

**1 KING FAHD UNIVERSITY OF PETROLEUM & MINERALS**  
**DEPARTMENT OF MATHEMATICAL SCIENCES**  
**DHAHRAN, SAUDI ARABIA**  
**STAT212: BUSINESS STATISTICS II**  
**Course Outline, Semester 061**  
**(Fully coordinated course)**

**Instructor:** Marwan Al-Momani

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**Office Hours:** SMW: 11:00 pm – 11:50 pm, 12:10 – 1:00

**Text and Package:**

1. Business Statistics: A Decision-Making Approach, 6<sup>th</sup> edition by Groebner, D., Shannon P., Fry, P. and Smith, K., Prentice Hall (2004).
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, lab work, attendance, three major exams and a comprehensive final exam, as in the following:

<b>Activity</b>	<b>Weight</b>
Homework	6%
Lab work	5%
Attendance	4%
<b>Exam 1</b> (Chapters 8 & 9) AOB 3:00 pm – 4:15 pm, Tuesday 10/10/2006	15%
<b>Exam 2</b> (Chapters 10 & 12) AOB 6:00 pm – 7:15 pm, Tuesday 7/11/2006	15%
<b>Exam 3</b> (Chapters 13 & 14) AOB 6:00 pm – 7:15 pm, Tuesday 12/12/2006	15%
<b>Final Exam</b> (Comprehensive)	40%

**Important Note:** The homework can be submitted anytime earlier but when the chapter is completed in a certain class, *it must be well understood*, by all the students, that the homework for that chapter must be submitted in the *Saturday* just after that *and no need for an announcement in advance*.

### Syllabus

Week	Sections	Topics	Notes
<b>1</b> 9/9 – 14/9	8-1	Hypothesis Tests for Means	Deadline for late registration and adding courses (12/9)
<b>2</b> 16/9 – 20/9	8-1 cont.	Hypothesis Tests for Means, continued	Deadline for dropping courses without permanent record (19/9)
<b>3</b> 24/9 – 27/9	8-2, 9-2	Tests for Proportions, Tests for the Difference Between Two Means.	
<b>4</b> 30/9 – 4/10	9-2 ,9-3	Tests for the Difference Between Two Means continued, Tests for Two Populations Proportions	
<b>5</b> 7/10 – 11/10	10-1, 10-2	Tests for One and Two Population Variances	<b>Major 1 (10/10)</b>
<b>14/10 – 25/10</b>		<b>Eid Al-Fitr vacation</b>	
<b>6</b> 28/10 – 1/11	12-1, 12-2	Goodness of Fit Tests and Introduction to Contingency Tables	Midterm grade report (31/10)
<b>7</b> 4/11 – 8/11	13-1, 13-2	Scatter Plots and Correlation and Simple Linear Regression	Deadline for dropping courses with “W” & <b>Major 2 (7/11)</b>
<b>8</b> 11/11 – 15/11	13-2, 13-3	Simple Linear Regression	
<b>9</b> 18/11 – 22/11	14-1, 14-2	Introduction to Multiple Regression, and Qualitative Variables	
<b>10</b> 25/11 – 29/11	14-3, 14-4	Nonlinear Relationships and Stepwise Regression	Deadline for withdrawal from all courses with “W” (29/11)
<b>11</b> 2/12 – 6/12	14-5	Aptness of the Model	Beginning of early registration for 062 and for Coop
<b>12</b> 9/12 – 13/12	15-1	Introduction to Forecasting, Time Series, and Index Numbers	<b>Major 3 (12/12)</b>
<b>13</b> 16/12 – 20/12	15-2	Trend-Based Forecasting Techniques	
<b>23/12 – 3/1</b>		<b>Eid Al-Adha vacation</b>	
<b>14</b> 6/1 – 10/1	15-3	Forecasting Using Smoothing Methods	Deadline for withdrawal from all courses with “WP/WF” (10/1)
<b>15</b> 13/1 – 17/1	15-3 & Review	Forecasting Using Smoothing Methods continued	

### Notes:

1. Classes will meet in the lab for MINITAB whenever is needed and possible.
2. In accordance with the university undergraduate bulletin, *ten* unexcused absences will result in a grade of *DN*.
3. 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:

**Ch-8:** 8.19, 8.37

**Ch-9:** 9.30, 9.41

**Ch-10:** 10.11, 10.44

**Ch-12:** 12.12, 12.27

**Ch-13:** 13.12, 13.27, 13.38

**Ch-14:** 14.8, 14.18, 14.25, 14.34, 14.43

**Ch-15:** 15.12, 15.32, 15.43

### *General Note on Problem solving in Homework, Quizzes and Exams:*

- 1) To effectively learn statistics, students need to *solve problems* in statistics and *analyze data*.
- 2) The selected homework problems above are designed to prepare you for major exams, and the final exam. Therefore, you are *strongly encouraged* to complete them.
- 3) *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.
- 4) Some lab times are *reserved* for student practice on MINITAB.
- 5) 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.

### *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.