

**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