LINEAR ALGEBRA
MATH 3013 SECTION 002, SPRING 2009
INSTRUCTOR: WEIPING LI

REVIEW FOR EXAM 2

(1) §2.1.Must understand the basis and independence, and know how to find a basis. Extend a set of independence to a basis. For example, 12, 13, 22, 23, 26, 27.
(2) §2.2. Must know the concept of the rank for a matrix, find basis for the row space, column space and the nullspace, must know the rank equation. For example, 3, 8, 10.
(3) §2.3. Definition 2.3 and Standard matrix representative are the fundamental facts, one must know. Identifying the linear transformation with its matrix representative, and finding corresponding notions for the matrix. For example, 3, 4, 9, 10, 18, 19.
(4) §3.1. Must know the general vector space notion and different additions and multiplications. For example, 3, 4, 12, 15.
(5) §3.2. Must know the linear combinations, a basis and independence, and test for a subspace. For example, 3, 4,5, 11, 12, 22, 23.
(6) §3.3. Coordinatization of vectors with a given ordered basis. For example, 2, 4, 7, 9, 12, 16, 19, 21.
(7) §3.4. Linear transformation. Understand the kernel , the solution structure for $Tv = b$ is a particular solution p plus the kernel of T. Know how to find its matrix representative of the linear transformation. For example, 3, 4, 8, 9, 11, 12, 20, 21, 22.