

Syrian Arab Republic	 الجامعة الافتراضية السورية SYRIAN VIRTUAL UNIVERSITY	الجمهورية العربية السورية
Ministry of Higher Education		وزارة التعليم العالي
Syrian Virtual University		الجامعة الافتراضية السورية

## Course Description: Applied statistics

### 1- Basic Information:

<b>Course Name</b>	Applied statistics
<b>Course ID</b>	<b>QAS51</b>
<b>Contact Hours (Registered Sessions)</b>	21 hours (14 sessions)
<b>Contact Hours (Synchronized Sessions)</b>	21 hours (14 sessions)
<b>Mid Term Exam</b>	-
<b>Exam</b>	75 min
<b>Registered Sessions Work Load</b>	16
<b>Synchronized Session Work Load</b>	16
<b>Credit Hours</b>	-

### 2- Pre-Requisites:

Course	ID
None	-

### 3- Course General Objectives:

This course aims to teach students statistical analysis methods of data and its applications in quality. In addition, this course aims to study descriptive statistics, probability distributions, correlation and regression, hypotheses testing, analysis of variance, confidence limits and illustrate how to use these statistical methods in quality by using SPSS, excel, Minitab.

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#### 4- Intended Learning Outcomes (ILO):

Code	Intended Learning Outcomes
ILO1	Remember basic concepts in applied statistics.
ILO2	Applies the appropriate statistical methods in the field of quality.
ILO3	SPSS, Excel, and Minitab are used in data analysis.
ILO4	The results of analysis are used to make a decision that helps solve quality problems.
ILO5	Be able to evaluate other researches results

#### 5- Course Syllabus (21 hours (14 sessions); 21 hours of total Recorded Sessions)

- **RS:** Recorded Sessions; **SS:** Synchronized Sessions;

NU	Course Syllabus	Short Description	Number of sessions
1	<b>Statistical Concepts Foundation</b>	The sample, population, statistical unit ,methods and tools for data collection	1
2	<b>descriptive statistics</b>	Describe the data using a tabular presentation of the chart and calculate measures of central tendency and measures of dispersion, With the application using the SPSS program	2
3	<b>Basic concepts in probability theory</b>	Basic laws of probability, and methods of counting.	1
4	<b>probability distributions</b>	Binomial Distribution, normal distribution, Poisson distribution with the application using the EXCEL program	2
5	<b>Inferential Statistic</b>	Hypothesis testing, Confidence limits, with the application using the SPSS, Minitab programs	3
6	<b>Correlation Analysis</b>	Study of relationships between variables quantitative and qualitative (Pearson and	2

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		Spearman correlation ...	
7	<b>Regression Analysis</b>	Simple linear regression and multiple linear regression) and its applications in quality	2
8	<b>Non parametric tests</b>	nonparametric tests using SPSS software	1

## 6- Assessment Criteria (Related to ILOs)

ILO Code	ILO	Intended Results	Assessment Type				
			ISC	PW	Ex	PF2F	Rpt
ILO1	Remember basic concepts in applied statistics.		X				X
ILO2	Applies the appropriate statistical methods in the field of quality.		X	X	X		X
ILO3	SPSS, Excel, and Minitab are used in data analysis.		X	X	X		
ILO4	The results of analysis are used to make a decision that helps solve quality problems.		X	X		X	
ILO5	Be able to evaluate other researches results		X	X	X	X	

## 8-Main References

<ol style="list-style-type: none"> <li>1. Anderson, Sweeney, Williams, Freeman, Shoesmith. (2009). <b>Statistics for Business and Economics</b>. second edition. China.</li> <li>2. Beins, B.C.and McCarthy,M.A. (2012). <b>Research Methods and statistics</b>. Pearson Education.</li> </ol>
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## 9-Additional References

-Gupta (2014) Statistics and Probability with Applications for Engineers and Scientists Set
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