BUSINESS MATHEMATICS II

1	Course Title:	BUSINESS MATHEMATICS II	
2	Course Code:	IIZ1402	
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:	No	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Dr. Ögr. Üyesi ŞÜKRÜ DOKUR	
15	Course Lecturers:	Dr.Kadir Yasin Eryiğit	
16	Contact information of the Course Coordinator:	Dr.Kadir Yasin Eryiğit Uludağ Üniversitesi İktisadi ve İdari Bilimler Fakültesi Ekonometri Bölümü 16059 Gorukle/Bursa Turkey Telefon: +90 224 2941135 Fax: +90 224 2941003	
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
		8	
		9	
		10	
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	
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:	1. Mustafa Aytaç, Mustafa Sevüktekin, Erkan Işığıçok, Sosyal Bilimlerde Matematik, Ezgi Kitabevi, Bursa, 2010. İstanbul, 2008. 4. Ahmet Öztürk, Matematiksel Analize Giriş, Ekin

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	14	5.00	70.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	20.00	20.00
Others	0	0.00	0.00
Final Exams	1	25.00	25.00
Total Work Load			157.00
Total work load/ 30 hr			5.23
Contribution of Term (Year) Learning Activities to ECTS Credit of the Course	40.00		5.00
Contribution of Final Exam to Success Grade	60.00		
Total	100.00		

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Quiz	0	0.00
Final Exam	1	60.00

Measurement and Evaluation Techniques Used in the Course	

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	5	3	4	5	3	4	5	3	4	3	5	4	0	0	0	0

ÖK2	3	5	4	3	5	4	3	4	5	3	4	5	0	0	0	0
ÖK3	5	4	5	3	4	5	3	4	4	3	3	3	0	0	0	0
ÖK4	5	5	3	4	5	3	4	3	3	3	3	5	0	0	0	0
ÖK5	4	5	3	3	3	5	5	5	3	4	4	4	0	0	0	0
ÖK6	5	3	4	5	3	3	4	4	5	3	3	5	0	0	0	0
ÖK7	3	3	3	3	5	4	5	3	4	5	3	4	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

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