

Course Description

Operations Research	
Scmath 3409	
Second Semester 2024/2025	
12/10/2024	
Official working hours / face-to-face lectures	
60 hours / 4 units	
Name: Eng. Ali Kadhem Yaqoob Email: ali.kazem@uoanbar.edu.iq	
methods of operations research · Knowledge of linear programming and ways to solve it · Networking knowledge	Course Objectives
1. Managing the lecture in an applied manner linked to the reality of daily life to attract the student to the topic of the lesson without moving away from the core of the topic so that the material is flexible and understandable.	Strategy

2. Assigning the student some group activities and duties. 3. Allocate a percentage of the grade for daily assignments and tests.					
Evaluation method	Learning method	Unit or subject name	Required Learning Outcomes	Hours	Week
Questions & Discussion	Theoretical/Presence	1- Introduction to Operations Research 2- Evolution of operations research 3- Stages of solving the problem of operations research	Identify operations research and what it means	4	First
Questions, discussion and exam	Theoretical/Presence	1- The concept of linear programming 2- Types of mathematical models 3-	Linear Programming	4	Second
Questions & Discussion	Theoretical/Presence	1- General formula 2- Legal formula 3- Standard formula	Linear programming model formats	4	Third
Instantaneous exam	Theoretical/Presence	Graphical method	Linear programming solution methods	4	Fourth
Questions & Discussion	Theoretical/Presence	Simplex method	Linear programming solution methods	4	V

Questions & Discussion	Theoretical/Presence	1- The concept of a binary problem 2- Corresponding model	Binary problem	4	Sixth
Questions & Discussion	Theoretical/Presence	1- The concept of the transport model 2- Transport model balancing 3- Finding the basic acceptable solution	Transport Forms	4	Seventh
Monthly exam	Came	First month exam		4	Eighth
Questions & Discussion Instantaneous exam	Theoretical/Presence	1- Northwest Corner Method 2- The least expensive way possible	Transport Forms	4	Ninth
Questions, discussion and exam Annie	Theoretical/Presence	Vogel method	Transport Forms	4	X
Questions & Discussion	Theoretical/Presence	Optimization of the solution	Transport Forms	4	Eleventh

Questions, discussion and real-time exam	Theoretical/Presence	1- Classification of decisions and factors affecting them 2- Circumstances or situations of decision-making	Decision theory and decision making	4	Twelfth
Questions & Discussion	Theoretical/Presence	1- Project Management 2- Business Networking Methods 3- Rules for building and drawing business networks	Business Networks	4	Thirteenth
Monthly exam	Came	Second month exam		4	Fourteenth
Questions & Discussion	Theoretical/Presence	1- Share matrix 2- Transformations Matrix	Markov's analysis	4	Fifteenth
<p>Monthly exams 40%</p> <p>Daily exams and assignments 10%</p> <p>Final Exam 50%</p>					

<p>1- Dr. Mohamed Badawi "Operations Research Part One" 2022</p> <p>2- Moulay Boualem "Applications in Operations Research" 2016</p> <p>3- Dr. Ahmed Hatem Abdullah "Operations Research" 2018</p> <p>4- Dr. Dalal Sadiq Mustafa, Dr. Hamid Nasser Hameed "Operations Research" 2008</p> <p>5- Richard Brutson, Operations Research, 1988</p> <p>6- Abd Diab Jazaa, Operations Research, University of Baghdad, 1985</p>	<p>Required textbooks (methodology, if any)</p>
	<p>Main references (sources)</p>
<p>None</p>	<p>Recommended supporting books and references (scientific journals, reports...)</p>
<p>None</p>	<p>Electronic references, websites</p>