

Module Code	MA2033	Title	Linear Algebra			
Credits	02	Hours/Week	Lectures	02	Pre-requisites	MA 1013
			Lab/Tutorials	-		

Learning Outcomes

At the end of this module the student should be able to

- Reduce a matrix using Gauss-Jordan reduction.
- Solve a system of n equations in m variables.
- Find the inverse of a matrix, eigen values and eigenvectors of a matrix
- Understand the dimension of a vector space, rank of a matrix and basis for a vector space.
- Understand the concepts of linear independence, linear transformation and determinants.
- Apply theories learnt above to solve engineering problems

Outline Syllabus

Vectors spaces, subspaces, linear combinations, spanning sets, linear independence and bases, column space, row space and the rank of a matrix ; Linear transformations; Eigen values and eigen vectors of nxn matrices; Inner product spaces, diagonalization of matrices, quadratic forms, Cayley-Hamilton theorem, the matrix form of a linear transformation

Note: To all MPR,ER and TT students