King Fahd University of petroleum & minerals
College of Computing & Mathematics
DEPARTMENT OF MATHEMATICS

STAT302: Statistical Inference (231)
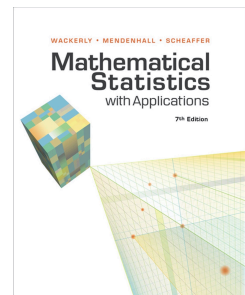
Instructor	Email	Office Location	Office Hours
Esam Al-Sawi	Using BB/MS teams	B5-R310	UT: 12-12:45 & 2 - 2:45 M: 10 - 11:45 PM Or by appointment

Course Objectives

Present a solid undergraduate foundation in statistical theory, its relevance and importance in solving practical problems in the real world.

Textbook:

Mathematical Statistics with Application,
by: Wackerly, Mendenhall and Scheaffer, 7th edition.

Assessment:

Assessment for this course will be based on attendance, homework, two major exams and a comprehensive final exam, as in the following: (tentative)

Activity	Weight
Homeworks	20%
Exam 1	20%
Exam 2	20%
Final Exam	40%
Total	100%

Topics to be covered & suggested problems

Section	Title	problems	Remarks
2.12	Random Sampling		
6.7	Order Statistics	74, 75, 86, 89	
7.1 7.2	Introduction to Sampling Distributions, Sampling Distributions Related to the Normal Distribution	10, 13, 14, 21, 26, 30	
8.1-8.10	Estimation	1, 2, 3, 5, 21, 25, 32, 33, 39, 43, 56, 60, 70, 71, 81, 82, 96, 97	
9.1-9.9	Properties of Point Estimators and Methods of Estimation	1, 3, 4, 15, 28, 38, 39, 49, 56, 60, 71, 72, 81, 82	
10.1-10.12	Hypothesis Testing	2, 3, 17, 19, 30, 31, 37, 46, 50, 51, 56, 62, 63, 68, 69, 79, 80, 83, 88, 96, 100, 106, 107	
16.1-16.5	Introduction to Bayesian Methods for Inference	1, 2, 7, 8, 18, 24	
14.1-14.7	Analysis of Categorical Data	2, 4, 14, 22, 23	If time permits

Notes Regarding Homework Problems

- Homework should be submitted in class on the first day after a chapter ends.
- No **late** homework will be accepted.
- Homework **not submitted** will get a score of zero.
- Homework problems solutions should be complete with **justifications and reasons** for all steps by referencing theorems, equations and discussion from your textbook.
- **Copying** from any source, human, print or electronic will result in a zero on the homework and will be reported to the department chairman for appropriate action in accordance with University rules.
- **Exam Issues**:
  - No student will be allowed to take the exam if he/she does not bring his/her KFUPM ID, or National/Iqama ID, or Driver's License with him/her to the exam hall.
  - Students are not allowed to have their mobiles, smart watches, or any electronic device in the exam hall. A violation of this will be considered an attempt of cheating.
  - **The Usage of Mobiles in Class:**
    Students are not allowed to use mobiles for any purpose during class time. Students who want to use electronic devices to take notes must take permission from their instructor. Violations of these rules will result in a penalty decided by the instructor.

Academic Integrity: **All KFUPM policies regarding ethics and academic honesty apply to this course.**