## MATH 3121A / 9050: ADVANCED LINEAR ALGEBRA (FALL 2016)

**Instructor.** Matthias Franz

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Class. TBA

### Textbook.

We will use the same book that is used for Math 2120:

Friedberg, Insel, Spence: Linear algebra, 4th ed., Prentice Hall 2003

Prerequisite. Mathematics 2120

**Antirequisite.** The former Mathematics 2121

**Course Description.** A continuation of the material of Mathematics 2120A/B including properties of complex numbers and the principal axis theorem; singular value decomposition; linear groups; similarity; Jordan canonical form; Cayley-Hamilton theorem; bilinear forms; Sylvester's theorem.

# **Evaluation of Student Performance (Math 3121A).**

*Midterm Examinations.* Two midterm exams (written in class), each worth 25% of the final grade.

Final Examination. An oral exam (30min) worth 50% of the final grade.

Assignments. There will be homework assignment, at least every two weeks. They may be graded, but the grades only serve as feedback; they will not affect the final grade. Solving the exercises is strongly recommended as this is the best (and probably the only) way to understand the material. It is also a very good preparation for the exams.

Solutions will not be graded if they consist of scrap paper, are not clearly and carefully written or if they are not stapled. Discussion of exercises and solutions during tutorials or office hours may be limited to students who have handed in non-negligible solutions (which are not required to be correct).

### **Evaluation of Student Performance (Math 9050).**

*Presentation.* A presentation in class (90min) of some textbook material, worth 20% of the final grade.

Midterm Examination. One midterm exam (written in class), worth 30% of the final grade.

Final Examination. An oral exam (30min) worth 50% of the final grade.

Assignments. See aboove.

Regarding Scholastic Offences and Penalties, see the Section "Scholastic discipline for undergraduate students" of the Academic Calendar. Note that these rules apply to homework as well as to midterm and final exams.

Electronic devices (including cell phones and ipods) are not allowed at the exams and may be confiscated. The mere possession of such devices may already be considered an academic offence.

### Make-up exams and conflicts.

For the midterm exam. In the event that you must miss the midterm due to a valid conflict, the make-up exam may be given before the regular exam. Usually this will be earlier on the same day, or on the day before. If you are in this situation, you must let the instructor know at least two weeks before the exam date.

If you miss the midterm due to illness, you must present a doctor's note to the appropriate Dean's office, and you may be given a make-up exam as soon as possible after the regular exam. If you are in this situation, you should contact your instructor as soon as you realize that you will miss the exam.

For the final exam. If you have a conflict with another final exam, you must contact Rob Downes in the Registrar's office by mid November to arrange a special time/place to write the final.

If you have a conflict with a midterm for a year-long course, you must contact the instructor of the other course.

If you have three final exams in 3 consecutive periods, you must contact the Dean of your faculty.

In all case, please let your instructor know.

If we need to give you a make-up exam, it will be given before the regular exam. If you miss an exam due to illness, you must present a doctor's note to the appropriate Dean's office, and you will be given a make-up exam as soon as possible after the regular exam. If you are in this situation, you should contact your instructor as soon as you realize that you will miss the exam.

Failure to follow these rules may result in a grade of zero.

See also the University's policy on final exam conflicts.

**Accessibility Statement.** Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 ext. 82147 for any specific question regarding an accommodation.