

Linear Algebra: Math 2164 - Spring 2008

MW 12:30 am –1:45 pm

Location: Fret 106

Instructor Catalin Turc (Cat.Turc@uncc.edu)

Office: Fretwell Bldg. 235 E, Phone (704) 687-2891

Office hours: MW 2:00-30:30 or by appointment

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Course Information and policies:

- **Text:** *Linear Algebra and its Applications 3rd updated edition*, by David C. Lay
- **Exams and Grading:** Your course grade is based on:
 1. Your performance on midterms: we will have three tests that will each count for 20 percent of the course grade.
 2. Your performance on the final exam : the *final exam* will count for 40 percent of the grade. The final exam will be comprehensive.
 3. The tests grades and the final grade will be assigned as follows: A (85-100), B (75-84) , C (65-74), D (55-64) and F (below 55).
- **Homework:** Homework will be assigned each class and it will constitute the basis for in class discussion. Specially assigned problems will be handed out and collected every 3-5 lectures. They will contribute 50 percent to the grade of the corresponding test.
- **Important dates:**
 1. February 20, 2008 - First Test
 2. March 26, 2008 - Second Test
 3. April 21, 2008 - Third Test
 4. Wednesday May 7, 2008 - Final Exam, 11:00am–1:45pm
- **Absence from Exams or quizzes:** You must take all three midterm exams and the final exam to pass. No make-up exams and quizzes are given.

• **Course Overview:**

1. **Sections 1.1–1.6 Lectures 1–9:** Systems of linear equations
Gaussian elimination algorithm
Vector equations
Matrix equations
Applications
2. **Review and Test 1**
3. **Sections 1.8, 1.9, 2.1–2.3, 2.6, 3.1, 3.2, 4.1, 4.2 Lectures 11 –19** Linear transformations
Matrix operations
Inverse matrices
Leontief model
Determinants
Vector spaces
4. **Review and Test 2**
5. **Sections 4.3–4.7, 4.9, 5.1-5.3 Lectures 21–28** Bases
Coordinate systems
Rank
Applications to Markov chains
Eigenvalue problems
Diagonalization
6. **Review and Test 3**
7. **Review for the final exam**