

Course E-Syllabus

1	Course title	Quantitative Analysis
2	Course number	1606407
3	Credit hours	3 Credit hours
	Contact hours (theory, practical)	theory
4	Prerequisites/corequisites	Statistical analysis
5	Program title	Public Administration
6	Program code	06
7	Awarding institution	The University of Jordan
8	School	Business
9	Department	Public Administration
10	Level of course	Undergraduate
11	Year of study and semester (s)	2020/2021 First semester
12	Final Qualification	-
13	Other department (s) involved in teaching the course	-
14	Language of Instruction	English
15	Teaching methodology	<input type="checkbox"/> Blended X Online
16	Electronic platform(s)	<input type="checkbox"/> Moodle X Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....
17	Date of production/revision	27-9-2020

18 Course Coordinator:

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19 Other instructors:

Name:
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Name:
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20 Course Description:

This course covers many approaches to solving business problems from management science point of view. Various quantitative techniques are surveyed with an emphasis on the why and how of these types of models as opposed to a detailed theoretical approach. Students develop optimization models which relate to their areas of interest. Spreadsheets are used extensively to accomplish the mathematical manipulations. Emphasis is placed on input requirements and interpretation of results

21 Course aims and outcomes:

A- Aims: This course aims at providing students with a comprehensive knowledge on the concepts related to the quantitative approach, in addition to providing student with a wide range of the models used in this area and the applications of the quantitative techniques in solving problems in organizations..

B- Intended Learning Outcomes (ILOs):

Upon successful completion of this course, students will be able to:

1. Demonstrate the application of models in support of managerial decision making in an enterprise, 2.
- 2.Utilize some of the most commonly used modeling approaches and principles.
3. Develop critical thinking and analytical skills of students in regard to decision making process
- 4.Understand waiting line models
- 5.Demonstrate competence in analysis/development of some common models graphically
- 6.Interpret model results in the context of the business situation and explain in plain language
- 7.Develop students' abilities in estimating techniques

22. Topic Outline and Schedule:

Week	Lecture	Topic	Teaching Methods*/platform	Evaluation Methods**	References
1	1.1	Introduction to QA and Syllabus Review	Lecture, power point presentation	Exam + Participation	The selected references
	1.2	Introduction to Modeling	Lecture, power point presentation, discussion	Exam + Participation	=
	1.3	Introduction to Modeling	Lecture, power point presentation, discussion	Exam + Participation	=
2	2.1	Modeling with Linear Programming	Lecture, power point presentation, discussion	Exam + Participation	=
	2.2	Modeling with Linear Programming	=	Exam + Participation	=
	2.3	Modeling with Linear Programming	=	Exam + Participation	=
3	3.1	Solving Linear Programming Models	=	Exam + Participation	=
	3.2	Solving Linear Programming Models	=	Exam + Participation	=
	3.3	Excercises		Exam + Participation	=
4	4.1	Linear Programming Transportation Models	Lecture, power point presentation, discussion	Exam + Participation	=
	4.2	Linear Programming Transportation Models	=	Exam + P Exam + Participation	
	4.3	Cases			
5	5.1	Shortest Route, Minimal Spanning Tree and Maximal	=	Exam + Participation	=

		Flow Models			
	5.2	Shortest Route, Minimal Spanning Tree and Maximal Flow Models	=		=
	5.3	Excercises			=
6	6.1	Decision Making Models	=	Exam + Participation	=
	6.2	Decision Making Models	=	Exam + Participation	=
	6.3	Decision Making Models	=	Exam + Participation	=
7	7.1	excercises		=	=
	7.2	Quiz		=	=
	7.3	Waiting Line Models	Lecture, power point presentation, discussion	=	=
8	8.1	Waiting Line Models	=	=	=
	8.2	Waiting Line Models	=	=	=
	8.3	Exercises		=+homework	
9	9.1	Mid-term exam			
	9.2				
	9.3	Estimating time and costs	Lecture, power point presentation, discussion	=	=
10	10.1	Estimating time and costs	Lecture, power point presentation, discussion	=	=
	10.2	Estimating time and costs	=	=	=
	10.3	Exercises		=+ homework	
11	11.1	Factors influencing estimates	Lecture, power point presentation, discussion	=	=
	11.2	Estimating time and costs	=	=	=
	11.3	Cases			
12	12.1	Quiz			
	12.2	Causes failure	Lecture, power		=

			point presentation, discussion		
	12.3	Exercise			
13	13.1	Shortest Route, Minimal Spanning Tree and Maximal Flow Models	Lecture, power point presentation, discussion		=
	13.2	Challenges of quantitative approach	=	=	=
	13.3	Exercise			
14	14.1	Exercises			
	14.2	Revision			
	14.3	Revision			
15	15.1	Final exam			
	15.2				
	15.3				

- Teaching methods include: Synchronous lecturing/meeting; Asynchronous lecturing/meeting
- Evaluation methods include: Homework, Quiz, Exam, pre-lab quiz...etc

23 Evaluation Methods:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	Period (Week)	Platform
Mid-term exam	30	Material covered in the first 8 weeks		Microsoft teams
Presentations	4	Starting by the 3 rd week		=
Quizzes	8		Every 3 or 4 weeks	=
Assignments + exercises	8	Selected topics	At the end of the 9 th week	=
Final Exam	50	5 chapters	As determined by the university schedule	Upon the regulations of the UJ
Total	100%			

24 Course Requirements (e.g: students should have a computer, internet connection, webcam, account on a specific software/platform...etc):

This is an online course; thus, access to a modern computer with a reliable, high-speed, Internet connection is required. students must also have sufficient administrative authority on their computer to download, install, and run the necessary software applications

25 Course Policies:

A- Attendance policies: Attendance All students must be active participants in class activities. There is no "excused" absence in this course except that mentioned by the UJ regulations. An absence is an absence, regardless of reason. In on-line courses, attendance is equated to the demonstration of an active, regular presence in the virtual course environment and appropriate progress toward timely assignment completion. An active presence may be shown through student's participation in, and contributions to, on-line class discussions and the Virtual Classroom. Regular attendance and assignment submissions are essential for success. Regular "check-ins" will be conducted and counted toward the course grade

B- Absences from exams and submitting assignments on time: will be treated as stated by the UJ's regulations. In addition, projects and assignments must be completed and submitted by the designated due dates. Late work will not be accepted.

C- Health and safety procedures: as stated by the UJ's regulations

D- Honesty policy regarding cheating, plagiarism, misbehavior: will

E- Grading policy: Credit is earned exclusively by completing the required activities, as assigned, and submitting by the due date, without exception

F- Available university services that support achievement in the course: The university of Jordan provides students technical support in the use of e learning and free Platforms, online library,

26 References:

Textbooks Required:

Taylor, Bernard. Introduction to Management Science, 11th ed., 2013, Person
Anderson, S., Williams, C. An Introduction to Management Science, 13th Edition. 2010. South-Western

27 Additional information: None

Name of Course Coordinator: --Dr Abdel Hakim Akhorshaideh-----Signature: -
----- Date: -----

Head of Curriculum Committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of Curriculum Committee/Faculty: ----- Signature: -----

Dean: -----Signature: -----