

Ministry of Higher Education and Scientific Research
Scientific Supervision and Evaluation Authority
Department of Quality Assurance and Academic Accreditation

Academic Program Description Form for Colleges and Institutes

University: Heir of the Prophets "pbuh"

Faculty/Institute: Management and Economics

Scientific Department: Accounting

File filling date: 28/ 2 /2025

Signature: Signature:

Head of Department Name: Scientific Associate Name :

Date: Date:

Instructor: Eng. Hussein Nasser Sharmoukh

Check the file before

Division of Quality Assurance and University Performance

Name of the Director of the Quality Assurance and University

Performance Division:

Date:

Signature:

Ratification of the Dean

Course Description Form

Accounting Operations Research in English

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, proving whether he or she has made the most of the available learning opportunities. It must be linked to the description of the programme.

College of Administration and Economics / Warith Al-Anbiya University "AS"	1. Educational institution
accounting	2. Scientific Department / Center
Accounting Operations Research in English	3. Course Name/Code
Face-to-face attendance in the classroom	4. Available Attendance Forms
Academic Year: 2024-2025	5. Semester / Year
60 hours theoretical	6. Number of Credit Hours (Total)
28 / 2 / 2025	7. The history of preparation of this description
8. Course Objectives:	
<p>This course aims to achieve the following:</p> <ul style="list-style-type: none">- Introducing the student to the concepts and methods of operations research and their applications in the field of accounting and financial management.- Enable the student to formulate and solve mathematical models for accounting problems and make optimal financial decisions.- Develop financial analysis and planning skills using tools such as linear programming, network analysis, and decision theory.	
9. Course Outcomes and Methods of Teaching, Learning and Assessment	

<p>:A- Knowledge and Understanding</p> <ul style="list-style-type: none"> Understand the basic principles of linear programming and its applications in accounting..
<p>In. Subject-specific skills:</p> <p>1 - Use quantitative methods such as the graph method and the simplified method (simplex) to solve accounting problems. 2- Analyze and interpret the results of mathematical solutions to make effective accounting decisions.</p> <p>3- Dealing with customization and transportation problems using appropriate mathematical models.</p>
<p>C. Thinking skills:</p> <p>1. The ability to apply operations research models in making financial decisions.</p> <p>2 - Analysis and interpretation of the results of mathematical models to solve accounting problems.</p>
<p>I</p>
<p>.D:Evaluation methods</p> <p>(1 Written exams (2 monthly exams) (40 marks)</p> <p>(2 Oral and paper tests (daily exams) (5 marks)</p> <p>3) Attendance, Participations and Assignments (5 marks)</p>
<p>Teaching and learning methods</p>
<p>1- Theoretical lectures: presenting the concepts and theoretical foundations of the course.</p> <p>2- Practical applications: solving problems and exercises using operations research software.</p> <p>3- Case Study Analysis: Applying quantitative models to realistic accounting problems.</p> <p>4- Classroom discussions: Enhancing understanding through interactive discussions among students.</p> <p>5- Research Projects: Preparing reports on the applications of operations research in accounting.</p>
<p>Evaluation methods</p>
<p>1- Oral questions and class participations.</p> <p>2- Practical tests.</p> <p>3- Monthly, quarterly and final exams.</p>

1) Infrastructure	
Decision Making and Operations Research Techniques in Accounting	A) Required textbooks
B) Main references (sources)	

Kamal Nasser	1) Recommended books and references (scientific journals, reports.....)
https://www.researchgate.net/	2) Electronic ,referenceswebsites

2) Course Structure

Evaluation method	Method of education	Subject / Chapter	Required Learning Outcomes	Hours	Week
daily	Lecture	Introduction to Operations Research and its Applications in Accounting	Understand the importance of operations research in solving accounting and management problems	3	1
daily	Lecture	Linear programming: basic concepts and mathematical formulation	Ability to formulate linear programming problems in the form of mathematical equations	3	2
daily	Lecture	Linear programming: basic concepts and mathematical formulation	distinguish between different formats of linear programming and choose the most appropriate one	3	3
examination	examination	Graph method for solving linear programming problems	use the graph as a tool to solve linear programming problems with two variables,	3	4
daily	Lecture	Simplified Method (Simplex)	Apply the simplex algorithm to solve multivariate linear programming problems	3	5
First month exam					
daily	Lecture	The major M method in solving linear programming problems	Dealing with issues with equality constraints or industrial variables using the M grand method	3	6
daily	Lecture	The binary problem in linear programming	Analyze the relationship between the core issue and the bilateral issue and use it to improve solutions	3	7
examination	examination	Transport models in operations research	Understand the transport model and	3	9

			use different methods to solve optimal distribution problems		
daily	Lecture	Customization model and customization problem	Distinguish between the transfer problem and the customization problem and choose the appropriate method of solution	3	10
Second month exam					
daily	Lecture	Methods for solving the customization problem	Using allocation algorithms such as the Hungarian method to solve resource allocation problems	3	11
daily	Lecture	Organizational Change	Integrate linear programming with accounting data for cost analysis and decision-making	3	12
daily	Lecture	Review and practical applications on all previous models	Review .	3	13
	Written test	Final Exam	Exam Includes	3	14

3) Course Development Plan

- 1- Updating the content according to the latest developments in operations research and its applications in accounting.
- 2- Integrate the use of specialized software in solving financial and accounting problems.
- 3- Developing practical case studies in cooperation with economic institutions and accounting companies.

Eng. Hussein Nasser Al-Jabr
College of Business and Economics
– Department of Accounting
28- 2-2025