KOENIG
step forward

Microsoft Solutions Partner
Microsoft Cloud Training Services

KOENIG SOLUTIONS · COURSE OUTLINE

# Marketing Analytics Forecasting Models with Excel

Learn to build sales forecasting models in Excel, from linear regression to seasonality, trend and new-product diffusion models.

| 2 Days | 7 | 38 |
| --- | --- | --- |
| 16 HOURS | MODULES | TOPICS |

## COURSE OVERVIEW

Understanding how future sales will change is one of the key information needed by manager to take data driven decisions. In this course, we will explore how one can use forecasting models to see patterns in time series data and make forecasts based on models.

## WHO THIS COURSE IS FOR

- **Marketing Analysts**
- **Sales Forecasters**
- **Business Analysts**
- **Data Analysts**
- **Marketing Managers**

## PREREQUISITES

- Basic understanding of Excel operations like opening, closing, and saving a file

## LEARNING OBJECTIVES

- Apply trendlines to create linear forecasting models
- Prepare and clean data through outlier and missing value treatment
- Build simple and multiple linear regression models in Excel
- Interpret regression accuracy measures such as RSE and R squared
- Incorporate special events such as holidays into forecasts using Solver
- Identify trend and seasonality using additive and multiplicative models
- Apply Winter's Method for changing trend and seasonality
- Model new product sales using S-curve and Bass Diffusion models

COURSE SYLLABUS

# 7 Modules, 38 Topics

01

## Introduction & Basics of Forecasting

**TOPICS**

Ms-Excel Refresh · Basics Of Forecasting · Creating Linear model with trendlines

02

## Getting Data Ready for Regression Model

*In this section you will learn what actions you need to take a step by step to get the data and then prepare it for the analysis these steps are very important.*

**TOPICS**

- Gathering Business Knowledge
- Data Exploration
- The Data and the Data Dictionary
- Univariate analysis and EDD
- Descriptive Data Analytics in Excel
- Outlier Treatment
- Identifying and Treating Outliers in Excel
- Missing Value Imputation
- Variable Transformation in Excel
- **Dummy variable creation:** Handling qualitative data
- Dummy Variable Creation in Excel
- Correlation Analysis
- Creating Correlation matrix in Excel

03

## Forecasting Using Regression Model

*This section starts with simple linear regression and then covers multiple linear regression. We have covered the basic theory behind each concept without getting too mathematical about it so that you understand where the concept is coming from and how it is important. The Problem Statement*

**TOPICS**

- Basic Equations and Ordinary Least Squares (OLS) method
- Assessing accuracy of predicted coefficients
- **Assessing Model Accuracy:** RSE and R squared
- Creating Simple Linear Regression model
- Multiple Linear Regression
- The F - statistic
- Interpreting results of Categorical variables
- Creating Multiple Linear Regression model

04

## Handling Special Events Like Holiday Sales

*In this section we will learn how to incorporate effects of Day of Week Effect, Month Effect or any special event such Holidays, pay day etc.*

**TOPICS**

Forecasting in presence of special events · **Excel:** Running Linear Regression using Solver · **Excel:** Including the impact of Special Events

05

## Identifying Seasonality & Trend for Forecasting

*In this section we will learn about trends and seasonality and how to use the Solver to develop an additive or multiplicative model to estimate trends and seasonality. We will also learn how to use moving averages to eliminate seasonality to easily see trends in sales.*

**TOPICS**

- **Excel:** Additive model to identify Trend & Seasonality
- **Excel:** Multiplicative model to identify Trend & Seasonality
- Moving Average Method
- **Excel:** Moving Average Method

06

## Handling Changing Trend & Seasonality over Time

*In this section we will learn about Winter's Method that changes trend and seasonal index estimates during each period has a better chance of keeping up with changes than other methods.*

**TOPICS**

- Winter's Method to accommodate changing Trend & Seasonality
- **Excel:** Winter's method

07

## Forecasting Models for New Products

*In this section we will learn techniques to forecast new product sales. It is difficult to forecast when we have little or no historical data. The S curve can be used when we have little data and the famous bass diffusion model can be used to predict product sales even before the product is launched in the market.*

**TOPICS**

S-curve for New products · **Excel:** Using Logistic curve to model S-curve · **Excel:** Using Gompertz curve to model S-curve · Bass Diffusion Model for New Products · **Excel:** Implementing Bass Diffusion Model

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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