King Saud University

College of Business Administration

Quantitative Analysis Department

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| **Quantitative Methods in Decision Making**  **QUA 553** |

Instructor:

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Ph.D. in Applied Statistics

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**Course Description**

This course introduces statistical methods and applications in applied research, covering statistical data, population and random sample, sampling methods, data collection, questionnaire, descriptive statistics, probability, and inferential techniques necessary for appropriate analysis and interpretation of data relevant to business. 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**

1. **Business Statistics:** A Decision-Making Approach(8th Edition)  by by David F. Groebner and others.

**Course Contents and Plan**

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| **READING** | **DATE** | **TOPIC** |
| Ch 1 | 01/10/2017 | The Where, Why, and How of  Data Collection |
| Ch 2 | 08/10/2017 | Graphs, Charts, and Tables –Describing Your Data |
| Ch 3 | 15/10/2017 | Describing Data Using Numerical Measures |
| Ch 4 | 22/10/2017 | Using Probability and Probability Distributions |
| Ch 5 | 29/10/2017 | Discrete Probability Distributions |
| Ch 6 | 05/11/2017 | Introduction to Continuous  Probability Distributions |
| 12/11/2017 | | **Midterm exam** |
| Ch 7 | 19/11/2017 | Introduction to Sampling Distributions |
| Ch 8 | 26/11/2017 | Estimating Single Population Parameters |
| Ch 9 | 03/12/2017 | Introduction to Hypothesis Testing |
| Ch 10 | 10/12/2017 | Estimation and Hypothesis Testing for Two Population Parameters |
| Ch 11 | 17/12/2017 | Hypothesis Tests and Estimation for Population Variances |
| Ch 12 | 24/12/2017 | Analysis of Variance |
| Ch 13 | 31/12/2017 | Goodness-of-Fit Tests and Contingency Analysis |
| Ch 14 | 07/01/2018 | Introduction to Linear Regression and Correlation Analysis |
| **14/01/2018** | | **Final Exam** |