KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
DEPARTMENT OF MATHEMATICS and STATISTICS
DHAHRAN, SAUDI ARABIA
STAT212: BUSINESS STATISTICS II (**111**)

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Teaching Hours: <u>SMW</u> 9:00-9:50 am, 9:00-10:50 am and 10:00-11:50 am
Office Hours: 7:30-8:50 am or by appointment

Text and Package:

1. Basic Business Statistics: Concepts and Applications, 11th edition, by Berenson, M.L., Levine, D.M., and Krehbiel, T.C., Pearson-Prentice Hall (2009).
2. MINITAB Statistical Package will be used.
3. Scientific calculator with statistical functions in every class and exam.

Course Objectives:

Introducing basic concepts of probability and statistics to business students. Emphasis will be given on the understanding of the nature of randomness of real world problems, the formulation of statistical methods by using intuitive arguments and thereby making meaningful decisions.

Assessment:

Assessment for this course will be based on homework, attendance, two Major exams and a final exam, as following

Activity	Weight
Quizzes[1], attendance, homework and Lab work	(7%+3%+5%+5% = 20%)
Exam 1 (Chapters 9 & 10) 12/10/2011 6:0 PM in Building 54	20%
Exam 2 (Chapters 12 & 13) 23/11/2011 6:0 PM in Building 54	20%
Final Exam (Comprehensive) 15/1/2012	40%

General Notes:

- Students are required to carry **pens**, **binder** and a **calculator** with statistical functions to **<u>EVERY lecture, quizzes, and exams</u>**.
- Students are also expected to take class notes and organize their learning material in a binder for easy retrieval to help them in study and review for class, exams, etc
    - It is to the student's advantage to keep a binder for storing class notes, homework, and other graded assignments. Students who are organized will find it easier to find important materials when studying for exams.
- To effectively learn statistics, students need to *solve problems* and *analyze data*. The selected assigned problems are specifically designed to prepare you for class quizzes, lab, majors and final exam. So, it is expected that you complete these problems *step-by-step* and with *comprehension*.
- *<u>Never round</u>* your intermediate results to problems when doing your calculations. This will cause you to lose calculation accuracy. Round only your final answers and you should not round less than 4 decimal places unless required otherwise.

A formula sheet and *statistical tables* **will be given for you in every exam, so you only need to bring with you** *pens*, *pencils*, *a sharpener*, *an eraser*, **and a** *calculator*.

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[1] Once a chapter is completed, you should expect a class quiz.

Tentative Schedule

Week	Topics	Note
1 10/9 – 14/9	9.1: Fundamentals of Hypothesis Testing Methodology, 9.2: t test of hypothesis for the Mean,	
2 17/9 – 22/9	9.3: one tail-tests, 9.4: Z-test for the proportion	Sept, 21 Last day for dropping course(s) without permanent record
3 24/9 –28/9	10.1: Comparing two means of two independent populations, 10.2: Comparing the means of two related population,	Sept, 24 National Day - Holiday
4 1/10 – 5/10	10.3: Comparing two population proportions 10.4: F-test for the difference between two variances	
October 12 - 1-st Major Exam (chapters 9 & 10)	
5 8/10 – 12/10	12.1: Chi-Square test for the difference between two proportions (independent samples) 12.2: Chi-Square test for differences among more than two proportions 12.3: Chi-Square test for independence	
6 15/10 – 19/10	12.4: McNemar Test for the difference between two proportions (related samples) 12.5: Chi-Square test for the variance or standard deviation	Oct 15 Midterm grade reports due in the Deanship thru Internet Oct 19 Last day for dropping course(s) with grade of "W" thru Internet http://regweb.kfupm.edu.sa* http://regweb.kfupm.edu.sa (2 Weeks)
7 22/10 – 26/10	13.1: Types of regression models, 13.2: Simple Linear Regression Equation 13.3: measures of variation 13.4: Model Assumptions 13.5: Residual Analysis	
8 29/10 – 31/10	13.6: Autocorrelation 13.7: Inference about the Slope and Correlation 13.8: C.I and P.I. estimates 13.9: Pitfalls in regression	Oct 31 Last day of classes before Id al-Adha Vacation
Id al-Adha Vacation Nov 1-11, 2011	
9 12/11 – 16/11	14.1: Developing a Multiple Regression model 14.2: R^2, Adjusted R^2, and overall F-test 14.3: Residual Analysis,	Nov 13 Classes resume
Nov 23 - 2-nd Major Exam (chapters 12 & 13)	
10 19/11 – 23/11	14.4: Inferences concerning the population Regression coefficients 14.5: Testing portion of the Multiple Regression Models 14.6: Using Dummy variables and interaction terms in regression models	Nov 23 Last day for withdrawal from all courses with grade of "W" thru the Univ Registrar Office*
11 26/11 – 30/11	15.1: The quadratic regression model 15.3: Collinearity	
12 3/12 – 7/12	15.4: Model building 15.5: Pitfalls in multiple regression	
13 10/12 – 14/12	16.1: The importance of Business Forecasting 16.2: Component forecasting of time – series models 16.3: Smoothing and annual time series	
14 17/12 – 21/12	16.4: least square trend fitting and forecasting 16:5: Autoregressive modeling for trend and forecasting 16.6: Choosing an appropriate forecasting model	
15 24/12 – 28/12	16.7:Time series forecasting of seasonal data 16.8: Index numbers	Dec 24 Last day for major exams; Last day for withdrawal from all courses with grade of "WP/WF" thru the University Registrar Office*
16 31/12 – 2/1	Review and catch up.	
Comprehensive Final Exam , Jan 15, 2012	

