FACULTY OF SCIENCES - DEPARTMENT OF STATISTICS
COURSE SYLLABUS

STAT 110: General Statistics (1)

COURSE TITLE	*ENGLISH CODE/NO*	*ARABIC CODE/NO.*	*CREDITS*			
			Th.	*Pr.*	*Tr.*	*Total*
General Statistics (1)	STAT 110	ص 281	٣			٣
Pre-requisites:	None					
Course Role in Curriculum *(Required/Elective):*	Required Course					

Catalogue Description:
This course is designed to teach students how to use a broad base of statistical methods and concepts to organize, analyze, and interpret hypotheses developed in various applications. This course consists of three main parts: (1) Data analysis and description, (2) Probability and random variables, and (3) Inferential statistics. Main goal for this class is to familiarize students with the various techniques of statistical analyses that are utilized in different disciplines. Emphasis will be on the basic concepts and their meaning, as well as their applications and interpretation

*Textbooks***:**
1.   Elementary Statistics a Step by Step Approach, 7th Edition by Allan Bluman, McGraw/Hill, 2006.

Supplemental Materials:
1.   Larson & Farber, "Elementary Statistics: Picturing the World", 3rd Edition (2006)

Course Learning Outcomes:
By the completion of the course the student should be able to:
1.   Demonstrate an understanding of statistics.
2.   Learn some commonly used statistical techniques.
3.   Apply these techniques in describing and analyzing data.
4.   Use statistics to solve different kind of problems.
5.   Recognize sound/good statistical studies.
6.   Gain an appreciation for analytical skills.

Topics to be Covered:
1.   Collecting data, graphical presentation and tabulation.
2.   Measures of central tendency: Mean, Median and Mode.
3.   Measures of dispersion: range, and standard deviation.
4,   Relative Dispersion and Skewness.
5.   Elementary probability: random experiment, sample space, event, and computation of probability. Rules of addition and multiplication, conditional probability and independence.
6.   Random variables, probability distributions, variance and expected value - Some probability distributions (Binomial, Poisson, and Normal).
7.   Sampling and sampling distribution: Sampling distribution of Sample

Mean (in case of large samples), central limit theorem and sampling distribution of proportion.
8. Estimation of population mean and proportion.
Tests of statistical hypotheses: testing of mean, differences between two means, proportion, differences between two proportions in large samples.
9. Simple linear regression and Correlation: Pearson's correlation coefficient and Spearman's rank correlation coefficient.
10. Collecting data, graphical presentation and tabulation.