



King Saud University

College of Business Administration

Quantitative Analysis Department

Business Statistics

QUA 502

Instructor:

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Course Description

The course starts with a very brief review of the bases such as descriptive statistics, probability and random variables. The main part of the course is devoted to sampling, estimation, hypothesis testing, linear correlation, simple regression, multiple regression, and analysis of variance. The presentation relies upon computer software for most of the needed calculations. Students will use the statistical software package (SPSS).

Course Objectives

- Familiarity with basic Statistics terms.
- Ability to summarize data and do basic statistical analyses using SPSS.
- Ability to understand basic statistical analyses in published journals.
- Understanding of key concepts including statistical hypothesis testing – critical quantitative thinking.
- Foundation for more advanced analyses.

Course Evaluation

1. Assignments and attendance	(20%)
2. Midterm exams	(40%)
3. Final exam	(40%)

Text book

Ken Black. Business Statistics for Contemporary Decision Making, 6th ed. John Wiley & Sons, 2010.

Course Contents and Plan

TOPIC	WEEK	READING
Descriptive statistics <ul style="list-style-type: none"> — Populations and samples — Types of data — Graphic methods — Measures of location — Measures of spread 	1 and 2	Unit I Ch 1,2,3
Probability, Distributions and Sampling <ul style="list-style-type: none"> — Elementary probability — Elementary properties of random variables — Discrete Distributions — Continuous Distributions — Central limit theorem — Normal approximation to the binomial — Normal approximation to the Poisson — Sampling — Sampling Distributions 	3 and 4	Unit I & II Ch 4,5,6,7
One-sample Inference <ul style="list-style-type: none"> — Populations and samples — Point estimation — The logic of hypothesis testing — Inference for the mean of the normal distribution — Inference for the binomial distribution — Inference for the Poisson distribution — Confidence intervals for the mean and variance — Hypothesis testing and confidence intervals — Confidence intervals for binomial and Poisson 	5 , 6 and 7	Unit III Ch 8, 9
Midterm exam 1		
Two-sample Inference <ul style="list-style-type: none"> — Inference for paired samples — Inference for independent samples (equal variance) — Underlying assumptions — Inference for independent samples (unequal variance) — Two-sample tests for binomial proportions — Measures of effect for binomial data 	8 and 9	Unit III Ch 10
Analysis of Variance, ANOVA <ul style="list-style-type: none"> — One-way ANOVA — Hypothesis testing 	10	Unit III Ch 11

— Comparisons of Groups		
Midterm exam 2		
Regression and Correlation — Simple Regression and Correlation — Multiple Regression	11 and 12	Unit IV Ch 13,14
Final Exam		16/12/2019