

**Introduction to Business Statistics**

**Course Number:** STAT-102  
**Duration:** 2 days

**Overview**

Accelebrate's Introduction to Business Statistics training course teaches participants how to calculate appropriate statistical measures, apply statistical procedures, and recognize key data pitfalls to effectively communicate analytical conclusions to stakeholders.

**Prerequisites**

All students should have prior experience working with data visualization and corporate reporting.

**Materials**

All students receive comprehensive courseware.

**Software Needed on Each Student PC**

* Microsoft Excel
* Internet access
* Related data and lab files that Accelebrate will provide

**Objectives**

* Choose appropriate measures to use in a given situation and calculate using Excel
* Consider data gathering methods, bias, and error
* Interpret the results and conclusions of statistical analysis
* Recognize key pitfalls be aware of and avoid
* Visualize and communicate the results in a fair, objective, and unbiased manner

**Outline**

* Introduction
* Overview of using data analysis and statistics for effective decision-making
* Installing the Data Analysis Tool Pack add-in for Excel
* Exploring and visualizing data
  + Types of variables
  + Choosing chart types
  + Formatting best practices
* Descriptive statistics
  + Real-world uses for specific measures and how to visualize
    - Samples vs. populations
    - Measures of Central Tendency
    - Measures of variation and position
    - Looking at the shape of the data and the impact of outliers
    - Cautions and common pitfalls (e.g. Anscombe’s Quartet)
  + Dealing with bad data and ensuring it’s reliable for good decisions
* Probability
  + Overview
  + Applications
  + Cautions and fallacies
* Inference for a Population
  + Sampling
    - Methods
    - Bias
    - Error
  + Sampling distribution for the mean
  + Central Limit Theorem
  + Confidence Intervals
* Regression
  + Correlation
  + Linear Regression
    - When to use it
    - How to interpret output meaningfully
* Conclusion