integrating slicers with PivotTables
- Using PivotCharts for visual representation

ADVANCED DASHBOARD TECHNIQUES

- Linking multiple PivotTables
- Dynamic dashboards with named ranges and data validation

BEST PRACTICES FOR DASHBOARDS

- Ensuring clarity and usability
- Managing performance with large datasets

03

Excel Add-Ins for Analysis

INTRODUCTION TO EXCEL ADD-INS

How to enable and install add-ins · Overview of useful Excel add-ins

BUILT-IN ADD-INS

Analysis ToolPak · Solver: Optimization

SPECIALIZED ADD-INS

Data modeling for large datasets · Approximate matching for data cleaning

PRACTICAL USE CASES

When and why to use specific add-ins

04

AI Tools to Help with Quick Automation

INTRODUCTION TO AI IN EXCEL

- Overview of AI tools integrated with Excel
- Benefits of AI for automation and efficiency

AUTOMATION WITH AI

- Automating data analysis and generating insights
- AI-generated summaries and reports

AI-POWERED TOOLS

- Text analysis tools
- Data cleaning and merging solutions

AUTOMATING DATA INSIGHTS

- Using AI to identify trends and patterns
- Predictive analytics with AI

ETHICS AND CHALLENGES OF AI TOOLS

- Ensuring data privacy and avoiding biases

05

Macros for Easy Access and Understanding Over Different Sheets

INTRODUCTION TO MACROS

- What are Macros?
- Advantages of using Macros for automation

RECORDING YOUR FIRST MACRO

- How to enable the Developer tab
- Step-by-step guide to recording and running a Macro

EDITING AND CUSTOMIZING MACROS

- Modifying recorded Macros for specific needs

WORKING ACROSS MULTIPLE SHEETS

- Automating repetitive tasks in different sheets
- Writing Macros to consolidate data from multiple sheets

BEST PRACTICES FOR MACROS

- Securing and sharing Macros with others

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

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

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