

MAT 204. Advanced Linear Algebra with Applications, Spring 2009

Syllabus

Course Web Page : Log in at <http://blackboard.princeton.edu> and go to the course MAT204 S2009. Check this website regularly for announcements, updates, course materials, sample exams, etc.

Text: Gilbert Strang, *Linear Algebra and its Applications, 4th Ed.*

The textbook has a related website:

<http://web.mit.edu/18.06/www/>

There you will find additional information including videos of Professor Strang's Fall 1999 Lectures.

Topics include: Matrices: Triangular Form, Diagonal Form, Jordan Canonical Form.

Course Organization: There are three lectures per week given by your instructor. This course is fast-paced, so do not lag behind!

Review sessions: In addition to the lectures, there will be a review session each week run by Dr. Strain every Wednesday, 6:30-8:30 PM beginning the second week of classes. These review sessions are an integral part of the course and should be considered when making up your schedule. The room number for these review sessions can be found at <http://www.math.princeton.edu/undergraduate/>

Prerequisites/Placement: Please check the website

<http://www.math.princeton.edu/undergraduate/Placement.html>

Homework: Weekly homework assignments will be due on Wednesday at 2:00 PM.. The homework assignments can be found on Blackboard, under Assignments. Your instructor will indicate to you where you should turn in your homework and where you can pick up graded homework.

Collaboration between students is encouraged, but you must write your own solutions, understand them and give credit to your collaborators.

Write your name on your paper, staple all pages together, write clearly in complete sentences, circle your answers wherever appropriate. You may lose points for unstapled, messy, or unclear work.

Late homework will not be accepted. However we will drop the lowest homework grade.

Midterm and Final Exams: There will be a Midterm held sometime during midterm week outside of class. There will be a Final exam held during the final exam period.

All sections take the same midterm and final exams together, at times scheduled by the registrar. The exact dates, times, and locations of these exams will be posted on the Blackboard site when they have been communicated to your instructor by the registrar. If you cannot make the time of an exam for a compelling reason, you must inform your instructor in advance. Likewise, if you miss an exam for a legitimate reason (such as illness) you must inform your instructor as soon as possible. For the midterm exam, contact your instructor and follow his or her directions. For the final exam, you must make arrangements through the registrar.

Old exams may be found on blackboard, or alternatively at <http://www.math.princeton.edu/undergraduate/>

Reading and Lectures: Please read the book before class! Students are responsible for all topics covered in the readings and lectures. Lectures may go beyond the reading, and not every topic in the reading will be covered in class.

Grading: There will be weekly assignments, a midterm exam and a final. They will count toward the grade as follows.

Homework	10%
Midterm	40%
Final	50%.

Getting Help: The following are opportunities for additional help.

Office Hours: Each instructor will have regularly-scheduled office hours each week. See the Blackboard site under Staff Information for these. You may attend the office hours of any instructor.

Resources at the McGraw Center at Frist Campus Center. These resources are summarized at

<http://web.princeton.edu/sites/mcgraw/undergraduates.html>

The McGraw Study Halls @ Frist provides free tutoring and also a good space for informal work with your classmates. Usually students find it quite helpful.

Calendar: (subject to change)

- Week 1: Feb 2, 4, 6: §1.1, §1.2, §1.3, §1.4
- Week 2: Feb 9, 11,13: §1.5, §1.6
- Week 3: Feb 16, 18, 20: §2.1, §2.2
- Week 4: Feb 23, 25, 27: §2.3 §2.4
- Week 5: Mar 2, 4, 6: §2.6, §3.1, §3.2
- Week 6: Mar 9, 11, 13: (Midterm Week) §3.3, §3.4
- Mar 14 - 22: Spring Recess
- Week 7: Mar 23, 25, 27: §4.1, §4.2, §4.3
- Week 8: Mar 30, April Fools Day, Apr 3: §4.4, §5.1
- Week 9: Apr 6, 8, 10: §5.2, §5.3
- Week 10: Apr 13, 15, 17: §5.4, §5.5
- Week 11: Apr 20, 22, 24: §5.6, §6.1, §6.2
- Week 12: Apr 27, 29, May 1 (last class): §6.3, Appendix B