Faculty of Economics and Political Science

Introduction to Statistics

Information :

Course Code :	STS 101	**Level :**	Undergraduate	**Course Hours :**	3.00- Hours

Department : Faculty of Economics and Political Science

Instructor Information :

Title	Name	Office hours
Lecturer	Rania Ramadan Moawad Mohamed	

Area Of Study :

This course presents the basic statistical ideas that are used in different social science disciplines. The course covers various statistical instruments such as: calculating the measures of central tendency (mean- median- mode- variance- standard deviation), providing the students with different graphical illustrations (histogram- bar charts- pie charts- stem and leaf-line and scatter plot), analyzing data and its distribution (discrete distribution-continuous distribution), as well as covering structures and methods of probability distributions. The course also familiarizes students with the use of statistical software program.

Course Goals:
ÅPrepare students with a deeper insight on the possible sub-fields in economics, political science, public administration and mass media.
ÅOrganize analyses, interpret and summarize the data in a useful and informative manner.
ÅDistinguish between different kinds of data and how they can describe the data in several behaviors.

Description :

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Course outcomes :

a.Knowledge and Understanding: :	
1 -	1.1) Understand data types, how data should be sampled, tabulated and graphed.
2 -	1.2) Comprehend frequency distributions and different graphical techniques.
3 -	1.3) Differentiate between descriptive and inferential statistics
b.Intellectual Skills: :	
1 -	3.1) Analyze problems and design problem solving techniques.
2 -	3.2) Compare and examine observational studies.
3 -	3.3) Analyze data using graphs Construct a frequency distribution, histogram, pie chart and a scatter plot.

c.Professional and Practical Skills: :	
1 -	2.1) Select the right sample, distinguishing between random and nonrandom sampling.
2 -	2.2) Select the appropriate law of probability to use in solving problems.
3 -	2.3) Compute the mean, median, mode, percentile, quartile, range and variance on grouped and ungrouped data.
4 -	2.4) Distinguish between discrete distribution and continuous distribution.
5 -	2.5) Experiment probability theory and rules.
d.General and Transferable Skills: :	
1 -	4.1) Enhance critical thinking and innovation.
2 -	4.2) Abstract reasoning, methodological knowledge and technical know-how.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Introductory Lecture and Course Outline	5	1	1
Data Collection ÅMethods of Collecting Data ÅDescriptive vs. Inferential Statistics	5	1	1
Population, Sample and Sampling Techniques	5	1	1
Data Description: Charts and graphical representation ÅFrequency Distribution ÅHistograms ÅBar Chart- Pie chart- Stem and Leaf Diagram ÅScatter Plot and Line Chart	10	2	2
Midterm Exam		1	
Measuring of Center and Location: ÅPopulation Mean and Sample Mean ÅMedian ÅMode ÅWeighted Mean ÅPercentiles and Quartiles	10	2	2
Measurements of Variation: ÅRange ÅInterquartile range ÅPopulation Variance and Standard Deviation ÅSample Variance and Standard Deviation ÅCoefficient of Variation	15	3	3
Introduction to Probability: ÅProbability Rules	15	3	3
Final Exam		1	

Teaching And Learning Methodologies :

Presentation

Group discussion
Research Paper

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Course Work (Attendance, Participation, Assignments, Quizzes, Research Paperé)	30.00		To assess theoretical background of the intellectual and practical skills
Final Exam	40.00	15	To assess knowledge and intellectual skills
Midterm Exam	30.00	6	To assess professional skills