

MATH 221 L21 Winter 2005

Instructor: Jędrzej Śniatycki, MS 420. Office hours: by appointment.

Text: Keith Nicholson, Elementary Linear Algebra, McGraw-Hill, Second Edition.

Quizzes: There will be 6 quizzes given in labs. Credit of 30% will be given for 5 best quizzes.

Detailed Lecture Schedule

Day	Date	Topic	Chapter
Tuesday	Jan. 11	Linear equations	1.2.1-1.2.2
Thursday	Jan. 13	Gaussian elimination	1.2.3
Tuesday	Jan. 18	Rank	1.2.4
Thursday	Jan. 20	Homogeneous systems	1.3
Tuesday	Jan. 25	Matrix algebra	1.1, 1.4.1-1.4.2
Thursday	Jan. 27	Matrix algebra	1.4.3-1.4.4
Tuesday	Feb. 01	Matrix inverses	1.5.1-1.5.2
Thursday	Feb. 03	Matrix inverses	1.5.3-1.5.5
Tuesday	Feb. 08	Determinants	2.1.1-2.1.2
Thursday	Feb. 10	Determinants	2.2.1-2.2.3
Tuesday	Feb. 15	Eigenvectors	2.3.2
Thursday	Feb. 17	Diagonalization	2.3.3
Tuesday	Feb. 22	READING WEEK	
Thursday	Feb. 24	READING WEEK	
Tuesday	Mar. 01	Diagonalization	2.3.3
Thursday	Mar. 03	Complex numbers	2.5.1-2.5.2
Tuesday	Mar. 08	Complex algebra	2.5.3-2.5.5
Thursday	Mar. 10	Polar form	2.5.6
Tuesday	Mar. 15	Review	
Thursday	Mar. 17	MIDTERM (in class)	
Tuesday	Mar. 22	Geometric vectors	3.1
Thursday	Mar. 24	Matrix form	3.1
Tuesday	Mar. 29	Dot product	3.2.1-3.2.3
Thursday	Mar. 31.	Lines and planes	3.3.1-3.3.3
Tuesday	Apr. 05	Cross product	3.3.4 and 3.5
Thursday	Apr. 07	Transformations	3.4.1-3.4.3
Tuesday	Apr. 12	Composition	3.4.4-3.4.5
Thursday	Apr. 14	Review	

Labs, Recommended Problems and Quizzes

Labs will begin in the second week of classes, January 17. Recommended problems, taken from the exercise sections of the text, should be attempted by students **before** the following lab. During each lab, the Instructor will answer questions about recommended problems, solve some problems on the blackboard and administers the quiz, if one is scheduled.

Students are encouraged to do all the problems in the relevant section of the text.

Week of		Recommended problems for the following week
Jan. 10	No Labs	1.2: 1, 3, 4, 7, 8, 9, 12, 13
Jan. 17	Quiz 1	1.2: 6, 10, 14, 1.3: 1, 2, 3, 4, 6, 7, 8.
Jan. 24		$\left\{ \begin{array}{l} \mathbf{1.1:} 4, 5, 6, 7, 8, \\ \mathbf{1.4:} 1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 15, 19, 20, 22, 24, 25. \end{array} \right\}$
Jan. 31	Quiz 2	1.5: 1, 2, 4, 5, 6, 7, 8, 9, 12, 13, 15, 16, 18, 20, 22, 23 24, 28.
Feb. 07		2.1: 1, 3, 5, 8, 11, 12, 14, 15, 2.2: 4, 5, 6, 7, 8, 10, 11, 12 14, 15.
Feb. 14	Quiz 3	2.3: 1, 2, 3, 4, 5, 6,
Feb. 21	No Labs	Reading days
Feb. 28		2.3: 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20.
Mar. 07	Quiz 4	2.5: 1, 2, 3, 4, 5, 7, 8.
Mar. 14		2.5: 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23 24, 25, 26.
Mar. 21	Quiz 5	3.1: 1, 2, 3, 4, 5, 10.
Mar. 28		$\left\{ \begin{array}{l} \mathbf{3.2:} 1, 2, 3, 4, 7, 8, 9, 10, 16, \mathbf{3.5:} 1, 3, 4, 5, 6, \\ \mathbf{3.3:} 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16. \end{array} \right\}$
Apr. 04	Quiz 6	3.4: 2, 3, 6, 7, 9, 12, 13, 14, 15, 16, 21, 24
Apr. 11		