

Department of Statistics & Operation Research-King Saud University
Second Semester 1444 /2023
Stat 109 Biostatistics

Instructor : Kholoud Basalim

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Office : Building 25 , Office : 2A03 second floor

Office hours: Monday : 9 AM – 10 AM \ Wednesday : 9 AM – 10 AM

Course Timeline

Week	Title
W1	Chapter 1 : Introduction to biostatistics : Some Basic Concepts , Types of variables , Probability Sampling (Simple random sampling, Stratified sampling)
W1	Chapter 2 : Grouped Data: The Frequency Distribution , Displaying Grouped Frequency Distributions
W2	Chapter 2 : Descriptive Statistics : Measures of Central Tendency (mean, median, mode), Measures of Dispersion (range, variance , standard deviation, coefficient of variation)
W3	Chapter 3 : Basic Probability Concepts : General Definitions and Concepts , Probability of an Event, Marginal Probability, Conditional Probability, Bayes' Theorem
First Term Exam - Chapters 1 , 2 , 3	
W4	Chapter 4 : Probability Distributions: Discrete : Probability Distributions for Discrete Random Variables , Expected Value and Variance of a Discrete Random , Cumulative probability , Binomial Distribution , The Poisson Distribution
W5	Chapter 4 : Continuous Probability Distribution : The Normal Distribution , The Standard Normal Distribution , The T-Distribution
W6	Chapter 5 : Sampling Distribution : sampling distribution of one and two sample means and one and two proportions
Second Term Exam - Chapters 4 & 5	
W7	Chapter 6 : Estimation : Point Estimators , Interval Estimation
W8	Chapter 7 : Hypothesis Testing : Null and Alternative Hypotheses , Type of errors , Concept of P-value, Hypothesis Testing: A Single Population Mean (μ)
W9	Chapter 7 : Hypothesis Testing: The Difference Between Two Population Means: Independent Populations ,Paired Comparisons , Hypothesis Testing: A Single Population Proportion (P) , Hypothesis Testing: The Difference Between Two Population Proportions ($P_1 - P_2$)
Final Exam Sunday 19/2/2023 – (28-7-1444H) at 1 PM Chapters 6 & 7	

Required text Books:

- Foundations of Biostatistics by Islam, M. Ataharul, Al-Shiha, Abdullah

Additional text Books:

- Bernard Rosner. Fundamentals of Biostatistics.
- Pagano, Gauvreau. Principles of Biostatistics, 2nd edition.

Attendance:

Student missing more than 25% of the total class hours won't be allowed to write the final exam.

Grading policy:

First Midterm: 30 Marks (1:30 hours)

Second Midterm: 30 Marks (1:30 hours)

Final Test: 40 Marks (2 hours)