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**PHOENIX TS**

# **Analytics Training**

This course introduces students to the data analysis process and provides attendees with the core skills necessary to handle any data intensive analytic project and the clarity, insight and confidence in order to make sound and measurable business decisions.

## **Course Overview**

Our 5-day, instructor-led Analytics Training course will focus on using MS Excel functionalities for data analysis and ultimately decision making. This course will provide students with knowledge to:

- Summarize data effectively
- Use advanced problem solving techniques to develop a thorough understanding of the data
- Calculate and select the most appropriate central tendency measures
- Identify and avoid hidden bias
- Standard normal distribution
- Extracting a random sample from a population
- Identifying the reliability of an estimate using confidence intervals
- Identifying relationships between variables

An understanding of Excel prior to this training course will be helpful for most students. This understanding can be developed through courses such as [Excel Level 1](#), [Excel Level 2](#), and [Excel Level 3](#).

## **Course Outline**

### **Introduction to The Course**

- Introduction to analytics
- Different types of analytics
- Why are there so many different methods?
- Terminology and notation
- Core ideas in data analytics

- The steps in data analytics projects

## Data Exploration

- Introduction to statistics
- Variable types
- Summarizing data
- Descriptive statistics: measures of central tendency
- Descriptive statistics: measures of variation
- Statistical displays: histograms and boxplots

## Excel for Data Analysis

- Introduction to excel
- Sort/filter/conditional formatting
- Pivot tables
- Data visualization

## Breakeven Analysis

- Linear functions
- Revenue and cost models
- Exponential functions
- Curve fitting
- What-if analysis / goal seek

## Time Value of Money

- Simple interest
- Compound interest

## Probability Models

- Basic principles
- Conditional probability
- Discrete random variables
- Continuous random variables
- Normal distribution

- Z-score
- Outlier detection method

## **Statistical Inferences**

- Sampling types / survey errors
- Confidence intervals
- t-distribution
- Introduction to hypothesis testing
- Single sample t-test
- Type I/II errors

## **Linear Regression - Part 1**

- Correlation
- Simple linear regression
- Multiple linear regression
- Fit measures

## **Predictive Modeling Basics**

- Data preparation
- Integrating data from multiple sources

## **Linear Regression - Part 2**

- Regression for prediction
- Performance evaluation

## **Classification Models**

- Distance measures
- K-nearest neighbors
- Performance evaluation
- Other methods

## Segmentation Modeling / Cluster Analysis

- Introduction to segmentation
- Cluster analysis
- Clusters interpretation

## Spreadsheet Models / Optimization

- Linear optimization models
- Maximizing profit / minimizing cost

## Data Analysis using R

- Introduction to R
- Data analysis using R

## Decision Analysis (optional)

- Introduction to decision making under uncertainty
- Decision analysis without probabilities
- Decision analysis with probabilities
- Decision trees

# Analytics Training FAQs

## Who should take this class?

This course is designed for beginners who want to develop their foundation knowledge for data analytics, those experienced with statistics, and professionals seeking more advanced methods and skills to further their career. The particular job positions who take this course include Organizational Analysts, Functional Managers, IT Specialists, Statisticians, Business Intelligence Professionals

## What do students have to say about this course?

"I like the fact that instructor was giving a lot of time on hands on training, he was very informative, knew his material thoroughly." – Student from November 2018

Starting at **\$1,950**

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**Price Match Guarantee**

We'll match any competitor's price quote. Call us at 240-667-7757.

This **Analytics Training** course includes:

- 5 days of instructor-led training
- Analytics Training book
- Notepad, pen and highlighter
- Variety of bagels, fruits, doughnuts and cereal available at the start of class\*
- Tea, coffee and soda available throughout the day\*
- Freshly baked cookies every afternoon\*

*\*denotes this benefit is only available at participating locations.*