Umm Al-Qura University
Faculty of Applied Medical Sciences
Clinical Laboratory Program

Course Overview

Course code	1701471-3
Course title	Basic medical biostatistics
Level / semester	4th year – 1st semester
Credit hours	**Theoretical: Two hours/week**
	Practical:
Language	English
Name of course coordinator	Dr. Hamza Assaggaf
Course objectives	By the end of this course, the students will be able to: **- Understand the concepts and principles of biostatistics and define terms used.** **- Differentiate between quantitative and qualitative data, construct, and interpret frequency distribution tables and graphic displays.** **- Calculate the measures of central tendency for a set of data.** **- State the meaning and estimate the measures of variability for a given set of biologic measurements.** **- Understand and define the basic principles of probability and their relevance in a physical therapy environment.** **- Know the types of samples and sampling techniques.** **- Understand t-test and chi-square with relation to physical therapy.** **- Understand and describe different study designs..** **- Describe the past trends in world population growth in general and for KSA and the Gulf Cooperation Council (GCC) countries, in particular.** **- Known how to use SPSS program.** **- Explain the processes that determine population growth, namely fertility, mortality and migration**

Course contents	- Definition of medical statistics. - Measures of central tendency(arithmetic mean, mode, median). - Measures of dispersion(range, mean deviation, variance, stander deviation). - Normal distribution curve, empirical rule, confidence limit. - Probability, variable. - Sampling. - Screening. - Epidemiological studies(descriptive, analytic, experimental/cross sectional, longitudinal {prospective, retrospective}). - Relative risk, Attributable risk, Odd's ratio. - Presentation of data. - Statistical significance. - How can you deal with SPSS program. - Fertility rates. - Mortality rates. - Morbidity rates.
Students' assessment methods	- Mid-Term Exam exam 30%. - Class Activity 20%. - Final exam 50%.