

MATH 252
Linear Algebra II
Winter 2016

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.

Text: Linear Algebra, 4th Edition, by Friedberg, Insel & Spence, Prentice Hall.

Assignments: Given weekly. No late assignments will be accepted. Solutions will be posted at the SGW Digital Store (LB-115).

Test: There will be one class test in the seventh week. There will be no make-up
test.

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

Final Mark: The final grade will be based on the higher of (a) or (b) below:
a) 5% for the assignments, 30% for the test, and 65% for the final.
b) 5% for the assignments, 95% for the final examination.
Please note that there is no "100% final exam" option in this course.

Calculators: Only calculators approved by the Department are permitted in the class test and final examination. The calculators are **Sharp EL 531** and **Casio FX 300MS**, available at the Concordia Bookstore.

Week	Section	Topics	Assignments
1	Appendix D 2.2	Complex Numbers Vector Spaces over R or C Matrix $[T]_{\beta}$ for $T:V \rightarrow V$	Page 84: 2bef, 5af, 8,10
2	2.5 5.1	The Change of Coordinate Matrix Eigenvalues and Eigenvectors	Page 116: 2bd, 3d, 6d Page 256: 3bd, 4c
3	5.2	Diagonalizability (Section on Direct Sums excluded)	Page 279: 2df, 3bf, 8, 14abc
4	5.4	Invariant subspaces The Cayley-Hamilton Theorem	Page 321: 3, 6bd, 9bd, 10bd, 18ab
5	6.1	Inner Products and Norms	Page 336: 5, 9, 11
6	6.2	The Gram-Schmidt Orthogonalization Process and Orthogonal Complements	Page 352: 2df, 9, 19c
7		Review Midterm Test	
8	6.3	The Adjoint of a Linear Operator	Page 365: 2b, 3b, 8, 12a, 19, 20c
9	6.4	Normal and Self-Adjoint Operators (Definition of a positive definite operator Page 377)	Page 374: 2cf, 6, 11, 20
10	6.5	Unitary and Orthogonal Operators and their Matrices	Page 392: 2bce, 3, 11, 17
11	7.1	The Jordan Canonical Form I	Page 494: 2abcd
12	7.2 7.3	The Jordan Canonical Form II The Minimal Polynomial	Page 509: 4bcd Page 522: 2, 3
13		REVIEW	