# Microsoft Excel – Data Analysis and Statistic Calculations

Course code: MSEXST1

At the course participants meet advanced data analysis methods. All standard statistical - analytic functions are discussed especially the Analysis ToolPack Add-Inn which is used for demanding statistical analyses. Listeners learn how to work with tools such as a descriptive statistics, a properties correlation, a values prediction and a work with time series. The course also focuses on clear interpretation of found results.

## Who is the course for

The course is for experienced users who work with data and want to analyze them. Participants meet advanced MS Excel 2007 tools.

## What we teach you

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## Required skills

Excellent knowledge of MS Excel. Participants should be able to work with functions, formulas and they should have an idea about data analysis principles.

## Course Outline

Analysis of extensive data volumes by helping PivotTable (PT) and PivotTable Chart Report.

- PT creation principles
- Total functions in PT
- Build-in functions for different data views in PT
- Calculated fields and items
- Data analysis and data understanding in PT

Basic data analysis

- Frequency analysis
- Histogram - frequency chart
- Level characteristics (Mean, Median, Mode, Quantity)
- Variable characteristics (Variance, Deviation)
- Shape allocation characteristics (Kurtosis, Skewness)

Dependence analysis

- Correlation
- Regression analysis (appropriate regression model, comparison of two different alternatives, judgment of regression model quality, estimates based on chosen regression model
- Graphic dependence analysis
- Multi regression (more independent variables)

Time series analysis

- Time series characteristics
- Basic time series description (differences, growth speed - chain, indexes)
- Time series modeling
- Time series decomposition (trend, seasonal, cyclic, random item of time series)
- Time series purge of seasonal component (moving average)
- Estimates based on time series model

**GOPAS Praha**
Kodaňská 1441/46
101 00 Praha 10
Tel.: +420 234 064 900-3
info@gopas.cz

**GOPAS Brno**
Nové sady 996/25
602 00 Brno
Tel.: +420 542 422 111
info@gopas.cz

**GOPAS Bratislava**
Dr. Vladimíra Clementisa 10
Bratislava, 821 02
Tel.: +421 248 282 701-2
info@gopas.sk