

Course No. & Code	STAT 106	
Course of Units	Biostatistics	
Number of Units	2 (1+2+0)	
Pre-requisite	N/A	
Co-requisite	N/A	
Equivalent Requisite	N/A	
Beneficiaries	College of Sciences	
Course Definition & Description (Brief Contents)	Descriptive Statistics, Quantitative and Qualitative data, Graphic presentation. Measures of central tendency, measures of dispersion. Probability rules, Conditional Probability, Predictive value positive and negative- pdf, Binomial distribution. Poisson distribution. Normal distribution- Sampling for mean and proportion-Confidence intervals of one population mean and proportion.	
Main topics	Detailed contents follow.	
Course Objectives:	Students are expected to: Have a knowledge of elementary probability and probability distributions; Summarize data by a suitable statistic, graphical presentation of data including Box plot; ability to use the z and t tests for one and two samples. Conduct hypothesis tests about one and two means and proportions and draw conclusion.	
Teaching Methods	Power point slides presentations, lectures and exercises	
Curriculum book	Book Title: Biostatistics - Basic Concepts and Methodology for the Health Sciences . Author: Wayne W. Daniel. Publisher: Wiley, ninth edition	
Evaluation System	1- Two Exams in the semester. 2- Final Exam	
Semester Exam	Time: 1 Hour 30 min	Week: 7 th and 11 th
Marks Distribution	Semester Works: Test 1, Test 2, 30 marks for each test. Final Exam: 40 marks	
Final Exam Time	2 Hours	

Chairman of Department of Statistics and Operations Research

Name: Dr. Adel Fahad Alrasheedi

Signature: 



Main Topics (Detailed Contents)	<p><u>Introduction:</u></p> <p>Introduction to Bio-Statistics, types of data and graphical representation</p>
	<p><u>Descriptive statistics:</u></p> <p>Measures of Central tendency- Mean , median, mode, Measures of dispersion-Range, Standard deviation, coefficient of variation. Calculating Measures from an Ungrouped Frequency Table Approximating Measures from Grouped Data.</p>
	<p><u>Basic Concepts of probabilities:</u></p> <p>Basic probability, conditional probability, concept of independence, Sensitivity, Specificity etc, and Bayes Theorem for predictive probabilities.</p>
	<p><u>Discrete probability distributions:</u></p> <p>Some discrete probability distributions: cumulative probability distribution, Binomial, and Poisson –their mean and variance</p>
	<p><u>Continuous Probability Distributions:</u></p> <p>Normal distribution, Standard normal.</p>
	<p><u>Statistical Inference:</u></p> <p>Statistical inference: Point and interval estimation, Type of errors, Concept of P-value, testing hypothesis about one and two samples means and proportions including paired data – different cases under normality.</p>

Chairman of Department of Statistics and Operations Research

Name: Dr. Adel Fahad Alrasheedi

Signature: 

