***SUBJECT NO-MA41003, SUBJECT NAME- LINEAR ALGEBRA***

***LTP- 3-0-0,CRD- 3***

**SYLLABUS :-**

**1. Linear Algebra:Vector spaces over real and complex field, subspaces, linear combination, spanning set, linear dependence and independence of vectors, basis and dimension of vector spaces. Rank of a matrix, solution of system of linear equations using rank concept, Gauss elimination method to solve system of linear equations, linear transformation, rank-nullity theorem, matrix representation of a linear transformation, inner product, norm of vectors, orthogonal vectors, Cauchy-Schwarz inequality (statement only), Eigenvalues and Eigenvectors of matrices and their properties (Hermitian, Skew-Hermitian, Unitary matrices), diagonalization, Cayley-Hamilton Theorem (statement only).**