Math 33A, Linear Algebra and Applications
Fall 2013
Course Information

Class Hours: MWF, 12–1pm, HUMANTS A51.

Instructor: Mario Bonk

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Office hours: Tu, 2–3pm; We, 3pm–4pm; Th, 2–3pm; and by appointment.

Course web-site: `http://www.math.ucla.edu/~mbonk/33a.3.13f/`

Textbook: O. Bretscher, Linear Algebra with Applications, 5th ed.

Grading: There will be weekly homework, two midterms, and a final exam. This will be weighted towards the course grade as follows:

Homework: 30%

Two Midterms: 15% each

Final: 40%

For passing the course it is necessary to turn in homework regularly. Homework will usually be due on Fridays *before* class. No late homework will be accepted. Failure to turn in three homework assignments will automatically result in a failing grade.

First midterm: Fr, Oct. 18, 2013, in class.

Second midterm: Fr, Nov. 15, 2013, in class.

Final exam: Mo, Dec. 9, 2013, 11:30am–2:30pm.

Course topics: Systems of linear equations, Gauss-Jordan elimination, linear transformations, matrix algebra, inverse matrices, subspaces of $\mathbf{R}^n$, linear independence, bases, dimension, kernel and image of linear transformations, coordinates, orthogonality, orthonormal bases, orthogonal projections, orthogonal transformations and matrices, Gram-Schmidt process, QR-factorization, least squares methods, determinants, eigenvalues and eigenvectors, diagonalization of matrices, symmetric matrices, singular-value decomposition.