1.	Title of the course	Linear Algebra for Engineers
2.	Course number	MA501L
3.	Structure of credits	2-0-0-2
4.	Offered to	PG
5.	New course/modification to	Modification To MA5021/12
6.	To be offered by	Department of Mathematics and Statistics
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	**Course Objective(s):** To introduce basic concepts of linear algebra. To gain hands-on ways of finding bases for vector spaces. To introduce linear transformations and its relations to matrices. To identify characteristic vectors under linear transformations.	
10.	**Course Content:** System of linear equations, row-reduce echelon matrices, invertible matrices, vector spaces, subspaces, linear dependence, linear independence, basis and dimension, linear transformations, linear functionals, inner product spaces, Gram-Schmidt orthogonalization, eigenvalues, eigenvectors, diagonalization of symmetric and Hermitian matrices.	
11.	**Textbook(s):** 1. Kreyszig E, *Advanced Engineering Mathematics*, 10th Edition, John Wiley & Sons (2010). 2. Strang G, *Linear Algebra and Its Applications*, 4th Edition, Brooks/Cole (2005).	
12.	**Reference(s):** 1. Hoffman K and Kunze R, *Linear Algebra*, 2nd Edition, Prentice-Hall of India (2014). 2. Kumaresan S, *Linear Algebra: A Geometric Approach*, 1st Edition, Prentice Hall of India (2000). 3. Lang S, *Linear Algebra*, 3rd Edition, Springer (2004). 4. Strang G, *Introduction to Linear Algebra*, 5th Edition, Wellesley-Cambridge Press (2016).	