ESOGÜ Mathematics and Computer Sciences Department
COURSE INFORMATION FORM

SEMESTER	Fall

COURSE CODE	821613002	**COURSE NAME**	LINEAR ALGEBRA - I

SEMESTER	**WEEKLY COURSE PERIOD**			**COURSE OF**			
	Theory	**Practice**	**Labratory**	**Credit**	**ECTS**	**TYPE**	**LANGUAGE**
3	3	0	0	3	5	COMPULSORY (X) ELECTIVE ()	Turkish

COURSE CATAGORY				
Mathematics	**Computer**			**Social Science**
X				

ASSESSMENT CRITERIA			
	Evaluation Type	**Quantity**	**%**
	Mid-Term	1	40
MID-TERM	Quiz		
	Homework		
	Project		
	Report		
	Others (………)		
FINAL EXAM		1	60

PREREQUIEITE(S)	
COURSE DESCRIPTION	Vectors in the plane and in the space, Vectors spaces, Subspaces, Examples of the vectors space, Linear depence an linear independence, Finite dimensional vectors spaces and the bases, Eklements of vectors spaces, Linear transformations, Numerical examples of linear transformations
COURSE OBJECTIVES	To teach the subject in the content the course
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	To obtain equipment about content the course
COURSE OUTCOMES	By the end of the course students should be able to: 1. Understand concepts of vector and vector spaces, 2. Understand subspaces of a vector space, 3. Learn basis of a vector space, 4. Understand transformation between vector spaces, 5. Analyse structure of linear mappings
TEXTBOOK	1) Linear Algebra (Lary Smith)
OTHER REFERENCES	2) Linear Algebra (Bernard Kolman)
TOOLS AND EQUIPMENTS REQUIRED	

	COURSE SYLLABUS	
WEEK	**TOPICS**	
1	Vectors in the plane and in the space	
2	Axioms of the vector space	
3	Subvector spaces – Linear subspaces	
4	Examples of the vectors space	
5	Linear dependence and linear independence in the vector spaces	
6	Concepts of base and dimension in the vector spaces	
7	Finite dimensional vectors spaces	
8	Midterm exam	
9	Elements of vector spaces	
10	Linear transformations in the vector spaces	
11	Linear transformations in the vector spaces	
12	Numerical examples of linear transformations	
13	Examples of linear transformations	
14,5	Problem solutions	
16,17	Final Exam	

NO	PROGRAM OUTCOMES	3	2	1
1	The ability to apply knowledges of Mathematics and Computer Sciences,	X		
2	To have sufficient theoretical and practical knowledge of Mathematics at international level,	X		
3	The ability of describing, modelling and solving of mathematical problems at Mathematics and related subjects,	X		
4	The skill to solve and design a problem process in accordance with a defined target,	X		
5	Skills to analyze data, interpret and apply to other datum and using these data on computer,		X	
6	The skill to use the modern techniques and computational tools needed for mathematical applications,		X	
7	The skill to make team work within the discipline and interdisciplinary,	X		
8	The ability to improve oneself by following the developments on other modern, scientific and technological subjects as well as Mathematics and Computer Sciences,	X		
9	The skill to communicate orally and in written way, in a clear and concise manner by having individual work skills and ability to independently decide and analytical thinking,	X		
10	The skill to have professional and ethical responsibility,		X	
11	The skill to have consciousness for quality issues and scientific research,	X		
12	The skill to be sensitive to environmental issues related with problems and development of living area and consistent in the social relations,			X
13	Ability to solve problems in the working life faced to find an appropriate algoritms via mathematical modeling and to write computer programs,		X	
14	The skill to developed design of software systems at different complex levels,		X	
15	The credence of necessity of life-long learning and ability to apply the formation long-life learning.		X	
1:None. **2**:Partially contribution. **3**: Completely contribution.				

Instructor(s):

Signature: **Date:**