

Department of Statistics & Operations Research
King Saud University
First Semester 1442

Instructor: Rafik Aguech

Office: 2B44

Email: raguech@ksu.edu.sa

SYLLABUS STAT 109 – Biostatistics

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).
Partial Exam (Till cumulative probability sec.4.4 included)	
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).
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).
Common Home work (12 hours) from section 4.1 to section 4.8	
W14	Testing hypothesis about one and two samples means and proportions including paired data – different cases under normality. (6.2 -6.6, 7.1 - 7.6, Excluding variances not equal page 181-182).
Final Exam from section5.1 to section 7.6	

Course Delivery	Lectures
Grading Policy	Partial exam. 1: 30 Marks (1.5 hours)
	Evaluation and home works. 30 Marks (12 hours)
	Final exam :40 Marks (2 hours)
Text Book	Foundations of Biostatistics by Islam, M. Ataharul, Al-Shiha, Abdullah

We have announce in cut clear way for all students from the beginning: Participation, Quizzes & Home works = 30%