KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
DEPARTMENT OF MATHEMATICS and STATISTICS
DHAHRAN, SAUDI ARABIA

STAT212: BUSINESS STATISTICS II (192)

Instructor: Raid Anabosi **Office:** Building 5, room 416
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Office Hours: UTR 8:00 – 8:50 in 5-416 & 10:00 – 10:50 in 59-2018

Text and Package:

1. Basic Business Statistics: Concepts and Applications, 12th edition, by Berenson, M.L., Levine, D.M., and Krehbiel, T.C., Pearson-Prentice Hall (2012).
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
Class test + HW	10%
Exam 1 (Chapters 9, 10 & 12) Week 6: Tuesday February 25, 2020, 6:00 pm in TBA	25%
Exam 2 (Chapters 12, 13 & 14) Week 11: Tuesday March 31, 2020, 6:15 pm in TBA	25%
Lab exam Thursday, April 23, 2020, class time, in 5-101	5%
Final Exam (Comprehensive) Tuesday May 5, 2020, 1:00 pm in TBA	35%

Grade Assignment

Score	87 – 100	80 – 86	75 – 79	70 – 74	65 – 69	60 – 64	55 – 59	50 – 54	0 – 49
Grade	A+	A	B+	B	C+	C	D+	D	F

Student Learning Outcomes:

Students are expected to

- Know the correspondence between ***levels of measurement*** and ***statistical procedures***.
- Know the ***assumptions*** underlying statistical procedures.
- ***Select*** the appropriate statistical ***procedure*** for various applied business situations.
- Accurately ***compute*** procedures ***manually*** and by ***MINITAB*** and ***interpret the results*** of these statistical procedures. Finally, make the ***right*** decision.

The Usage of Mobiles and Electronic Devices

Students are not allowed to use mobiles for any purpose during class time. Students who want to use electronic devices for note taking have to take permission from their instructor. Violations of these rules will result in a penalty in students' class work grade.

Tentative Schedule

Week	*Sections & Topics*	*Notes*
Week 1 Jan 19 – 23	9.1 Fundamentals of Hypothesis-Testing Methodology 9.2 T-Test of Hypothesis for the Mean (σ Unknown)	
Week 2 Jan 26 – 30	9.3 One-Tail Tests 9.4 Z Test of Hypothesis for the Proportion	
Week 3 Feb 2 – 6	10.1 Comparing the Means of Two Independent Populations 10.2 Comparing the Means of Two Related Populations 10.3 Comparing the Proportions of Two Indep. Populations	
Week 4 Feb 9 – 13	10.4 F Test for the Ratio of Two Variances 12.1 Chi-Square Test for the Difference Between Two Proportions 12.2 Chi-Square Test for Differences Among More Than Two Proportions	
Week 5 Feb 16 – 20	12.3 Chi-Square Test of Independence 12.4 McNemar Test for the Difference Between Two Proportions (Related Samples) 12.5 Chi-Square Test for the Variance or Standard Deviation	
Week 6 Feb 23 - 27	13.1 Types of Regression Models 13.2 Determining the Simple Linear Regression Equation 13.3 Measures of Variation	Major 1 – Feb 25 6:00 pm in TBA
Week 7 Mar 1 – 5	13.4 Assumptions 13.5 Residual Analysis 13.6 Measuring Autocorrelation: The Durbin-Watson Statistic	
Week 8 Mar 8 – 12	13.7 Inferences About the Slope and Correlation Coefficient 13.8 Estimation of Mean Values and Prediction of Individual Values 13.9 Pitfalls in Regression	
Week 9 Mar 15 – 19	14.1 Developing a Multiple Regression Model 14.2 R^2 , Adjusted R^2, and the Overall F Test 14.3 Residual Analysis for the Multiple Regression Model	
Week 10 Mar 22 – 26	14.4 Inferences Concerning the Population Regression Coefficients 14.5 Testing Portions of the Multiple Regression Model 14.6 Using Dummy Variables and Interaction Terms in Regression Models	
Week 11 Mar 29 - Apr 2	15.1 The Quadratic Regression Model 15.3 Collinearity 15.4 Model Building	Major 2 – Mar 31 6:15 pm in TBA
Week 12 Apr 5 – 9	15.6 Aptness of the model 16.1 The Importance of Business Forecasting 16.2 Component Factors of Time-Series Models	
Week 13 Apr 12 – 16	16.3 Smoothing an Annual Time Series 16.4 Least-Squares Trend Fitting and Forecasting 16.5 Autoregressive Modeling for Trend Fitting and Forecasting	
Week 14 Apr 19 - 23	16.6 Choosing an Appropriate Forecasting Model 16.7 Time-Series Forecasting of Seasonal Data	Lab Test – Apr 23 Class time 5-101
Week 15 Apr 26 - 30	16.8 Online Topic: Index Numbers	
Tuesday May 5, 2020	Final Exam (Comprehensive) at 1:00 PM in TBA	

General Notes:

- Students are required to carry **pens, binder** and a **calculator** with statistical functions to **EVERY lecture, 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, 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*****.**

Important Notes:

- 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***. It is students' responsibility to provide valid written excuses on time before a ***DN*** report is issued.
- ***Attendance*** on time is ***very*** important.
- 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 Blackboard, so the student ***must*** check his Blackboard inbox ***at least once*** a day.

Home Work Problems:

- The ***Homework*** should be submitted the first Sunday 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, 9.27, 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