

CLASS TIME: MWF 12:00 – 12:50 in 308 Burnham Hall from 08/25/2003 to 12/12/2003.

INSTRUCTOR: Anton Leykin

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URL: <http://www.math.uic.edu/~leykin>

CLASS WEBPAGE: See <http://www.math.uic.edu/~leykin/class/> for homework assignments, announcements, sample exams, etc...

OFFICE HOURS: MW 2:30 – 4:00pm or by appointment. Subject to change.

TEXT BOOK: Steven J. Leon: ‘Linear Algebra with Applications’, Sixth Edition, 2002.
Bring your text book to every class meeting.

HOMEWORK: Homework assignments will be posted on the class webpage. There you will also find an additional list of recommended problems, some of them intended for using MATLAB available on campus PCs.

The homework shall be turned in on Monday in class. Late homework is not accepted. Three lowest scores will be dropped.

CALCULATORS and COMPUTERS: During the exams NO CALCULATORS are allowed. However, you are encouraged to use MATLAB, OCTAVE or any other mathematical software for homework assignments. In case you choose to do so, for every step in the solution that is not completed manually, write ”used computer”.

GRADING: 90 – 100% = A, 80 – 89% = B, 70 – 79% = C, 60 – 69% = D.

Exam 1	25%	Chapters 1-3	Fri, Oct 17
Exam 2	25%	Chapters 4-5	Fri, Nov 14
Final	40%	all chapters, focus on Chapter 6	TBA (Dec 9 – Dec 12)
Homework	10%	assignments posted on the web	due every Monday

SOME IMPORTANT DATES:

August 25, M Instruction begins.

September 1, M Labor Day holiday. No classes.

September 5, F Last day to complete late registration and last day to add a course(s).

October 3, F Last day to drop a course(s) offered by all colleges.

November 27-28, Th-F Thanksgiving holiday. No classes.

December 5, F Instruction ends.

December 8, M Reading day. No examinations.

December 9-12, T-F Final examinations.

Week 1	Mon Aug 25	1.1	linear systems and row operations
	Wed Aug 27	1.2	echelon form
	Fri Aug 29	1.2+	Gauss elimination, Gauss-Jordan
Week 2	Mon Sep 1		Labor day – no labor
	Wed Sep 3	1.3	matrix multiplication
	Fri Sep 5	1.4	elementary matrices
Week 3	Mon Sep 8	1.4+	LU factorization
	Wed Sep 10	1.4+	inverses
	Fri Sep 12	2.1	determinants, definition, cofactors
Week 4	Mon Sep 15	2.2	properties of determinants
	Wed Sep 17	2.3	Cramer's rule
	Fri Sep 19	3.1	vector spaces, definition and examples
Week 5	Mon Sep 22	3.2	subspaces
	Wed Sep 24	3.2+	span
	Fri Sep 26	3.2+	spanning sets
Week 6	Mon Sep 29	3.3	linear independence
	Wed Oct 1	3.3+	...continued...
	Fri Oct 3	3.4	basis of vector space
Week 7	Mon Oct 6	3.4+	dimension of vector space
	Wed Oct 8	3.5	change of basis
	Fri Oct 10	3.5+	...continued...
Week 8	Mon Oct 13	3.6	row and column space
	Wed Oct 15		review of Chapters 1,2,3
	Fri Oct 17		EXAM 1 on Chapters 1,2,3
Week 9	Mon Oct 20	4.1	linear transformations
	Wed Oct 22	4.2	matrix representation
	Fri Oct 24	4.3	similarity
Week 10	Mon Oct 27	5.1,5.2	scalar product; orthogonal subspaces
	Wed Oct 29	5.3	inner products
	Fri Oct 31	5.4	least squares problems
Week 11	Mon Nov 3	5.4+	continued
	Wed Nov 5	5.5	orthonormal sets
	Fri Nov 7	5.5+	continued
Week 12	Mon Nov 10	5.6	Gram-Schmidt orthogonalization
	Wed Nov 12	5.6+	QR factorization
	Fri Nov 14		EXAM 2 on Chapters 4 and 5
Week 13	Mon Nov 17	6.1	eigenvalues and eigenvectors
	Wed Nov 19	6.2	linear differential equations
	Fri Nov 21	6.2+	...continued...
Week 14	Mon Nov 24	6.3	diagonalization; Markov chains
	Wed Nov 26	6.4	Hermitian matrices
	Fri Nov 28		Thanksgiving – no classes
Week 15	Mon Dec 1	6.5	quadratic forms
	Wed Dec 3	6.6	positive definite matrices
	Fri Dec 5		review of everything

FINAL EXAM – date, time and room to be announced.