

## Management Statistical Analysis (MGT503Q)

### Description

The objective of this course is to acquaint students with basic statistical methods. For the first 8 weeks, we will discuss the fundamentals of statistical inference, estimation and hypothesis testing for one or two population and ANOVA for comparing population means. For the second 8 weeks we will mainly focus on basic concept and methodology for the linear regression model which is widely used in empirical research. Topics to be covered includes testing linear hypotheses, model specification errors, dummy variable model, model selection, multicollinearity, heteroscedasticity.

### Instructor

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### Topics

(Content may change depending on the progress of the class.)

- Random Sample and Sampling Distribution
- Estimation
- Hypothesis Testing
  - About One population
  - About two populations
- ANOVA
  - One way ANOVA
  - Randomized Complete Block Design
  - Two factor ANOVA
- Chi-squared test
- Simple Linear Regression
- Multiple Linear Regression
  - model specification errors
  - testing linear hypotheses
  - Variable Selection
  - Linear Regression with Dummy Variables
  - heteroscedasticity
  - Multicollinearity