

# Advanced Data Analysis Using Excel with AI

**Course Duration: 24 Hours**

**Course Code: ADEA-EXAI-01**

## 1. Course Overview

This course is designed to help professionals master advanced data analysis techniques using Microsoft Excel integrated with AI tools. It covers data cleaning, visualization, automation, predictive analysis, and AI-driven insights to improve decision-making and business performance efficiently.

## 2. What You'll Learn

- Advanced Excel formulas and functions
- Data cleaning and transformation techniques
- Pivot Tables, Power Query, and Power Pivot
- Data visualization using charts and dashboards
- Introduction to AI in Excel
- Using AI tools for predictive analysis
- Automating tasks with macros and AI
- Real-time data analysis for business decisions

## 3. Target Audience

- Data Analysts and Business Analysts
- Digital Marketing Professionals
- MIS Executives and Reporting Managers
- Finance and Operations Professionals
- Students and job seekers interested in data analytics
- Anyone looking to upgrade Excel skills with AI

## 4. Pre-Requisites

- Basic knowledge of Microsoft Excel
- Understanding of data handling concepts
- Familiarity with spreadsheets and formulas (recommended)
- No prior AI knowledge required

## 5. Course Content

### **Module 1: Advanced Excel Fundamentals**

- Advanced formulas (INDEX, MATCH, XLOOKUP)
- Logical and text functions

### **Module 2: Data Cleaning & Preparation**

- Data validation
- Removing duplicates and errors
- Power Query basics

### **Module 3: Data Analysis Tools**

- Pivot Tables & Pivot Charts
- Power Pivot for data modeling

### **Module 4: Data Visualization**

- Interactive dashboards
- Advanced charts and graphs

### **Module 5: Introduction to AI in Excel**

- AI-powered features in Excel
- Data insights using AI

### **Module 6: Predictive Analysis**

- Forecasting techniques

- Trend analysis using AI tools

### **Module 7: Automation**

- Macros and VBA basics
- Automating repetitive tasks

### **Module 8: Real-World Projects**

- Business case studies
- Marketing and sales data analysis
- Financial data insights

