

TITLE: EXCEL FOR STATISTICAL ANALYSIS

Duration: 14 hrs (2 days)

OVERVIEW OF EXCEL FORMULAS AND FUNCTIONS

CATEGORIES OF FUNCTIONS

STATISTICAL FUNCTION

- AVERAGE, AVERAGEIF, AVERAGEIFS
- COUNT, COUNTIF, COUNTIFS
- COVAR, DEVSQ
- FREQUENCY
- GEOMEAN
- KURT
- MAX, MIN, MODE
- PEARSON
- PERCENTILE, PERCENTILERANK
- PROB, RANK
- SMALL, LARGE
- STDEV
- TINO
- VAR
- TTEST

SPREADSHEET STATISTICS

- Description statistics
- Correlation, simple and multiple regression analysis in excel
- Chi-square test
- Creating XY (Scatter) diagram

ADDING CHARTS

- Creating a chart
- Formatting charts
- Modifying chart data
- Changing chart types
- Printing a chart

INTRODUCING PIVOT TABLE

- An introduction to pivot tables
- Types of data appropriate for pivot table
- Pivot table terminology
- How to create pivot tables
- Pivot table examples that answer specific questions about data

DATA ANALYSIS WITH EXCEL

- **ANOVA**
 - Anova: single factor
 - Anova: two factor with replication
 - Anova: two factor without replication
- Correlation
- Covariance
- **Descriptive statistics**
 - Mean
 - Standard error
 - Median
 - Mode
 - Standard deviation
 - Kurtosis & skewness
- Exponential smoothing
- F-Test Two sample for variance
- Fourier analysis
- Histogram
- Moving average
- Random number generation
- Rank and percentile
- Regression
- Sampling
- t-Test Paired Two sample for means
- t –test: two sample assuming equal variance
- t –test: two sample assuming unequal variance
- Z-test: two sample for means

QUANTITATIVE DATA CHARTS /TABLES

- Histogram /Freq.chart
- Box plot
- Control charts
- Stem and leaf plot
- Stacked histograms

QUALITATIVE DATA CHARTS /TABLES

- Contingency table
- Bar chart
- Line graph
- Pie chart
- Trendlines: column, line, win/loss