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Lectures: Every Monday, 1 – 3 PM, room GA 2, Building 6

SYLLABUS STAT 109 – Biostatistics

Week	Title
W1 (22 /12/1439)	Introduction to Bio-Statistics, (1.1-1.4).
W2 (29/12/1439)	Types of data and graphical representation, (1.1-1.4).
W3 (06/01/1440)	Descriptive statistics: Measures of Central tendency- Mean, median, mode (2.1 -2 .6 Excluding stem plot percentiles).
W4 (13/01/1440)	Measures of dispersion-Range, standard deviation, coefficient of variation (2.1 - 2.6 Excluding stem plot percentiles).
W5 (20/01/ 1440)	Calculating Measures from an ungrouped frequency table (2.1 - 2.6 Excluding stem plot percentiles).
W6 (27/01/1440)	Basic probability. Conditional probability, concept of independence, sensitivity, specificity, (3.1 - 3.6).
W7 (04/02/1440)	Bayes Theorem for predictive probabilities. (3.1-3.6).
W8 (11/02/1440)	Some discrete probability distributions: cumulative probability (4.1-4.4).
First Term Exam (7 - ٨.٣٠ PM), Thursday, 16/02/1440 (25/10/2018). Covers chapters 1,2,3	
W9 (18/02/1440)	Binomial, and Poisson -their mean and variance (4.1 - 4.4 Excluding the use of binomial and Poisson tables).
W10 (25/02/1440)	Continuous probability distributions: Normal distribution (4.5 - 4.8).
W11 (03/03/1440)	Standard normal distribution and t distributions (4.5-4.8).
W12 (10/03/1440)	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 Term Exam (7 - ٨.٣٠ PM), Thursday, 14/03/1440 (22/11/2018). Covers chapters 4,5	
W13 (17/04/1440)	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 (29/03/1439)	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 (two hours), date to be announced. Covers chapters 6,7	

Grading Policy: Test No. 1 : 30 Marks (1.5 hours), Test No. 2 : 30 Marks (1.5 hours), Final Test : 40 Marks (2 hours).
No other marks will be counted in the total.

Homework and exam policy: Collaboration on homework assignments is encouraged. You may consult outside reference materials, other students, the instructor, or anyone else. There is one restriction: you must write, type, or otherwise record your answers yourself, alone, so that your homework reflects your understanding. No late homework or make-up exams without prior approval; penalties may apply.

Text Book: *Biostatistics: Basic Concepts and Methodology for the Health Sciences* by Wayne W. Daniel. [9th ed.] Books available from university book store below SAMBA bank. The book costs 70 Riyals for students.