

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
DEPARTMENT OF MATHEMATICS and STATISTICS
DHAHRAN, SAUDI ARABIA
STAT 212: BUSINESS STATISTICS II (131)

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Office Hours: UT. 09:00 am - 11:00 am, M. 12:00-1:00 pm, 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:

Introduce 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 the following components:

Activity	Weight
Class work and Lab work	10%
Exam 1 (Chapters 9 & 10) <i>Wednesday, October 2, 2013 7:15 PM</i>	20%
Exam 2: (Chapters 12 & 13) <i>Wednesday, November 6, 2013 7:15 PM</i>	20%
Exam 3: (Chapters 14 & 15) <i>Wednesday December 4, 2012</i>	20%
Final Exam (Comprehensive)	30%

General Notes:

- Students are required to carry **pens, pencils, binder** and a **calculator** with statistical functions to **EVERY lecture, test, and exam**.
- 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, tests, lab, majors and final exam. So, it is expected that you complete these problems *step-by-step* and with *comprehension*.
- **Never round** 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.

Schedule & Coverage of Material

<i>Week</i>	<i>Topics</i>	
1 1/9 – 5/9	9.1: Fundamentals of Hypothesis Testing Methodology 9.2: t test of hypothesis for the Mean	
2 8/9 – 12/9	9.3: one tail-tests 9.4: Z-test for the proportion	Thursday Sep. 12: Last day for dropping course(s) without permanent record
3 15/9 – 19/9	10.1: Comparing two means of two independent populations 10.2: Comparing the means of two related population	
4 22/9 – 26/9	10.3: Comparing two population proportions 10.4: F-test for the difference between two variances Monday, 23 September. National Day - Holiday	
5 29/9 – 3/10	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 October 2 – Major Exam 1 (Ch. 9 & 10)	
6 6/10 – 9/10	12.4: McNemar Test for the difference between two proportions (related samples) 12.5: Chi-Square test for the variance or standard deviation	
EID – ID – ADHA VACATION		
7 21/10 - 24/10	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	Monday October 21 Last day for dropping course(s) with grade of "W" thru Internet http://regweb.kfupm.edu.sa
8 27/10 – 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	
9 3/11 – 7/11	14.1: Developing a Multiple Regression model 14.2: R^2 , Adjusted R^2 , and overall F-test 14.3: Residual Analysis Nov. 6 – Major Exam II (Ch. 12 & 13)	
10 10/11 – 14/11	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 reg. models	Thursday November 14 Last day for withdrawal from <u>all courses</u> with grade of "W" thru the Uni. Registrar
11 17/11 – 21/11	15.1: The quadratic regression model 15.3: Collinearity	Sunday November 17 Beginning of Early Registration for the 2nd Semester, 2013-2014 (132); & Coop
12 24/11 – 28/11	15.4: Model building 15.5: Pitfalls in multiple regression	
13 1/12 – 5/12	16.1: The importance of Business Forecasting 16.2: Component forecasting of time – series models 16.3: Smoothing and annual time series Dec. 4 – Major Exam III (Ch. 14 & 15)	
14 8/12 – 12/12	16.4: least square trend fitting and forecasting 16.5: Autoregressive modeling for trend and forecasting 16.6: Choosing an appropriate forecasting model	Thursday December 12 Last day for withdrawal from <u>all courses</u> with grade of "WP/WF" thru Registrar
15 15/12 – 19/12	16.7: Time series forecasting of seasonal data 16.8: Index numbers	
16 22/12 – 24/12	Catch up, Review & Normal Thursday class	Tuesday December 24 Normal Thursday Classes

IMPORTANT NOTES:

- ✓ Students will be required to carry a scientific calculator with statistical functions to every class, test, and exam.
- ✓ We will explain the MINITAB commands in the class and the students are free to do the homework anywhere they like.
- ✓ 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 absent.
- ✓ 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.

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.