



جامعة الزيتونة الأردنية
Al-Zaytoonah University of Jordan
كلية الأعمال
Faculty of Business

"الريادة والأبداع في الأعمال"
"Entrepreneurship and Innovation"

"عراقة وجودة"
"Tradition and Quality"

Detailed Course Description - Course Plan Development and Updating Procedures/ Banking and Finance Department	QF05/0408-3.0E
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Faculty	Faculty of Business	Department	Finance and banking
Course number	0503146	Course title	Mathematics for Business and Economics
Number of credit hours	3	Pre-requisite/co-requisite	---

Survey of mathematical applications to economic theory and analysis. Designed for students with limited mathematical background.

	Course goals and learning outcomes
Goal 1	1– The use of Mathematical techniques in Economics, Administration & finance
Learning outcomes	1.1 The student should know how to use the basics of mathematics in business 1.2 Giving students the mathematical skills
Goal 2	2– Determination of Demand & supply functions.
Learning outcomes	2.1 The student should employ the mathematical analysis of the economic theory data. 2.2 Students should be able to use mathematical analysis of economic theory.
Goal 3	3– the rules of Derivatives
Learning outcomes	3.1 Students should be able to identify the rules of Derivatives. 3.2 Students should understand using the rules of derivation to reach the optimal solution.
Goal 4	4– How can find Equilibrium in the market.
Learning outcomes	4.1 Solve problems related to find Equilibrium in the market. 4.2 Students should be able to Use optimization to maximize profit and minimization cost
Goal 5	How can find optimization
Learning outcomes	5.1 Students should be able to find optimization without constraints 5.2 Students should be able to find optimization with constraints
Goal 6	the rules of integration
Learning outcomes	6.1 Students should be able to identify the rules of integration 6.2 Students should be use integration in economics applications
Goal 7	the rules of matrices
Learning outcomes	7.1 Students should be able to identify the rules of matrices 7.2 Students should be use the matrices in finding solution for economic models



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Textbook	1- Jasqus, I (2009). Mathematics for Economics & Business.6 th.Edt. Prentice Hall: Harlow
Supplementary references	1.- 1-Holden K. and Pearson A.W (1992). "Introductory Mathematics for Economics & Business. 2.- 3.-

Course timeline				
Week	Number of hours	Course topics	Pages (textbook)	Notes
01	1	-Mathematical	32 - 5	(1) goal
	1	-Linear functions		
	1	-Application & exercises		
02	1	-Economical application for linear functions	74 - 33	2) goal (4 +
	1			
	1			
03	1	- Non- linear functions	102 - 89	(1) goal
	1	- Application & exercises		
	1			
04	1	- Economical applications for non- linear functions	147 - 103	2) goal (4 +
	1			
	1			
05	1	- Derivatives	213 - 191	(3) goal
	1	- Application & exercises		
	1			
06	1	- Using derivatives in economical applications	250 - 214	2) goal (4 +
	1			
	1			
07	1	- Optimization	269 - 251	(3) goal
	1			
	1			
08	1	-Partial derivative	281 - 270	3) goal



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	1 1	- Application & exercises		(4 +
09	1 1 1	- Using partial derivative in economical applications - Unconstrained optimization	294 - 293	(4) goal
10	1 1 1	- Constrained optimization	295 - 368	
11	1 1 1	- Constrained optimization	295 - 368	
12	1 1 1	-Matrices -Algebraic operations for matrices - Determinants	444 - 434	
13	1 1 1	- Matrices inverse - cramer's rule for solving a system of equations	456 - 445	
14	1 1 1	-Using matrices in economical applications	381 - 369	
15	1 1 1	- Integrations - Application & exercises	394 - 382	
16	1 1 1	- Using Integration in economical applications	394 - 382	

Theoretical course evaluation methods and weight	Participation = 10% First exam 20% Second exam 20% Final exam 50%	Practical (clinical) course evaluation methods	Semester students' work = 50% (Reports, research, quizzes, etc.) Final exam = 50%
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Approved by head of department		Date of approval	
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Extra information (to be updated every semester by corresponding faculty member)

Name of teacher		Office Number	
Phone number (extension)		Email	_____@zug.edu.jo
Office hours			