1.	Title of the course	Multivariate Statistical Analysis
2.	Course number	MA603L
3.	Structure of credits	3-0-0-3
4.	Offered to	PG
5.	New course/modification to	Modification To MA6109/7
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 multivariate normal distributions along with the estimation of mean and covariance matrix. To study Hotelling T-square and Wishart Distributions. To learn the Multivariate Analysis of Variance, Classifications, Variable reduction, and Copula Methods.	
10.	**Course Content:** Multivariate Normal Distribution, Transformation of Multivariate Normal Random Variables, Conditional Distributions, Independence, Maximum Likelihood Estimation of Mean and Covariance Matrix, Hotelling T- square and Wishart Distribution, Multivariate Analysis of Variance (MANOVA), Principle Component Analysis, Factor Analysis, