



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Economics and Financial Mathematics							
Course Code		EFN528		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	5	Workload	125 (<i>Hours</i>)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		To introduce the basic mathematical tools to the students and also to provide the ability of systematic and analytic approach to the problems.							
Course Content		Algebra, Equations, Induction, Functions with One Variable, General Properties of Functions and Graphs, Limit and Continuity, Simple Rules of Deriving, Exponential and Logarithmic Functions, Optimization, Plot the Graphs of Functions, Economic Applications.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Individual Study, Problem Solving					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Sydsaeter K. ve Hammond P. (2004), Ekonomik Analiz İçin Temel Matematik, Turhan Kitabevi, Ankara
2	Chiang, A. C. (2003), Matematiksel İktisadın Temel Yöntemleri, Teori Yayınları, Ankara

Week	Weekly Detailed Course Contents	
1	Theoretical	Discussion About the Function of Mathematics (An Example)
2	Theoretical	Algebra: Numbers, Inequalities and Absolute Value
3	Theoretical	Equations: Linear and Nonlinear Equations, Parametric Equations, Economic Equilibrium, Partial Market Equilibrium
4	Theoretical	Functions with One Variable: Polynomial, Exponential, Logarithmic and Trigonometric functions, Power and Absolute Value Functions
5	Theoretical	Functions with One Variable: Polynomial, Exponential, Logarithmic and Trigonometric functions, Power and Absolute Value Functions
6	Theoretical	General Properties of Functions and Graphs
7	Theoretical	Comparative Statistics and Derivative: Slope, Increasing and Decreasing Functions, Limit and Continuity
8	Intermediate Exam	Midterm Exam
9	Theoretical	Comparative Statistics and Derivative: Simple Rules of Deriving Usage at Comparative Statistics
10	Theoretical	Optimization: Special Type of Equilibrium Analysis, Extremum Values, Second and Higher Order Derivatives
11	Theoretical	Optimization: Special Type of Equilibrium Analysis, Extremum Values, Second and Higher Order Derivatives
12	Theoretical	Uncertainty, Limit and Asymptotes
13	Theoretical	Graphs of Functions
14	Theoretical	Graphs of Functions
15	Theoretical	Several applications
16	Final Exam	final

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	4	3	98
Midterm Examination	1	10	1	11



Final Examination	1	14	2	16
Total Workload (Hours)				125
[Total Workload (Hours) / 25*] = ECTS				5
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	To be able to compose functions utilizing from certain economic variables
2	To be able to constitute systems of equation (economic model) by means of these functions
3	To be able to use mathematical tools such as derivative and limit
4	To be able to interpret and analyse economic optimisation processes
5	Students will be able to explain the relationships between facts with an analytical structure

Programme Outcomes (Economics and Finance Interdisciplinary Master)

1	To be able to use the basic concepts in the field of economics and finance correctly
2	To be able to comprehend philosophical, social, historical and psychological principles influencing economics and finance
3	To be able to analyze economical and financial events theoretically and empirically
4	To be able to evaluate any economical and financial problem in accordance with scientific principles
5	To be able to prepare solutions for an economical or financial problem cooperatively in accordance with principles and criteria
6	To be able to follow contemporary implementations, and national and international academic publications
7	To be able to prioritize scientific methods and ethical principles in economics and finance while considering and implementing field specific professional issues
8	To be willing to do scientific research in the field of economics and finance
9	To be able to create value for economics and finance profession as a professional identity

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5
P1	3	3	4	4	4
P2	4	4	3	3	5
P3	4	3	4	2	4
P4	3	4	3	4	3
P5	4	3	4	3	4
P6	3	4	3	4	5
P7	4	3	2	2	4
P8	4	4	4	3	3
P9	3	4	3	4	4

