

NEAR EAST UNIVERSITY - COMMON COURSES COORDINATION UNIT



Department of Mathematics
Course Information Sheet & Course Outline

Course Code MTH261	Course Name Statistics I		Credit 3	ECTS 6			
Pre-requisite: MTH172							
Language: English		Course Type: Compulsory		Year: 2019/2020		Semester: Spring	
Weekly Hours	Class Hours	Laboratory	Practicum	Learning Sessions			
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Learning Outcomes		After the completion of this course, the student will be able to <ul style="list-style-type: none"> ➤ Meaning of Statistics ➤ They can learn how to organise, group data and present it pictorially using bar chart, histogram, pie-chart e.t.c. ➤ How to find the mean, median and mode and their relationships ➤ How to find the range, variance, standard deviation and coefficient of variation ➤ Will some useful aspects of probability theory Will also know how to use the probability distributions like Binomial, Poisson, Hyper geometric, and normal distributions 					
Course Description	Sequences, Infinite series, Geometric series, The Integral test, The Comparison tests, Power series, Taylor and Maclaurin series, Lines and planes, Functions of several variables, Limits and Continuity, Partial Differentiation, Chain Rule, Tangent plane, Critical points, Global and Local Extrema, Directional Derivatives, Gradient, Divergence and Curl, Multiple integrals with applications, Triple integrals with applications, Triple integrals in Cylindrical and Spherical coordinates, Line-, Surface- and Volume Integrals, Independence of path, Green's Theorem, Conservative Vector Fields, Divergence Theorem, Stoke's Theorem.						
Course Objectives	To analyse, process and present data						
Textbooks and/or References	1	Introductory Statistics- Willey (2011), Prem. S. Mann					
Course Content	<ol style="list-style-type: none"> 1. Statistics and Types of Statistics 2. Organizing and Graphing Qualitative data 3. Cumulative Frequency Distribution 4. Measures of Central Tendency for Ungrouped Data 5. Mean, Variance, and Standard Deviation for Grouped data 6. Measures Of Position 7. Probability, Experiment, Outcome and Sample space 8. Marginal Probability, Conditional Probability, and Related probability Concepts 9. Discrete Random Variables and Their Probability Distribution 10. Mean and Standard Deviation of a Discrete random variable 11. Binomial, Hypergeometric and Poisson probability Distribution 12. Continuous Random Variables and the Normal Distribution 						