

LINEEAR ALGEBRA I

1	Course Title:	LINEEAR ALGEBRA I
2	Course Code:	MAT0503
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	3
6	Semester:	5
7	ECTS Credits Allocated:	4.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	-
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. SÜLEYMAN ÇİFTÇİ
15	Course Lecturers:	Doç. Dr.Basri ÇELİK- Yrd. Doç.Dr. Atilla AKPINAR- Öğr.Gör.Dr.Esen İYİGÜN
16	Contact information of the Course Coordinator:	E-posta: sciftci@uludag.edu.tr Telefon: +90 224 2941754 Adres: Uludağ Üniversitesi Fen-Edebiyat Fakültesi Matematik Bölümü 16059 Görükle-Bursa-TÜRKİYE
17	Website:	
18	Objective of the Course:	The primary objective of this course is to introduce algebraic structures as group, ring, field and so to understand the concept of vector space, which is constructed over these structures, with basic properties and applications.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	
	1	knows the concepts of group, ring, field
	2	gives an understanding of the algebra of finite-dimensional vector spaces as a basis for further study of abstract algebra
	3	acquires an understanding of some fundamental ideas of linear algebra, including vectors, vector spaces, linear independence, bases, dimension and linear transformations, especially in the case of R^n and C^n
	4	knows sub-vector spaces
	5	learns real and complex inner product.
	6	knows the concepts of linear independence, basis and dimension.
	7	uses the Gram-Schmidt algorithm to orthonormalize a set of vectors.
	8	
	9	
	10	
21	Course Content:	
	Course Content:	

Week	Theoretical	Practice		
1	Groups			
2	Fields and subfields			
3	The definition of vector spaces and their examples			
4	Standart vector spaces $R^{(n)}$ and $C^{(n)}$			
5	Subvector spaces			
6	The properties of vector spaces $R^{(n)}$			
7	Midterm exam and evaluation of midterm exam, repeat of previous subjects			
8	Linear independent, the method of orthogonality			
9	The properties about basis of vector spaces, dimensions of subspaces			
10	Space of direct sums and subspaces of inner product spaces			
11	Linear transformations in vector spaces and			
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical		14	3.00	42.00
13	Linear transformations corresponding to			
Practicals/Labs		0	0.00	0.00
Self study and preperation		14	2.00	28.00
14	Linear isomorphism, algebra of $Hom(V,W)$			
Homeworks		0	0.00	0.00
Projects		0	0.00	0.00
20	Textbooks, References and/or Other	14	11.00	154.00
Field Studies		0	0.00	0.00
Midterm	exams	Ankara, 2002	11.00	11.00
Others		14	2.00	28.00
Final Exams		Publisher	11.00	11.00
Total Work Load				120.00
TERM LEARNING ACTIVITIES		NUMBER	WEIGHT	
Total work load/ 30 hr				4.00
ECTS Credit of the Course				4.00
Quiz		0	0.00	
Home work-project		0	0.00	
Final Exam		1	60.00	
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				
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK7	0	0	0	0	0	0	0	0	0	0	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			