MATH 227-03 – Introduction to Linear Algebra

Semester: Instructor: Office: Assistant:	Spring 2006 Alex Degtyarev Room SA-130 Pinar Pekcagliyan		E-mail: E-mail:	degt@fen.bilkent.edu.tr pinarp@ug.bilkent.edu.tr
Exams & Grading:	2 Midterms • 1 st Midterm (%25) • 2 nd Midterm (%25) Final exam (%40) • Final Exam Quizzes (%10) 75% attendance is obligatory		March 10, 2006 @ 1:40 pm April 28, 2006 @ 1:40 pm Finals week Weekly	
Course Schedule: Office Hours:	Tuesday Friday Tuesday	3:40- 4:30 pm 1:40- 3:30 pm 10:40-11:30 am	Room BZ 06 Room BZ 06	3 3
Textbook:	Thursday Howard An (John Wile Bernard Ko (Prentice-H	2:40– 3:30 pm ton, <i>Elementary Linear</i> y & Sons, Inc., 1994) olman, <i>Elementary Line</i> fall, New Jersey, 1996)	Algebra, 7th ar Algebra, 6	Edition, th Edition,

<u>Tentative</u> course schedule

Week	Subject	MT	Q
#1	Introduction to systems of linear equations (1.1) ; Gaussian elimination (1.2)		
#2	Matrices and matrix operations (1.3) ; Inverses; rules of matrix arithmetic (1.4)		#1
#3	Elementary matrices and finding inverse matrix (1.5) ; Further results on systems and invertibility (1.6) ; Special matrices (1.7)		#2
#4	The determinant function (2.1) ; Evaluating by row reduction (2.2)		#3
#5	Properties of the determinant (2.3); Cofactor expansion, Cramer's Rule (2.4)		#4
#6	REVIEW AND FIRST MIDTERM	#1	
#7	Lines and planes in 3-space (3.5); Euclidean <i>n</i> -space (4.1); Linear transforma- tions from \mathbf{R}^n to \mathbf{R}^m (4.2)		#5
#8	Properties of linear transformations (4.3)		#6
#9	Eigenvalues and Eigenvectors (7.1)		#7
#10	Real vector spaces (5.1) ; Subspaces (5.2)		#8
#11	Linear independence (5.3) ; Basis and dimension (5.4)		#9
#12	REVIEW AND SECOND MIDTERM	#2	
#13	Row space, column space, and nullspace (5.5)		#10
#14	Rank and nullity (5.6)		
#15	Applications		

¹⁹⁹⁸ Faculty of Science, Course Syllabus