

# TOROS ÜNİVERSİTESİ

Faculty Of Engineering  
Electrical And Electronics Engineering (English)

## Course Information

LINEAR ALGEBRA					
Code	Semester	Theoretical	Practice	National Credit	ECTS Credit
		Hour / Week			
MAT201	Fall	3	0	3	4

<b>Prerequisites and co-requisites</b>	
<b>Language of instruction</b>	English
<b>Type</b>	Required
<b>Level of Course</b>	Bachelor's
<b>Lecturer</b>	Prof. Dr. Adnan MAZMANOĞLU
<b>Mode of Delivery</b>	Face to Face
<b>Suggested Subject</b>	
<b>Professional practise ( internship )</b>	None
<b>Objectives of the Course</b>	An exposure to linear systems and linear relationships. Using matrices to represent linear systems, and vector spaces.
<b>Contents of the Course</b>	Systems of linear equations. Matrices, matrix algebra determinants. Vector spaces, subspaces, orthogonal spaces. Charactersitic equation of matrix, eigenvalues, eigenvectors. Cayley-Hamilton Theorem.

## Learning Outcomes of Course

#	Learning Outcomes
1	Getting knowledge about Linear Eqwuations and matrices
2	Getting knowledge about Determinants
3	Getting knowledge about Solving linear systems
4	Getting knowledge about Real vector spaces
5	Getting knowledge about Eigenvalues and eigenvectors

## Course Syllabus

#	Subjects	Teaching Methods and Technics
1	Linear Eqwuations and matrices	lecture
2	Solving linear systems	lecture
3	Solving linear systems	lecture
4	Determinants	lecture
5	Determinants	lecture
6	Real vector spaces	lecture
7	Real vector spaces	lecture
8	Real vector spaces	lecture
9	Real vector spaces	lecture
10	Midterm	
11	Inner product spaces	lecture

12	Inner product spaces	lecture
13	Eigenvalues and eigenvectors	lecture
14	Eigenvalues and eigenvectors	lecture
15		
16	Final Exam	

## Course Syllabus

#	Material / Resources	Information About Resources	Reference / Recommended Resources
1	Internet resources		
2	B. Kolman, D. Hill, Elementary Linear Algebra with Applications		

## Method of Assessment

#	Weight	Work Type	Work Title
1	40%	Mid-Term Exam	Mid-Term Exam
2	60%	Final Exam	Final Exam

## Relationship between Learning Outcomes of Course and Program Outcomes

#	Learning Outcomes	Program Outcomes	Method of Assessment
1	Getting knowledge about Linear Equations and matrices	1	1,2
2	Getting knowledge about Determinants	1	1,2
3	Getting knowledge about Solving linear systems	1	1,2
4	Getting knowledge about Real vector spaces	2	1,2
5	Getting knowledge about Eigenvalues and eigenvectors	3	1,2

PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method of Assessment.

## Work Load Details

#	Type of Work	Quantity	Time (Hour)	Work Load
1	Course Duration	14	3	42
2	Course Duration Except Class (Preliminary Study, Enhancement)	14	3	42
3	Presentation and Seminar Preparation	0	0	0
4	Web Research, Library and Archival Work	0	0	0
5	Document/Information Listing	0	0	0
6	Workshop	0	0	0
7	Preparation for Midterm Exam	1	15	15
8	Midterm Exam	1	2	2
9	Quiz	0	0	0
10	Homework	0	0	0
11	Midterm Project	0	0	0
12	Midterm Exercise	0	0	0
13	Final Project	0	0	0
14	Final Exercise	0	0	0
15	Preparation for Final Exam	1	20	20

16	Final Exam	1	2	2
				<b>123</b>