Math 322-001- Matrix Algebra
Exam 2 Review
Fall 2015

List of sections from textbook

- Chapter 3 - Sections 1-3

- Chapter 4 - Sections 1-6

List of important terms: (You should know the meaning of these and be prepared to state a definition)

- Chapter 3 - Determinant;   minor;   cofactor

- Chapter 4 - Vector space;   subspace;   column space;   null space;   row space;   basis;   standard basis;   coordinates in a basis;   dimension;   rank

List of procedures/algorithms you will be expected to know:

- Chapter 3 - Computing determinant via row reduction or via cofactors;   computing area of parallelogram/volume of parallelepiped

- Chapter 4 - Finding a basis for $C(A)$, $N(A)$, and $R(A)$;   finding $\mathcal{B}$-coordinates

List of results or formulas you will be expected to know:

- Chapter 3 - $\det(A^T) = \det(A)$; $\det(A^{-1}) = 1/\det(A)$; $\det(AB) = \det(A)\det(B)$; cofactor formula for A^{-1} (Cramer's rule) ;   determinants measure how much a transformation distorts area

- Chapter 4 - Theorem 4.3.5;   Theorem 4.6.14

Suggested problems from the text:

- **3.1:** 7, 9, 13,

- **3.2:** 7, 9, 13, 25, 27

- **3.3:** 11, 13, 21, 23

- **4.1:** 5, 9, 13, 21, 23(a-d)

- **4.2:** 5, 7, 11, 13, 15, 17, 25

- **4.3:** 3, 9, 13, 15, 21

- **4.4:** 3, 5, 7, 15(a,c)

- **4.5:** 3, 5, 11, 13, 19

- **4.6:** 3, 5, 7, 11, 13, 17(a-d)