

BUSINESS MATHEMATICS II

1	Course Title:	BUSINESS MATHEMATICS II
2	Course Code:	ISL1402
3	Type of Course:	Compulsory
4	Level of Course:	First Cycle
5	Year of Study:	1
6	Semester:	2
7	ECTS Credits Allocated:	5.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Dr. Öğr. Üyesi Burcu AVCI ÖZTÜRK
15	Course Lecturers:	Doç. Dr. Gül EMEL
16	Contact information of the Course Coordinator:	bavci@uludag.edu.tr Tel: 0224 29 41157
17	Website:	
18	Objective of the Course:	To develop analytical thinking, solution producing to more complex problems and result evaluating skills of the students. And to provide a strong quantitative basis for the rest of the program courses.
19	Contribution of the Course to Professional Development:	With the mathematical solutions of different types of business problems, business mathematics contributes to the decision making activities of all kinds of business related professions.
20	Learning Outcomes:	
	1	To be able to state business problems with multi-variable functions.
	2	To be able to optimize the mathematical model of the problem.
	3	To be able to apply integral rules to business problems
	4	To be able to do basic calculations with matrices
	5	To be able to solve linear equation systems and their applications to business problems.
	6	To be able to optimize the matrix models with different techniques
	7	To be able to make economic evaluations with the results of the model
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21	Course Content:	
	Course Content:	
Week	Theoretical	Practice
1	Use of Marginal Cost and Marginal Revenue functions in businesses.	

2	Use of the derivative in optimization (Maximum profit, maximum revenue, minimum cost)			
3	Multi-variable functions, Derivatives of multi-variable functions and partial derivative rules			
4	Multivariable marginal functions			
5	Optimization of multi-variable revenue, profit and cost functions			
6	Constrained optimization and lagrange multipliers in production, utility and other business functions			
7	Description and rules of integral and indefinite integral			
8	Definite integral, producer and consumer surplus			
9	Business applications of integral calculations			
10	Definition of determinants, calculation of inverse matrix with Co-factors and determinants			
11	Definition of determinants, calculation of inverse matrix with Co-factors and determinants			
12	Gauss elimination method, Solving linear equations with Gauss elimination method and inverse matrix			
13	Solving linear equations with Cramer Method			
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical	Materials:	Sosyal Bilimlerde Matematik, Ezgi Kitabevi, Bursa, 2010. * Mustafa Seviiktekin, Zehra Baskaya, Matematiksel	3.00	3.00
Practicals/Labs		0	0.00	0.00
Self study and preperation		Bursa, 2010. * Bülent Kocbu, İşletme Matematiği, Beta Yayınevi	4.00	56.00
Homeworks		0	0.00	0.00
Projects		* Ahmet Ozturk, Matematiksel Analize Giriş, Ekin Kitabevi, Bursa, 1993	0.00	0.00
Field Studies		0	0.00	0.00
25	Assesment	1	25.00	25.00
Others		0	0.00	0.00
Final Exams		1	30.00	30.00
Midterm Exam		1	40.00	40.00
Total Work Load				153.00
Total work load/ 30 hr				5.10
Home work-project		0	0.00	
ECTS Credit of the Course				5.00
Final Exam		1	30.00	
Total		2	100.00	
Contribution of Term (Year) Learning Activities to Success Grade		40.00		
Contribution of Final Exam to Success Grade		60.00		
Total		100.00		
Measurement and Evaluation Techniques Used in the Course		Multiple choice/Written exam		
24	ECTS / WORK LOAD TABLE			

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	2	4	3	2	1	3	3	3	5	5	1	1	0	0	0	0
ÖK2	2	4	3	2	1	3	3	3	5	5	1	1	0	0	0	0
ÖK3	2	3	3	2	1	2	3	3	5	4	1	1	0	0	0	0
ÖK4	2	4	3	2	1	3	3	3	5	5	1	1	0	0	0	0
ÖK5	2	4	3	2	1	3	3	2	5	4	1	1	0	0	0	0
ÖK6	2	4	3	2	1	3	3	2	5	4	1	1	0	0	0	0
ÖK7	3	4	3	2	1	4	4	4	5	5	1	1	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low		2 low			3 Medium			4 High			5 Very High				