

MATH 251/Lec B & C
Linear Algebra I
Fall 2014

Instructor*: _____

Office/Tel No.: _____

Office Hours: _____

*Students should get the above information from their instructor during class time. The instructor is the person to contact should there be any questions about the course.

Course Examiner: Dr. C. Cummins

Text: *Linear Algebra*, 4th Edition, by S. Friedberg, A. Insel, L. Spence, (Prentice Hall).

Assignments: Are very important, even if they carry no credit and are not to be handed in. They indicate the level of difficulty of the problems which the student is expected to solve, so every effort should be made to do them. Solutions will be available, but should only be consulted after solving the problems.

Class Test: There will be one class test in the seventh week of classes, covering the first five weeks of the course. **There will be no make-up test.**

Final Grade: The final examination will be three hours long. It will cover material from the entire course.

Grading: Your final grade is the maximum of the final examination grade counted as 100%, and a grade computed by adding 70% of your mark on the final examination to your class test for 30%.

Calculators: Only calculators approved by the Department (with a sticker attached as proof of approval) are permitted in the class test(s) and

final examination. The preferred calculators are the **Sharp EL 531** and the **Casio FX 300MS**, available at the Concordia Bookstore.

Week	Section	Topic	Problems
1	1.2, 1.3	Vector Spaces, Subspaces	1.2: 12, 18 1.3: 19, 23, 24
2	1.4, 1.5	Linear Combinations, Systems of Equations Linear Dependence and Independence	1.4: 4(a,c), 5(g,h), 10 14 1.5: 2(a,c,e), 12, 17
3	1.6	Basis and Dimension	1.6: 4, 10(b,d), 14, 29, 30
4	2.1	Linear Transformations, Null Spaces, Ranges	2.1: 2, 5, 9(d,e), 14, 15, 24b
5	2.2	Matrix Representation of Linear Transformation	2.2: 4, 5(b,c,f), 11, 13
6	2.3	Composition of Linear Transformations, Matrix Multiplication	2.3: 3, 9, 11, 12, 13
7		CLASS TEST	
8	2.4 2.5	Invertibility and Isomorphisms Change of Coordinate Matrix	2.4: 7, 9, 14, 17 2.5: 2d, 3b, 6d, 7a
9	3.1, 3.2, 3.3	Elementary Matrices, Rank of Matrices, Matrix Inverses, Systems of Equations	3.2: 2f, 4b, 5h, 6(d,f), 7, 11 3.3: 2d, 3d
10	3.4 4.4	Systems of Equations Summary about Determinants	3.4: 6*, 9, 10, 12 (*In question 6: Deter- mine A if the first, third and FIFTH columns...) 4.4: 3d, 4d, 5
11	5.1	Eigenvalues and Eigenvectors	5.1: 2f, 3(b,d), 4(c,d,g,i), 8, 11
12	5.2	Diagonalizability	5.2: 2(b,d,f), 3(b,f), 7, 8, 9
13		REVIEW	

