

University of Jordan	
Faculty of Business	
Department	Economics
Programme	BSc Economics
Module title / number	Statistical Analysis / 1607250
Pre-requisite	Principles of statistics / 1607150
Module description	This course provides conceptual understanding of statistical procedures that have been used in analyzing the data after determining the kind of data at hand. In addition, this course identifies the random variable and its probability function, finding the sampling distribution for one mean and the difference between two means and for a population proportion and the difference between two proportions. Also, estimating population parameters and testing hypotheses about those parameters.
Aims	This course aims at providing students with a comprehensive understanding of the different statistical procedures that enable the student to make a decision about applications and problems. Also, this course aims at providing the student with the skills to do so.
Intended learning outcomes (ILOs)	
Upon the completion of this course, students should be able to achieve the following:	
1- knowledge and understanding	Students should have knowledge of: <ul style="list-style-type: none"> - The importance of statistical analysis in writing reports and also in real life. - How to deal with different kind of data. - How to determine the appropriate statistical procedure. - How to write conclusions.
2- analytical and thinking skills	Students should have the ability to: <ul style="list-style-type: none"> - Identifying the data. - Choosing the appropriate procedure for analysis. - Conducting the specified procedure. - The ability to write conclusions and give the right answer for a specified question.
Teaching and learning methods	
	Although the lectures cover the vast majority of the course material, students must use the text book. A number of problems (some could be chosen from the end of chapter problems) will be indicated in class, specifying their due time. A discussion of the assigned problems can be done through the preceding lectures.
Assessment methods	

	<p>Students will be assessed based on the following:</p> <p>Mid-term Exam 30% Assignments and a second Exam 20% Final Exam 50%</p> <p>Details of these assignments and the submission deadlines will be announced in class and/or posted on the course website. Students are advised to keep track of what is announced in class, it is their responsibility to do so, BEING ABSENT IS NOT AN EXCUSE FOR NOT KNOWING WHAT IS GOING ON.</p>
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Academic Honesty

	<p>All the assignments and work submitted by the student should be his or her own. All actions of academic dishonesty including cheating, plagiarism or helping other students in such actions will be dealt with strictly according to the university regulations.</p>
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Main textbook(s) and additional readings

	<p>Sh. Alattom (2005), "Statistics Methods : Economic Management Applications with SPSS".</p>
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Detailed lecture schedule

	Wee k	Material	Homework and Assignmen ts
	1	<p>Definition of random variable , kind of variables , discrete and continuous random variables.</p> <ul style="list-style-type: none"> - Probability function and probability density function. 	
	2	<p>Joint, marginal and conditional distributions.</p> <p>The expected values, the variance, covariance and correlation.</p>	
	3	<p>Raw and central moments</p> <p>Skeweness and kurtosis</p>	
	4	<p>Definition of probability distribution</p> <p>Bernoulli and binomial distributions</p>	
	5	<p>Poisson, hyper geometric distributions in both cases univariate and multivariate</p>	
	6	<p>Uniform, gama, and beta</p>	

		<p>distribution</p> <p>The normal distribution and its applications</p> <p>Mid-term Exam 23.11.2009</p>	
	7	<p>Sampling distribution for one mean, for the difference between two means, for population proportion and the difference between two proportions</p> <p>t-distribution, X^2 distribution</p>	
	8	<p>Point estimation and properties of good estimator: unbiasedness, consistency, relative efficiency, and sufficiency</p> <p>Methods of point estimation: method of moments, method of maximum likelihood, and method of least squares</p>	
	9	<p>Interval estimation: confidence interval (C.I.) for one population mean and for the difference between two means</p>	
	10	<p>C.I. for population proportion and the difference between two proportions</p> <p>Determination of sample size for both cases the mean and the proportion</p>	
	11	<p>C.I. in correlation and regression analysis</p> <p>Second Exam 28.12.2009</p>	
	12	<p>What is meant by hypothesis testing</p> <p>The null and alternative hypotheses</p> <p>Type I and type II errors</p> <p>Steps for conducting statistical test</p>	
	13	<p>Testing hypotheses about one population mean</p>	
	14	<p>Testing hypotheses about the difference between two means</p>	
	15	<p>Testing hypotheses about one proportion and the difference between two proportions</p>	

		Testing about the correlation coefficient and about the coefficients of simple linear regression	
	16	Definition of multiple regression and the general linear model Estimating the coefficient in the general linear model Confidence interval and testing in general linear models One-way and two-way analysis of variance	
		Final Exam 9.1.2010	