✓ Students will be required to carry a scientific calculator *with statistical functions* to *every class, quiz, and exam*.
✓ We will explain the MINITAB commands in the class and the student free to do his homework any were he likes.
✓ In accordance with University rules, *Nine (9) unexcused absences* will automatically result in a grade of *DN*.
✓ *Attendance* on time is *very* important. Therefore, ½ % will be reduced for *each* one absence
✓ Mostly, attendance will be checked within the *first five minutes* of the class. Entering the class after that, is considered as one late, and *every two lateness* equals to one absence.
✓ All contacts or announcements between the instructor and the students are supposed to be held on the WebCT, so the student *must* check his WebCT inbox *at least once* a day.
✓ *Quizzes*: In general, there will be a *quiz at the end of every chapter*.

Home Work Problems:

• The *Homework* should be submitted the first Saturday after completing the chapter *and no need for an announcement in advance*.
• No late homework will be accepted.

• Chapter 9: 9.1, 9.3, 9.6, 9.11, 9.13, 9.19, 9. 21, 7.27, 9.33, 9.39, 9.47, 9.51, 9.55
• Chapter 10: 10.2, 10.10, 10.13, 10.19, 10.25, 10.26, 10.31, 10.33, 10.36, 10.39, 10.41, 10.45, 10.49, 10.52
• Chapter 12: 12.1, 12.3, 12.7, 12.13, 12.15, 12.19, 12.21, 12.13, 12.25, 12.27, 12.31, 12.33, 12.35, 12.41, 12.45
• Chapter 13: 13.3, 13.5, 13.9, 13.13, 13.17, 13.19, 13.25, 13.29, 13.33, 13.37, 13.39, 13.41, 13.43, 13.49, 13.53, 13.55, 13.57, 13.61
• Chapter 14; 14.1, 14.3, 14.7, 14.9, 14.11, 14.17, 14.19, 14.21, 14.23, 14.25, 14.29, 14.31, 14.35, 14.38, 14,41, 14.45
• Chapter 15: 15.1, 15.3, 15.7, 15.15, 15.19, 15.21, 15.25
• Chapter 16: 16.3, 16.5, 16.7 16.11, 16.15, 16.19, 16.25, 16.29, 16.33, 16.35, 16.42, 16.47, 16.51, 16.52, 16.55,

Student Learning Outcomes:
Students are expected to
1. Know the correspondence between *levels of measurement* and *statistical procedures*.
2. Know the *assumptions* underlying statistical procedures.
3. *Select* the appropriate statistical *procedure* for various applied business situations.
4. Accurately *compute* procedures *manually* and by *MINITAB* and *interpret the results* of these statistical procedures.
5. Finally, make the *right* decision.