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:	Doç. Dr. GÜL EMEL
15	Course Lecturers:	Yrd. Doç. Dr. Gül EMEL Öğr.Gör.Dr.Burcu AVCI ÖZTÜRK
16	Contact information of the Course Coordinator:	ggokay@uludag.edu.tr Tel: 0224 29 41055
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:	
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	Multi-variable functions	
2	Derivatives of multi-variable functions and partial derivative rules	
3	Optimization of multi-variable functions	

4	Constrained optimization and Lagrange multipliers applications	
5	Business applications of multi-variable functions	
6	Description and rules of integral and indefinite integral	
7	Definite integral and area calculation with integral (Midterm Exam)	
8	Business applications of integral	
9	Introduction to matrix algebra	
10	Definition of determinants, calculation of inverse matrix with Co-factors and determinants	
11	Calculation of inverse matrix with Gauss elimination method, linear equations	
12	Solving linear equations with Gauss elimination method and inverse matrix	
13	Solving linear equations with Cramer Method	
14	Business applications of matrices	

22	Textbooks, References and/or Other Materials:	* Mustafa Aytaç, Mustafa Sevüktekin, Erkan Işığıçok, Sosyal Bilimlerde Matematik, Ezgi Kitabevi, Bursa, 2010. * Mustafa Sevüktekin, Zehra Başkaya, Matematiksel Analiz: İşletme ve Ekonomi Uygulamaları, Dora Yayıncılık, Bursa, 2010. * Bülent Kobu, İşletme Matematiği, Beta Yayınevi.

Activites		Number	Duration (hour)	Total Work Load (hour)
23	Theoretical Assesment	14	3.00	42.00
	Practicals/Labs	0	0.00	0.00
	Self study and preperation	14	4.00	56.00
	Homeworks	0	0.00	0.00
	Projects	0	0.00	0.00
	Field Studies	0	0.00	0.00
	Midterm exams	1	25.00	25.00
	Others	0	0.00	0.00
	Final Exams	1	30.00	30.00
	Total Work Load			178.00
	Total work load/ 30 hr			5.10
	ECTS Credit of the Course			5.00

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	Midterm Exam	1	40.00														
	Quiz	0	0.00														
	Homework assignments	0	0.00														
	Contribution of Term (Year) Learning Activities to Success Grade		40.00														
	Contribution of Final Exam to Success Grade		60.00														
	Total		100.00														
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	0	3	3	3	5	5	1	0	0	0	0	0
ÖK2	2	4	3	2	0	3	3	3	5	5	1	0	0	0	0	0
ÖK3	2	3	3	2	0	2	3	3	5	4	1	0	0	0	0	0

ÖK4	2	4	3	2	0	3	3	3	5	5	1	0	0	0	0	0
ÖK5	2	4	3	2	0	3	3	2	5	4	1	0	0	0	0	0
ÖK6	2	4	3	2	0	3	3	2	5	4	1	0	0	0	0	0
ÖK7	3	4	3	2	0	4	4	4	5	5	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**