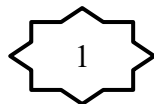


King Saud University
College of Science
Department of Statistics & OR

STAT 109

BIostatISTICS



Outline of the course

Course Code & No:	STAT 109
Course Name	Biostatistics
Credits:	2 (2+0)
Pre-requisite:	None

Instructor: Sana Abunasrah, Office :3rd floor ,3A04

Week	Title
W1	Introduction to bio-statistics (1.1-1.4).
W2	Types of data and graphical representation (1.1-1.4).
W3	Descriptive statistics: measures of Central tendency- mean, median, mode (2.1 -2 .6 Excluding stem plot percentiles).
W4	Measures of dispersion-range, standard deviation, coefficient of variation (2.1 - 2.6 Excluding stem plot percentiles).
W5	Calculating measures from an ungrouped frequency table (2.1 - 2.6 Excluding stem plot percentiles).
W6	Basic probability, conditional probability, concept of independence, sensitivity, specificity (3.1 -3.6).
W7	Bayes theorem for predictive probabilities (3.1-3.6).
W8	Some discrete probability distributions: cumulative probability (4.1-4.4).
W9	Binomial and Poisson -their mean and variance (4.1 - 4.4 Excluding the use of binomial and Poisson tables).
First Midterm (30%- Sections 1.1 - 4.4)	
W10	Continuous probability distributions: Normal distribution (4.5 - 4.8).
W11	Standard normal distribution and t-distributions (4.5-4.8).
W12	Sampling with and without replacement, sampling distribution of one and two sample means and one and two proportions (5.1 - 5.7 Excluding sampling without replacement).
Second Midterm (30% - Sections 4.5 – 5.7)	
W13	Statistical inference: Point and interval estimation, Type of errors, Concept of P-value (6.2 - 6.6, 7.1 - 7.6 Excluding variances not equal page 181-182).
W14	Testing hypothesis about one and two samples means and proportions including paired data – differentcases under normality. (6.2 -6.6, 7.1 - 7.6, Excluding variances not equal page 181-182).
Final Exam (40% - chapter 6 & 7)	

Course Delivery	Lectures
Grading Policy	First Midterm:.. 1: 30 Marks (1.5 hours)
	Second Midterm :30 Marks (1.5 hours)
	Final exam :40 Marks (2 hours)
Text Book	Foundations of Biostatistics by Islam, M. Ataharul, Al-Shiha, Abdullah

Marking scheme:

30 marks = 2 mid-term tests carrying 30 marks each

40 marks = Final exam

Notes:

1. This course is a coordinated course taught by several professors. The exams are common for all sections. Dates of the exams will be announced in two weeks in-sha-Allah. Exam dates will not be changed once they have been fixed.
2. Attendance is important. Latecomers will be marked absent. **Students missing more than 25% of the lectures will be deprived of sitting the final exam.**

Further References:

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

