

Faculty of Computers and Information Technology

Linear Algebra

Information :

Course Code : BMT 212

Level : Undergraduate

Course Hours : 3.00- Hours

Department : Faculty of Computers and Information Technology

Instructor Information :

Title	Name	Office hours
Lecturer	Wael Sayed Abdel Rahman Hassanein	2
Teaching Assistant	Hagar Gamal Mohamed Sayed Eliwa	
Teaching Assistant	Manar Afify Farag Hassan abo el Soud	

Description :

The course provides the basic understanding, definitions and properties of determinants and matrices, algebra of matrices, reduced matrix, rank of a matrix, solution of linear systems using inverse matrix, and Cramer's Rule. Topics covered in this course are homogeneous and non-homogeneous systems, square and rectangular systems, idea of a Linear transformation, matrix of linear transformation, solution of nonlinear algebraic equations by fixed point method, secant method, solution of linear algebraic systems by Iterative methods, jacobi method, Seidel Method and solution of nonlinear algebraic systems by Gauss elimination, Gauss elimination with pivot, LU decomposition method, Gauss - Jordan method Eigenvalues and Eigenvectors. Also, the course introduces orthogonality, projections, least squares approximations, orthonormal bases, and linear regression.