Exam II Topics
Math 22, Spring 2007

Sections covered: 3.1–3.3, 4.1–4.7, 4.9 (11)

(1) Determinants: calculation (cofactors, row reduction), relation to invertibility, relation to matrix product and scalar multiplication
(2) Vector spaces: definition, subspaces, relationship to span
(3) Null space, column space, row space, rank; finding bases, relation to invertibility
(4) Bases: definition, dimension, relationship between size, linear independence, and span; dimension for subspaces
(5) Coordinate systems: translating between nonstandard bases and between one nonstandard basis and the standard basis
(6) Markov chains: probability/state vectors, stochastic matrices, steady-state/equilibrium vectors