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CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

MATH 462: Advanced Linear Algebra, Summer 2011

Class Number: 10331; Schedule: M-T-W-Th 6:00pm–7:40pm in CR5208.

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Instructor: Dr. Vladislav Panferov, office SN 129, phone (818)677-2326

Email: `vladislav.panferov@csun.edu`

Course webpage: `www.csun.edu/~panferov/math462/`

Office hours: (tentative: check webpage for updates) Tue 4-6pm Thu 4-6pm,

or by appointment (email).

Course description: "Linear Algebra with Proofs": Vector spaces, linear independence, bases, dimension. Linear transformations. Determinants. Diagonalization of linear transformations. Jordan canonical forms. Symmetric and orthogonal matrices, conditioning and the Rayleigh quotient, singular-value decomposition and pseudoinverse.

Text: Linear Algebra, by S. H. Friedberg, A. J. Insel, L. E. Spence, 4th edition, Prentice Hall, 2003.

Recommended references: Linear Algebra, by K. M. Hoffman and R. Kunze; 2nd edition, Prentice Hall, 1971; Linear Algebra, by G. E. Shilov, Dover, 1977; Linear Algebra with Applications, by O. Bretscher, 4th ed, Pearson Prentice Hall, 2009 or 3rd ed, 2005 (the last one is a MATH 262 book).

Prerequisites: MATH 262, MATH 320 or equivalent courses.

Grading: 25% quizzes (given in class), 40% two midterm tests, 35% final exam (cumulative). The percentages are generally translated into letter grades using the following scale: 90-100% A; 80-89% B, 70-79% C, 60-69% D, 0-59% F. There will be no "grading on the curve", however the cutoff numbers for the grades may be lowered, at instructors discretion, based on the overall performance of the class.

Homework: Homework is the course's most essential component. You are expected to solve a large number of problems each week, the list of which will be announced in class or on the course webpage. Homework problems will not be graded; however, selected problems will be included in quizzes.

Tests/exams: There will be two in-class midterm tests, tentatively scheduled for July 28 and August 11 (Thursdays). This schedule may be adjusted, and the changes will be announced in class and on the course webpage. All tests will be closed books/notes.

Make-ups: There will be no make-up exams, unless you have to miss the exam for a valid and well-documented reason, due to circumstances beyond your control. In such cases arrangements for an alternate date and time should be made prior to the scheduled test date, if possible.

Final exam: On Tuesday August 23, 2011, 6-8pm in CR 5208.

Calculators: A graphing calculator or a computer software such as Maple or Matlab may be useful for solution of some of the homework problems. However, graphing calculators will <u>not</u> be allowed on midterm or final exams. A basic scientific calculator is OK (example, TI-30XII, or similar).