



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Economics and Financial Mathematics II							
Course Code		EFN518		Couse 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 teach how to implement economic cases by using mathematical methods and interpret what results mean economically.							
Course Content		Dynamism and Integration: The Indefinite Integral, Area and Definite Integrals, Partial Integration, Various Applications of Integration, Differential Equations, Financial Issues: Interest Rates and Present Value, Multivariate Functions, Comparative Statics, Multivariate Optimization, Constrained Optimization, Matrix and Vector Algebra, Determinants and Matrices.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation)					
Name of Lecturer(s)									

Assessment Methods and Criteria

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

Recommended or Required Reading

1	Stephen A. Ross, Randolph W. Westerfield, Bradford D. Jordan (2008). Corporate Finance Fundamentals 8th ed. McGraw-Hill.
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Week	Weekly Detailed Course Contents	
1	Theoretical	Antiderivatives and the Rules of Integration, Integration by Substitution
2	Theoretical	Finding Areas by Integration, the Definite Integral
3	Theoretical	Integration by Parts
4	Theoretical	Improper Integrals and Applications to Integral
5	Theoretical	Differential Equations
6	Theoretical	Financial Issues: Interest Rates and Present Value I
7	Theoretical	Financial Issues: Interest Rates and Present Value II
8	Intermediate Exam	Mid-term
9	Theoretical	Functions of Several Variables
10	Theoretical	Functions of Several Variables
11	Theoretical	Comperative Static
12	Theoretical	Optimisation of Functions of Several Variables
13	Theoretical	Constraint Optimisation
14	Theoretical	Matrixes and Vectors
15	Theoretical	Matrixes and Determinants
16	Final Exam	Final

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	3	70
Individual Work	7	2	2	28
Midterm Examination	1	10	1	11
Final Examination	1	15	1	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 use integration as a mathematical and an economic tool
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2	To be able to constitute basic knowledge about financial issues
3	To be able to apply functions of several variables to economic conditions and to make optimisation of functions of several variables
4	To be able to apply matrixes and vectors to systems of equations with functions of several variable
5	To be able to interpret and analyse economic optimisation processes

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	3	4
P2	4	4	3	5	3
P3	4	4	3	4	3
P4	4	5	3	4	3
P5	3	5	5	4	3
P6	3	4	5	4	3
P7	3	4	4	4	3
P8	3	4	4	5	5
P9	3	4	4	5	4

