

MATH 237 – Linear Algebra I

Department of Mathematics and Computer Sciences

Methods of Instruction	Theor.	Appl.	Lab.	Intern.	Project/Field Work	Other	Total	Credit	ECTS Credit
	64	-	-	-	-	-	64	(4 0 4)	6

Semester	Fall 2007
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Instructor	Sezgin Sezer (A-Block, 103/B, Phone: +90 312 2844500 Ext: 307) e-mail: sezgin@cankaya.edu.tr Home Page: http://ari.cankaya.edu.tr/~sezgin
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Schedule	Thursday 15:40 – 17:30 B-408/409, Friday 15:40 – 17:30 B-417/418
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Office Hours	Tuesday 10:40 – 11:30, Wednesday 10:40 – 11:30, Thursday: 10:40 – 11:30
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Prerequisite	None
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Catalog Description	Matrices and systems of linear equations; vector spaces; subspaces, sums and direct sums of subspaces; linear dependence; bases; dimension; quotient spaces; linear transformations; kernel, range, isomorphism; spaces of linear transformations; $\text{Hom}(V, W)$, V^* , V^{**} transpose; representations of linear transformations by matrices, similarity.
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Textbook	Linear Algebra Stephen H. Friedberg, Arnold J. Insel, Lawrence E. Spence International Edition, Fourth Edition, Prentice Hall ISBN 0-13-120266-9
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Reference Books	Linear Algebra I Cemal Koç METU Ankara, 1998
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Evaluation Criteria		Number of	Percentages
	Midterm Exams	2	30 + 30
	Quiz	-	-
	Homework	-	5
	Project	-	
	Term Homework	-	
	Laboratory Work	-	
	Class Participation	-	-
	Final Exam	1	40

Exam Dates	First Midterm Exam: 13 November 2007 Second Midterm Exam: 18 December 2007
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Course Description Details		
Week	Dates	Topics covered
1	24. 09 – 28. 09	Groups, Rings, and Fields, Operations on Matrices
2	01. 10 – 05. 10	Special Types of Matrices, Row equivalence, invertibility
3	08. 10 – 12. 10	Systems of Linear Equations
4	15. 10 – 19. 10	Determinants
5	22. 10 – 26. 10	Vector Spaces, Subspaces
6	30. 10 – 02. 11	Linear Combinations and Systems of Linear Equations
7	05. 11 – 09. 11	Linear Dependence and Linear Independence,
8	12. 11 – 16. 11	Bases and Dimension
9	19. 11 – 23. 11	Linear Transformations, Null Spaces and Ranges
10	26. 11 – 30. 11	The Matrix Representation of a Linear Transformation
11	03. 12 – 07. 12	Composition of Linear Transformations
12	10. 12 – 14. 12	Invertibility and Isomorphisms,
13	17. 12 – 19. 12	The Change of Coordinate Matrix
14	24. 12 – 28. 12	Dual Spaces