

Hashemite University	 	Principles of Mathematics (110108102) 3 Credit Hours
Faculty of Science		Pre-requisite: ...
Department of basic sciences support		First Semester 2014/2015

Course Syllabus

Course Information	
Lecture's Time	
Lecture Room	
Instructor	Mohammad Alkhalaileh
Office Location	IT 224
Office Hours	11– 12 Sunday, Tuesday and Thursday 9:30-11 Monday and Wensday
Text Book : Mathematics for Economics and Business, Ian Jacques, Pearson Education Limited, 6 th edition, 2009.	
References(s)	Calculus for management, social and life sciences, D. Barkey, Saunders College Publishing 2 nd edition, 1990.

Grading Policy:	
1 st Exam	25%
2 nd Exam	25%
Final Exam	50%

Course Objectives
To introduce the necessary mathematical concepts and techniques for the students of economics and business to enable them to face and solve problems in the future studies that need mathematics.
Teaching and Learning Methods
<ul style="list-style-type: none"> • Introducing new definitions and using examples to illustrate new concepts. • Giving examples and applications for some theorems and corollaries. • Giving a sample assignment for each section. • Discussing some of the students' solutions of some sample assignments. • Making a discussion of the problems of each exam.

Course Contents

Week	Section in Text	Topics
1	1.1	Introduction to algebra
	1.2	Further Algebra
	1.3	Graphs of linear equations
2	1.4	Algebraic solution of simultaneous linear equations
	1.5	Supply and demand analysis
3	1.6	Transposition of formulae
	1.7	National income determination
4	2.1	Quadratic functions
	2.2	Revenue, cost and profit
5	2.3	Indices and logarithms
	2.4	The exponential and natural logarithm functions
6	3.1	Percentages
	3.2	Compound interest
7	3.3	Geometric series
	4.1	The derivative of a function
8	4.2	Rules of differentiation
	4.3	Marginal functions
9	4.4	Further rules of differentiation
	4.6	Optimization of economic functions
10	4.7	Further optimization of economic functions
	4.8	The derivative of the exponential and natural logarithm functions
11	5.1	Functions of several variables
12	6.1	Indefinite integration
	6.2	Definite integration
13	7.1	Basic matrix operations
14	7.2	Matrix inversion
15	7.3	Cramer's rule