

King Saud University (RIYADH)
College of business administration
Department of Quantitative Analysis

STATISTICAL METHODS IN HEALTH ADMINISTRATION (QUA 520)
Second Term (2021/2022) (1443H)

A core course in the Master Program in Health Administration
Level 1 (First semester in the program)

Course Facilitator: Dr. Najwan Alsadat

Office : Building 3 2nd Floor, Office No. 185

E-mail: nalsadat@ksu.edu.sa

Lecture: Saturday 10:00 AM-1.00 PM

Office Hours : Tuesday (12-1), Wednesday (12-1)

Course Objectives

This course introduces bio statistical methods and applications, covering descriptive statistics, probability, and inferential techniques necessary for appropriate analysis and interpretation of data relevant to health sciences. Students will use the statistical software package (SPSS) and (EXCEL).

Content of the Course and Session Plan

Session	Content
Week 1	Introduction to Statistics and Biostatistics
Week 2-3	Descriptive Statistics, Numerical Summary Measures
Tuesday (1/3/2022) (10 PM)	First submission of title, objectives, problem statement, literature review, and methodology of the paper with presentation (5 points)
Week 4	Random Variables and Probability
Week 5	Probability Distributions
Saturday (26/3/2022)	First midterm exam (25 points)
Week 6	Statistical Inference (Confidence Intervals)
Week 7	Testing of hypothesis
Week 8	ANOVA
Saturday (16/4/2022)	Second midterm exam (25 points)

Week 9	Non-Parametric Tests
Week 10	Correlation and regression
Week 11	Statistical analysis using SPSS
Tuesday (10/5/2022) (10 PM)	Final submission of final paper with presentation (5 points)

Main references:

1. Marc M. Triola, Mario F. Triola, Jason Roy - Biostatistics for the Biological and Health Sciences-Pearson (2017)
2. Wayne W. Daniel, Chad L. Cross - Biostatistics_ A Foundation for Analysis in the Health Sciences-Wiley (2013)

Other recommended references:

1. Rosner B. Fundamentals of Biostatistics, Latest ed. Brooks/Cole, Boston.
2. Amir D. Aczel and Jayavel Sounderpandian, Complete Business Statistics, McGraw Hill International, Latest Edition.
3. Sheridan J Coakes, SPSS Version 20.0 for Windows: Analysis without Anguish, Wiley, Latest Edition.
4. Richard I Levin., David S Rubin., Statistics for Management, Prentice-Hall, Latest Edition.
5. Edward Tufte, The Visual Display of Quantitative Information, Graphics Press, Cheshire, Connecticut.
6. Levine, Krehbiel, Berenson, and Viswanathan, Business Statistics – A First Course, Pearson Education, Latest Edition.
7. Lind, Marchal and Wathen, Statistical Techniques in Business and Economics, McGraw Hill International, Latest Edition.