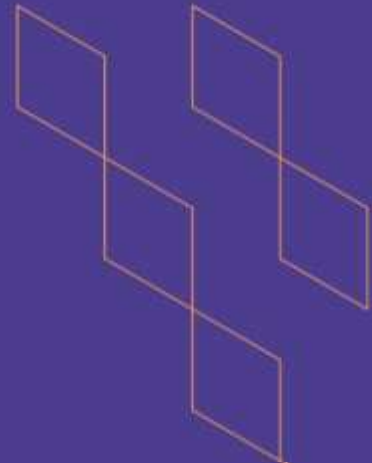




T-104  
2022

## Course Specification



Course Title:	Operations Research in Management
Course Code:	BA4503
Program:	BA Degree in Business Administration
Department:	Business Administration
College:	College of Business
Institution:	Umm Al-Qura University
Version:	2
Last Revision Date:	28/01/2023



## Table of Contents:

Content		Page
A. General Information about the course		3
1. Teaching mode (mark all that apply)		3
2. Contact Hours (based on the academic semester)		3
Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods		4
Course Content		6
		6

No	List of Topics	Contact Hours
1	Modelling with Linear programming	
2	Transportation models	
3	Assignment models	
4	Decision making models	
5	Queuing theory	
6	Simulation	
7	Introduction to Non-linear Programming	
...		
<b>Total</b>		<b>6</b>





<b>A. Students Assessment Activities</b>	
<b>E. Learning Resources and Facilities</b>	
1. References and Learning Resources	7
2. Required Facilities and Equipment	7
<b>F. Assessment of Course Quality</b>	7
<b>G. Specification Approval Data</b>	8





## A. General information about the course:

Course Identification	
1. Credit hours:	4
2. Course type	
a.	University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Track <input type="checkbox"/> Others <input type="checkbox"/>
b.	Required <input checked="" type="checkbox"/> Elective <input checked="" type="checkbox"/>
3. Level/year at which this course is offered:	Level 11
4. Course general Description Operations research helps in solving problems in different environments that needs decisions. The module cover topics that include linear programming, Transportation, Assignment, and CPM technique.	
5. Pre-requirements for this course (if any): BA2501	
6. Co- requirements for this course (if any):	
7. Course Main Objective(s) This module aims to introduce students to use quantities methods and techniques for effective decisions–making; model formulation and applications that are used in solving business decision problems.  - Understanding "linear programming, Transportation, Assignment, Decision theory and Network (CPM) techniques. Then will be used to solve problems facing business managers in decision environments.	

### 1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	32	80%
2.	E-learning		
3.	Hybrid <ul style="list-style-type: none"> <li>• Traditional classroom</li> <li>• E-learning</li> </ul>	8	20%
4.	Distance learning		





## 2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	32
2.	Laboratory/Studio	8
3.	Field	
4.	Tutorial	
5.	Others (specify)	
	<b>Total</b>	<b>40</b>

## B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Theoretical concepts in OR	K1	Lectures. Videos Class work and in class discussions	1- Short tests and quizzes. 2- Homework. 3- Assignments 4- Exams
1.2	Model Construction	K3	Lectures. Videos Class work and in class discussions	1- Short tests and quizzes. 2- Homework. 3- Assignments 4- Exams





Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.3	OR Applications in Business decision	K2	Lectures. Videos Class work and in class discussions	1- Short tests and quizzes. 2- Homework. 3- Assignments 4- Exams
2.0	Skills			
2.1	Applying the models in business decision	S5	Case studies Homework. Dialogues and discussions. Lectures	1- Short tests and quizzes. 2- Homework. 3- Assignments 4- Exams
2.2	Understanding and evaluating optimization	S5	Looking in the internet. Using computers and software's to understand and analyze data and using simulation programs. Fieldwork	1- Short tests and quizzes. 2- Homework. 3- Assignments 4- Exams
3.0	Values, autonomy, and responsibility			
3.1	Having ability to work within a group, and be responsible for own assigned work, duties and roles in the workgroup properly, improving students' analyzing skills.	V3	Divide students in groups and change the leadership of groups each period	Group Presentation Assess each group achievements
.3.2	Work effectively in groups and exercise leadership when appropriate	V2	Group presentation, group research assignment, group discussions	Evaluation of case analysis in Teams, class presentations, Group Project evaluation &





Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
				feedback on discussions
3.2	Demonstrate acceptance of constructive criticism.	V3	Group presentation, group research assignment, group discussions	Evaluation of case analysis in Teams, class presentations, Group Project evaluation & feedback on discussions

## C. Course Content

No	List of Topics	Contact Hours
1	Modelling with Linear programming	9
2	Transportation models	6
3	Assignment models	3
4	Decision making models	6
5	Queuing theory	5
6	Simulation	5
7	Introduction to Non-linear Programming	6
...		
<b>Total</b>		<b>40</b>



## B. Students Assessment Activities

### E. Learning Resources and Facilities

#### 1. References and Learning Resources

Essential References	Taylor, B. W., Bector, C. R., Bhatt, S. K., & Rosenbloom, E. S. (2013). <i>Introduction to management science</i> . Pearson.
Supportive References	
Electronic Materials	
Other Learning Materials	

#### 2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom, lab
Technology equipment (projector, smart board, software)	Data Show, Smart Board , , software
Other equipment (depending on the nature of the specialty)	None

### F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Chair, Students, External Stakeholders and quality Department and committee	Open discussions with the students Anonymous surveys
Effectiveness of students assessment	Chair, Students, External Stakeholders and quality Department and committee	Checking marking by the students themselves if it's possible Using the help of other members in reviewing the assignments/exams
Quality of learning resources	Chair, Students, External Stakeholders	Review of course portfolios





Assessment Areas/Issues	Assessor	Assessment Methods
	Department and quality committee	Instructor assessment by students
The extent to which CLOs have been achieved	Chair, Students, External Stakeholders Department and quality committee	Course specifications are periodically reviewed at the departmental level. Courses are updated periodically and compared to the benchmark standards.
Other		

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

## G. Specification Approval Data

COUNCIL /COMMITTEE	BA DEPARTMENT
REFERENCE NO.	
DATE	28/01/2023

