Midterm 1
Rough outline

Important: You must present your ID when you turn in your exam!! Your exam will be **REFUSED** if you do not have your ID on test day!!!!!

For the exam, you should be able to:

- Decide whether or not a system of linear equations is consistent. If so, use row operations to reduce to reduced row echelon form and find the solution.

- Prove basic facts about matrix algebra.

- Do basic matrix algebra calculations.

- Decompose a matrix into a product of elementary matrices.

- Find the inverse of a nonsingular matrix.

- Compute determinants.

- Prove basic facts about determinants using either the definition or properties of the determinant (as discussed in §2.2).

- Prove that something is/isn't a vector space.

- Prove basic facts about vector spaces.

- Prove that something is/isn't a subspace.

- Decide whether a set of vectors is linearly (in)dependant/spanning.

- Find the nullspace of a matrix.

- Find bases for subspaces and compute dimensions.

- Prove basic facts about bases and dimension.