

University of Jordan	
Faculty of Business	
Department	Business Economics
Programme	BCs Business Economics
Module title / number	Mathematical Economics 1607341
Pre-requisite	1607115
Module description	This course concerns with studying mathematical tools and techniques that is necessary to analyze economic models. The course deals mainly with how to determine the optimal points (maximum and minimum).
Aims	1- provide students with quantitative methods. 2- Provide students with suitable knowledge to deal with economic models.
Intended learning outcomes (ILOs)	
Upon the completion of this course, students should be able to achieve the following:	
1- knowledge and understanding	1- understanding mathematical analysis tools. 2- Learning how to express economic relations by mathematics. 3- Understanding and analyzing equations with many variables.
2- analytical and thinking skills	1- be able to use mathematical tools to express economic theory in mathematical form. 2- be able to study economic problems by mathematics.
Teaching and learning methods	
	3 hours lecture per week
Assessment methods	
	Mid-term exam 30%. Second exam and participation 20% Final exam 50%
Academic Honesty	
	Student effort by himself will determine his achievement , so student will face university regulations for any attempt to cheat in exams or in assignments.
Main textbook(s) and additional readings	
	1 - الاقتصاد الرياضي : مدخل كمي تحليلي ، د. عدنان كريم نجم الدين ، 2003 2 - أساسيات الاقتصاد الرياضي ، د. حسين بخيت ، د. غالب الرفاعي ، 2003 Introduction to Mathematical Economics , Edward T . Dowling

Detailed lecture schedule			
	Week	Material	

	1	introduction	
	2	Linear equations.	
	3	Solving linear equatios	
	4	matrix	
	5	matrix	
	6	derivative	
	7	Max and min points (one variable)	
	8	Midterm exam	
	9	Exponential and logarithmic functions	
	10	Implicit and total derivative	
	11	Partial derivative	
	12	Max and min points for multivariable functions.	
	13	Max and min points for multivariable functions.	
	14	integration	
	15	Linear programming	
	16	Final exam	