Syrian Arab Republic

Ministry of Higher Education

Syrian Virtual University



الجمهورية العربية السورية

وزارة التعليم العالمي

الجامعة الافتراضية السورية

Course Definition File

1. Basic Information:

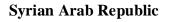
Course Name	Data analysis
Course ID	BQM305
Contact Hours (Registered Sessions)	18
Contact Hours (Synchronized Sessions)	18
Mid Term Exam	
Exam	75min
Registered Sessions Work Load	18
Synchronized Session Work Load	18
Credit Hours	4

2. Pre-Requisites:

Course	ID
Operations Research	BQM202

3. Course General Objectives:

The course aims to give students a thorough overview of the quantitative data analysis methods using computers. The course includes a definition of the scales and its types, and how to design a questionnaire as a tool to collect quantitative data. The course also distinguishes between descriptive analysis methods and inferential analysis methods. The course explains too how to test hypothesis. Besides, it addresses how to apply a wide range of statistical analysis methods in SPSS such as chi square, one sample t-test, independent samples t-test, paired samples t-test, analysis of variance, linear correlation, and simple and multiple linear regression.



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4. Intended Learning Outcomes (ILO):

Code	Intended Learning Outcomes						
ILO1	Understand the types of scales and data and their relationship with the						
ILUI	statistical analysis methods.						
ILO2	Learn how to enter and analyze data and test hypothesis using a computer.						
ILO3	Understand the difference between descriptive statistics and inferential						
ILU3	statistics.						
ILO4	Learn how to describe the sample and the variables using descriptive						
1204	analysis methods.						
ILO5	Understand how to test hypothesis using inferential statistics.						
ILO6	Understand how to test the relationship between variables based on their						
ILU0	types.						
ILO7	Learn how to test the difference between means.						
	Understand how to anticipate variations in the dependent variable as a						
ILO8	function of one or more independent variable.						

5. Course Syllabus (18 hours of total synchronized sessions)

RS: Recorded Sessions; SS: Synchronized Sessions;

ILO	Course Syllabus	RS	SS	Туре	Additional Notes							
				× Exercises								
	Questionnaire and scales:			X Assignments								
ILO1	• Types of scales	15	15	15	15	15	15	1.5	15	15	Seminars	
ILUI	Scaling technics	1.3	1.5	Projects								
	Questionnaire Design			Practices								
				Others								

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	Introduction to SPSS:			Exercises
	• Windows available in			☑ Assignments
ILO1	SPSS	15	15	□ Seminars
ILO2	SPSS Files	1.5	1.5	□ Projects
	SPSS menus			□ Practices
	Entering data in SPSS			□ Others
	Descriptive analysis:			Exercises
ILO2	Frequencies			Sector Assignments
ILO3	Measures of central	2.5	2.5	□ Seminars
ILO4	tendency	2.3	2.3	□ Projects
	Dispersion measures			□ Practices
	Distribution			□ Others
ILO2	Cross tabulations and chi square			Exercises
ILO3	test:			☑ Assignments
ILO5	Cross tabulations	2.5	2.5	□ Seminars
ILO6	 Hypothesis testing 	2.0	2.0	□ Projects
	Chi square			
	t-test:			Exercises
ILO2	One sample t-test			☑ Assignments
ILO5	 Independent samples t- 	2.5	2.5	□ Seminars
ILO7	test	2.0	2.5	□ Projects
	 Paired samples t-test 			

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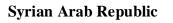


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	Analysis of variance:			
	Variables			Exercises
ILO2	Hypothesis			☑ Assignments
ILO5	Assumptions of the	2.5	2.5	
ILO7	analysis	2.3	2.5	□ Projects
	Calculating statistical			
	coefficients in ANOVA			□ Others
	Test using SPSS			
	Linear correlation analysis:			☑ Exercises
ILO2	• Relationship between two			☑ Assignments
ILO5	variables	2.5	2.5	□ Seminars
ILO6	Linear correlation	2.3	2.5	□ Projects
	coefficient			
	Test using SPSS			□ Others
				☑ Exercises
ILO2	Linear regression:			☑ Assignments
ILO5	Simple linear regression	2.5	2.5	□ Seminars
ILO8	 Multiple linear regression 	2.0	2.0	□ Projects



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6. Assessment Criteria (Related to ILOs)

ISC	Interactive	Synchronized	Ex	Exams		Rpt	Reports
	Collaboration						
PF2F	Presentations and Face-to-Face		PW	Practice V	Vor	ĸ	
	Assessments						

ILO				Asse	ssmen	t Type	
Code	ILO	Intended Results	ISC	PW	Ex	PF2F	Rpt
ILO1	Understand the types of scales and data and their relationship with the statistical analysis methods.		х		х		Х
ILO2	Learn how to enter and analyze data and test hypothesis using a computer.		Х		х		х
ILO3	Understand the difference between descriptive statistics and inferential statistics.		Х		x		х
ILO4	Learn how to describe the sample and the variables using descriptive analysis methods.		х		х		Х
ILO5	Understand how to test hypothesis using inferential statistics.		Х		Х		Х
ILO6	Understand how to test the relationship between variables based on their types.		Х		х		х

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Syrian Virtual University		الحامصة الإقتراضيية السوريية Syman Vikruae University	يّة	لافتراضيّة السور	الجامعة ا	
ILO7	Learn how to test the difference between means.		X	X		Х

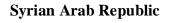
ILO8	Understand how to anticipate variations in the dependent variable as a function of one or more independent variable.	х	х	х

7. Practice Tools:

Tool Name	Description
SPSS	SPSS Program

8. Main References

- 1. Field A. (2006), Discovering Statistics Using SPSS, 2nd Edition, SAGE, England.
- 2. Ho R. (2006), Handbook of Univariate and Multivariate Data Analysis and Interpretation with SPSS, Chapman & Hall/CRC, USA.
- Landau S. & Everitt B.S. (2004), A Handbook of Statistical Analysis Using SPSS, Chapman & Hall/CRC Press, USA.
- 4. Malhotra N.K. (2010), Marketing Research: An Applied Orientation, 6th Edition, Pearson, USA.



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9. Additional References

- Blumberg B., Cooper D.R., & Schindler P.S. (2005), Business Research Methods, Mcgraw–Hill, Berkshire.
- Leech N.L., Barrett K.C., & Morgan G.A. (2005), SPSS for Intermediate Statistics: Use and Interpretation, 2nd Edition, Laerence Erlbaum Associates, Inc., USA.
- 3. Moore D.S., McCabe G.P., Alwan L.C., Craig B.A., & Duckworth W.M. (2011), The Practice of Statistics for Business and Economics, 3rd Edition, W.H. Freeman and Company, England.
- Pallant J. (2007), SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS for Windows, 3rd Edition, McGraw Hill, USA.