



Future Academy
Higher Future Institute for Specialized Technological Studies

Course Specification

1- Course information:

Course Code:	414
Course Title:	Quantitative methods
Year/level	4 th
Academic Programs	Business Administration Program (B.Sc.)
Contact hours/ week	Theoretical 3 hrs / Tutorial 2 hrs

2- Course aims:

This course aims to provide students with Determine a real-world problem in business and create an mathematical model to describe it, Recognize the mathematical techniques required to solve these different models using linear programming models, transportation models, assignment models, time series and quality control models.

3- Intended learning outcomes of the course (ILOs):

a- Knowledge and understanding:

On successful completion of this course, the student should be able to:

A1- Understand the quantitative methods imply.

a2- Recognize the different mathematical models of quantitative methods

b- Intellectual skills:

On completing this course, the student should be able to:

B1- Analyze an optimal solution and techniques.

B2- Analyze the basics Principles of creative thinking using quantitative methods models.

c- Professional and practical skills:

At the end of this course, the student will be able to:

C1- Perform analytical studies about applications of Quantitative methods.

C2- Use appropriate scientific methods and proper tools to solve problems using modeling techniques.

d- General and transferable skills:

On successful completion of this course, the student should be able to:

d1- Manage time effectively.

d2- Work in a team and manage work groups.

d3- Develop and enhance work methods continuously.

4- Course contents

Week No.	Topics/units	Number of hours		ILO's
		Lecture hours	Tutorial hours	
1	Introduction to Operation Research	3	2	a1, a2, b1, b2, c1, d1
2	Solve of Linear Programming Problem (graphically, Mathematically)	9	6	a1, a2, b1, b2, c2, d1, d2,d3
3	Transportation Models	6	4	a2, b1, b2c1, c2, d1, d2, d3
4	Assignment Models	9	8	a2, b1, b2, c1, c2, d1, d2
5	Revision + Quiz 1	3	2	a1, a2, b1, b2
6	Midterm Exam	3	2	a1, a2, b1, b2
7	Revision + Quiz 2	3	2	a1, a2, b1, b2

5- Teaching and learning methods

Methods	ILO's																			
	a 1	a 2	a 3	a 4	a 5	b 1	b 2	b 3	b 4	b 5	c 1	c 2	c 3	c 4	c 5	d 1	d 2	d 3	d 4	d 5
Lectures	√	√				√					√	√				√		√		
Practical sections/Tutorials																				
Self-learning	√	√				√	√										√	√		
Assays and reviews						√	√					√					√	√		
Discussion groups																				
Problem-solving																				
E-learning																				
Blended learning																				

6- Teaching and learning methods for Low-achieving students

- Extra teaching hours for those who need help
- More quizzes to assess their ability for understanding the course
- Encourage the team work for those students with other advanced ones to increase their participation and understanding

7- Student assessment

Assessment method	Time	Grade weight (%)	Week	ILOs
Course Work (Tutorial Exercise and Assignments)		10	Every week	a1, a2, b1, c2, d1, d2, d3
Quiz 1	1	10	Week#4	a1, a2, b1, b2
Mid-term exam	1	20	Week#7	a1, a2, b1, b2
Quiz 2	1	10	Week#11	a1, a2,a3,b3 b1, b2
Final Written exam	2	50	----	a1, a2,b3, b1, b2,a4

8-List of references

8.1. Student notebooks:

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8.2. Essential textbooks:

“Operations Research: An Introduction”, Taha, H.A., Prentice Hall of India Private Limited, New Delhi, 2005.

8.3. Recommended textbooks:

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8.4. Journals, Periodical and Reportsetc.

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8.5. Websites

<https://www.coursera.org/courses?query=operations%20research>

Course Coordinator: Asocc. Prof. Dr. Amira Eldesokey

Head of department: Associate Professor Dr.Mohammed Elbaz

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