

جامعة
الملك سعود
King Saud University



King Saud University

College of Business Administration

Quantitative Analysis Department

Business Statistics

QUA 502

Instructor:

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Ph.D. in Applied Statistics

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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 basis statistical analyses in published journals.
- Understanding of key concepts including statistical hypothesis testing – critical quantitative thinking.
- Foundation for more advance analyses.

Course Evaluation

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

Text book

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

Course Contents and Plan

TOPIC	DATE	READING
Descriptive statistics <ul style="list-style-type: none"> — Populations and samples — Types of data — Graphic methods — Measures of location — Measures of spread 	21/09/2016	Unit I Ch 1,2,3
Introduction to the SPSS Interface <ul style="list-style-type: none"> — Opening an existing SPSS database — Graphical data analysis — Descriptive statistics 	28/09/2016	
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 	05/10/2016 12/10/2016 19/10/2016	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 	26/10/2016 02/11/2016 09/11/2016	Unit III Ch 8, 9
Midterm exam	23/11/2016	
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) 	30/11/2016 07/12/2016	Unit III Ch 10

<ul style="list-style-type: none"> — Two-sample tests for binomial proportions — Measures of effect for binomial data 		
Analysis of Variance, ANOVA <ul style="list-style-type: none"> — One-way ANOVA — Hypothesis testing — Comparisons of Groups 	14/12/2016	Unit III Ch 11
Regression and Correlation <ul style="list-style-type: none"> — Simple Regression and Correlation — Multiple Regression 	21/12/2016 28/12/2016 04/01/2017	Unit IV Ch 12,13
Final Exam	18/01/2017	