SUBJECT NO-MA20107, SUBJECT NAME- MATRIX ALGEBRA

LTP- 3-0-0,CRD- 3

SYLLABUS :-

Prerequisite: voidGram-Schmidtâs orthogonalization, row and column spaces, rank and trace and their properties, QR decomposition, linear systems, symmetric, skew-symmetric, hermitian, skew-hermitian, orthogonal, unitary matrices and their properties, generalized inverse, Moore-Penrose inverse, minimum-norm g-inverse, idempotent matrix, projection matrices, quadratic forms, positive definite, non-negative definite, negative definite matrices and their properties, LDU, UDU and Cholesky decompositions, matrix differentiation, eigenvalues and eigenvectors â properties for various type of matrices, singular value decomposition, diagonalization, simulataneous diagonalization, extrema of quadratic forms, least square theory and Gauss-Markoff theorem.