ESOGÜ Mathematics and Computer Sciences Department
COURSE INFORMATION FORM

SEMESTER	Spring

COURSE CODE	821614002	**COURSE NAME**	LINEAR ALGEBRA - II

SEMESTER	**WEEKLY COURSE PERIOD**			**COURSE OF**			
	Theory	**Practice**	**Labratory**	**Credit**	**ECTS**	**TYPE**	**LANGUAGE**
4	3	0	0	3	5	COMPULSORY (X) ELECTIVE ()	Turkish

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

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

PREREQUIEITE(S)	None
COURSE DESCRIPTION	Matrices and linear transformations, Matrices, Matrix representations of the linear transformations, system of linear equations, eigen values and Eigen vectors, Innner product spaces
COURSE OBJECTIVES	To teach the subject in the content the course
ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUATION	By the end of the course students should be able to: 1. Learn concept of Matrix, 2. Understand relation between Matrix and linear mappings, 3. Represent Linear mappings with matrix 4. Solve Linear equation systems, 5. Understand concepts of Eigenvalue and eigenvector, 6. Understand inner product space.
COURSE OUTCOMES	To obtain equipment about content the course
TEXTBOOK	1) Linear Algebra (Lary Smith)
OTHER REFERENCES	2) Linear Algebra (Bernard Kolman)
TOOLS AND EQUIPMENTS REQUIRED	None

WEEK	TOPICS
	COURSE SYLLABUS
1	Matrices
2	Connection between matrices and linear transformations
3	Connection between matrices and linear transformations
4	Matrix representations of linear transformations
5	Matrix representations of linear transformations
6	System of linear equations
7	System of linear equations examples
8	Midterm exam
9	Eigen values and Eigen vectors
10	Eigen spaces
11	Inner product spaces
12	Inner product spaces
13	Theorem of spectrum
14,15	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:**