

## MA2033-Linear Algebra-2014-Topics that will **NOT** be tested at the final

1. Groups
2. Fields
3. Non real Vector Spaces (It will always be assumed that  $F = \mathbb{R}$ )
4. Best approximation in an inner product space( best approximation to  $u \in V$  in a subspace  $W$ . However orthogonal complement  $W^\perp$  can be tested)
5. Complex Matrices (so Hermetian=Symmetric and Unitary=Orthogonal)
6. Algebraic and Geometric multiplicity (only the names will not be tested)
7. Numerical Solution to Systems of Equations (Jacobi and Gauss Siedel)
8. Convergence of matrices (stuff like  $\lim_{k \rightarrow \infty} A^k$ )
9. Numerical Eigenvalue Finding (Power and QR methods, Schur Factorization. However QR factorization can be tested under Gram-Schmidt Orthogonalization)
10. General Vector Norms (only  $p = 1, 2, \infty$  norms will be tested)
11. General Matrix Norms (only  $p = 1, 2, \infty$  norms will be tested)
12. Diagonal Forms(transform a Quadratic Form into a Diagonal Form in coordinate transformations)

### **Note:**

1. As a general policy students can use any of the above words and ideas in their answers.
2. You will get a modified lecture note with these topics marked.
3. You will see answers to all Tests and Mid exams online.
4. You will get a link to lecture material and tests of the other lecturer.