MAS 3105-0001—Applied Linear Algebra I, Fall 2013

INSTRUCTOR: Dr. Ettore Aldrovandi `http://www.math.fsu.edu/~ealdrov`
OFFICE: 215 LOV.
EMAIL: `aldrovandi@math.fsu.edu`
OFFICE HOURS: Announced on the Blackboard Site and the instructor's web page.

COURSE WEBSITE Under the courses tab at blackboard (`http://campus.fsu.edu`).

CLASS SCHEDULE Class will meet on Monday, 8:00 AM–8:50 AM, Tuesday and Thursday, 8:00 AM–9:15 AM in MCH 0201.

PREREQUISITES Calculus w/ Analytical Geometry II (MAC2312 or equivalent) with a C- or better.

TEXT Linear Algebra and its applications by David Lay, 4th Edition, Addison-Wesley (ISBN:0321385179)

COURSE CONTENT A selection of topics from chapters 1–6 of the text, with a few additional items from chapter 7, if possible. The course will cover basic elements of linear algebra from both theoretical and computational perspectives. The material includes the study of systems of linear equations, linear transformations, matrix algebra, eigenvalues, eigenvectors and inner-product spaces.

COURSE OBJECTIVES Linear algebra provides fundamental methods and tools for modeling and analyzing data in a vast array of problems arising in the sciences and engineering. The main goal of the course is to introduce students to the theoretical and computational components of the discipline, emphasizing the applicability of the methods and techniques discussed. The key algebraic notions in linear algebra have geometric counterparts that allow us to visualize various concepts, so both aspects of the subject will be explored. The interplay between geometry and algebra leads to a deeper understanding of the concepts discussed and opens new perspectives. Data mining, image analysis, and computer graphics are some examples of modern applications where the methodology of linear algebra has played an important role.

GRADING Your grades will be based on the average score of weekly quizzes, three tests, and a final exam, each counting 20% of the overall grade. One quiz will be dropped when computing the overall quiz score.

Letter grades will be determined from numerical grades as follows. A: 90-100%; B: 80-89%; C: 70-79%; D: 60- 69%; F: 0-59%. Plus or minus grades may be assigned in a manner consistent with standard University practice. This includes factors such as class attendance and participation.

Partial credit will be awarded only when part of a solution is completely correct. Students with incomplete assignments at the end of the course will be given the earned final grade. A grade of I will not be given to avoid a grade of F or to give additional study time. Failure to process a course drop will result in a course grade of F.

WEEKLY QUIZZES Each Thursday, at the end of class, except on a test week: there will be no quiz on a test week.

TEST EXAMS There will be **three** test exams.

1. Thursday, Sep. 19th
2. Thursday, Oct. 17th
3. Thursday, Nov. 14th

FINAL EXAM Monday, Dec. 9th, ~~7:30–9:30 AM,~~ 10:00–12:00 noon, same location as class meetings.

The final exam will be cumulative, with emphasis on the material not covered by the midterms.

EXAM POLICY No makeups. An absence may be excused given sufficient evidence of extenuating circumstances and in accordance with the University policy stated below. In such a case, extra weight will be attached to the other exams. Barring emergencies, the matters leading to a possible excused absence should be discussed with the instructor well in advance. An unexcused absence will result in a grade of zero.

HOMEWORK Homework problems will be assigned but **not** collected for grading. Homework problems will be posted on the course web site and/or announced in class. In any case, assignments only are a suggestion, and you should attempt as many problems as possible. Students are expected to work out problems as part of their study routine. An effort will be made to discuss problems in class, in order to illustrate the material.

COURSE ATTENDANCE Students are expected to attend class regularly. A student absent from class bears the full responsibility for all subject matter and information discussed in class. Attendance (and participation) will be useful to make decisions in borderline cases.

Other situations are discussed under "University Attendance Policy" below.

TUTORING FOR MATH Tutoring is available for this course via ACE Tutoring at the Learning Studio in the William Johnston Building. Appointments may be made, and drop-ins are welcome for one-on-one and group tutoring. Please contact the ACE Learning Studio at tutor@fsu.edu, 850-645-9151, or find more information at `http://ace.fsu.edu/tutoring`.

University Attendance Policy Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

Academic Honor Policy The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "...be honest and truthful and... [to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy, found at `http://fda.fsu.edu/Academics/Academic-Honor-Policy`.)

Americans With Disabilities Act Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; and (2) bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class.

This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center
874 Traditions Way
108 Student Services Building
Florida State University
Tallahassee, FL 32306-4167
(850) 644-9566 (voice)
(850) 644-8504 (TDD)
sdrc@admin.fsu.edu
`http://www.disabilitycenter.fsu.edu/`