Instructor: Musawar A. Malik  
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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:

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:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>Class work and Lab work</td>
<td>10%</td>
</tr>
<tr>
<td>Exam 1 (Chapters 9 &amp; 10)</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Wednesday, October 2, 2013 7:15 PM</strong></td>
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<tr>
<td>Exam 2: (Chapters 12 &amp; 13)</td>
<td>20%</td>
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<tr>
<td><strong>Wednesday, November 6, 2013 7:15 PM</strong></td>
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<tr>
<td>Exam 3: (Chapters 14 &amp; 15)</td>
<td>20%</td>
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<tr>
<td><strong>Wednesday December 4, 2012</strong></td>
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<tr>
<td>Final Exam (Comprehensive)</td>
<td>30%</td>
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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**.
<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
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</table>
| 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 |
| 3 | 15/9 – 19/9 | 10.1: Comparing two means of two independent populations  
10.2: Comparing the means of two related populations |
| 4 | 22/9 – 26/9 | 10.3: Comparing two population proportions  
10.4: F-test for the difference between two variances |
| 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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 11 | 17/11 – 21/11 | 15.1: The quadratic regression model  
15.3: Collinearity |
| 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 |
| 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 |
| 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 |

Monday October 21  
Last day for dropping course(s) with grade of "W" thru Internet  
http://regweb.kfupm.edu.sa

Thursday Nov. 6  
Major Exam II (Ch. 12 & 13)

Sunday November 17  
Beginning of Early Registration for the 2nd Semester, 2013-2014 (132); & Coop

Thursday December 12  
Last day for withdrawal from all courses with grade of "WP/WF" thru Registrar

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, \( \frac{1}{2} \) % 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 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 15: 15.1, 15.3, 15.7, 15.15, 15.19, 15.21, 15.25

**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.