Syrian Arab Republic		الجمهورية العربية السورية
Ministry of Higher Education	SVU	وزارة التعليم العاليي
Syrian Virtual University	الجامعــة الإفتراضيــة السوريــة Syrian Virtual University	الجامعة الافتراضية السورية

Course Description: Scientific Methods in Management

1- Basic Information:

Course Name	Scientific Methods in Management
Course ID	SMM
Contact Hours (Registered Sessions)	16
Contact Hours (Synchronized Sessions)	16
Mid Term Exam	-
Exam	75 min
Registered Sessions Work Load	16
Synchronized Session Work Load	16
Credit Hours	24

2- Pre-Requisites:

Course	ID
None Scientific Methods in Management	SMM

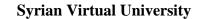
3- Course General Objectives:

Scientific Methods in Management helps in solving problems in diffenert environments that needs decisions. The module convert topics that include: linear programming, Transportation, Assignment, and CPM/ MSPT techniques. Analytic techniques and computer packages will be used to solve problems facing business managers in decision environments.

This module aims to introduce students to use quantitative methods and techniques for effective decisions—making; model formulation and applications that are used in solving business decision problems.

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4- Intended Learning Outcomes (ILO):

Code	Intended Learning Outcomes
ILO1	Knowledge and understanding - Be able to understand the characteristics of different types of decision-making environments and the appropriate decision making approaches and tools to be used in each type
ILO2	Cognitive skills (thinking and analysis) - Be able to build and solve Transportation Models and Assignment Models
ILO3	Communication skills (personal and academic). - Be able to design new simple models, like: CPM, MSPT to improve decision — making and develop critical thinking and objective analysis of decision problems.
ILO4	Practical and subject specific skills (Transferable Skills) Be able to implement practical cases, by using TORA, Win QSB
ILO5	
ILO6	
ILO7	
ILO8	

- 5- Course Syllabus (24 hours of total synchronized sessions;24 hours of total Recorded Sessions)
 - RS: Recorded Sessions; SS: Synchronized Sessions;

ILO	Course Syllabus	RS	SS	Type	Additional Notes
	Introduction to				
	Operations Research			□ Exercises	
	(OR) Operations			□ Assignments	
ILO1	Research definition and			□ Seminars	
ILOI	origin. Essential features			□ Projects	
	of the OR approach.			□ Practices	
	Quantification of factors.			\Box Others	
	Stages in OR study.				
	Introduction to			□ Exercises	
ILO2	Foundation mathematics			☐ Assignments	
	and statistics Linear			□ Seminars	

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	Programming (LP), LP		□ Projects
	and allocation of		□ Practices
	resources, LP definition,		□ Others
	Linearity requirement		
			☐ Exercises
	Expressing LP problems,		☐ Assignments
ILO3	Limitations or constraints,		□ Seminars
	Maximization Then		□ Projects
	Minimization problems.		□ Practices
			☐ Others
			☐ Exercises
	Linear Programming –		☐ Assignments
ILO4	Graphical Solutions,		☐ Seminars
	Introduction To Graphical		□ Projects
	LP Maximization solution		□ Practices
			☐ Others
	Graphical LP		□ Exercises
	Minimization solution,		☐ Assignments
ILO5	Introduction, Simplex		□ Seminars
ILUS	method definition,		□ Projects
	formulating the Simplex		☐ Practices
	model		☐ Others
			□ Exercises
	Linear Programming –		☐ Assignments
ILO6	Simplex Method for		□ Seminars
	Maximizing.		□ Projects
	Simplex maximizing		□ Practices
			☐ Others
			□ Exercises
	Example containing		☐ Assignments
ILO7	mixed limitations, Duality		□ Seminars
LO7	Theory, The Primal Vs- Dual Solutions		□ Projects
			□ Practices
			☐ Others
			□ Exercises
			☐ Assignments
ILO8	Decision making tree		□ Seminars
			□ Projects
			☐ Practices

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					□ Others	
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6- Assessment Criteria (Related to ILOs)

ISC	Interactive Synchronized Collaboration		Ex	Exams		Rpt	Reports
PF2F	Presentations and Face-to-Face Assessments		PW	W Practice Work			

ILO		Intended Degults		Asse	essment	t Type			
Code	ILO	Intended Results	ISC	PW	Ex	PF2F	Rpt		
ILO1		Absence from lectures and/or tutorials shall not exceed 15%. Students who exceed the 15% limit without a medical or emergency excuse acceptable to and approved by the Dean of the relevant college/faculty shall not be allowed to take the final examination and shall receive a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.							
ILO2									
ILO3									
ILO4									
ILO5									

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ILO6										
ILO7										
ILO8										
7-Practice Tools:										
Tool Name	Description									
Scientific Methods in Management										
8-Main References										
Quantitative Methods for Decision Makers										
Fourth Edition Mik Wisniewsk	İ									

9-Additional References		