

## NCSU Mathematics Department

### MA 405-001 – Introduction to Linear Algebra and Matrices

Spring 2008, MWF 3:00-3:50 pm, HA 201

**Instructor:** Dr. Bojko Bakalov, office HA 138, phone 513-7442,  
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**Course Webpage:** <http://www4.ncsu.edu/~bnbakalo/ma405.html>

**Text:** *Linear Algebra with Applications*, by Steven J. Leon, 7th edition, Prentice Hall, 2005, ISBN 0131857851. Also available in paperback, ISBN 0131936239.

#### Tentative Topics:

Chapter 1	(2 weeks)	Linear equations, row reduction, matrix algebra, LU factorization
Chapter 2	(1 week)	Determinants
Chapter 3	(3 weeks)	Vector spaces, subspaces, linear independence, basis and dimension, coordinates, row space, null space
Chapter 4	(2 weeks)	Linear transformations, matrix representations of linear transformations, similarity
Chapter 5	(3 weeks)	Orthogonality, Gramm-Schmidt, QR factorization
Chapter 6	(3 weeks)	Eigenvalues, eigenvectors, diagonalization

**Final Exam: Friday, May 2 from 1-4 pm in HA 201.**

The date and time of the final exam are fixed. Please take them into account when scheduling plane tickets or making other obligations as the university has strict policies on missing the final exam.

#### Tentative Test Dates:

Test 1, Wednesday, January 30. NEW DATE: Friday, February 1  
Test 2, Friday, February 22. NEW DATE: Monday, February 25  
Test 3, Wednesday, March 26. NEW DATE: Friday, March 28  
Test 4, Friday, April 18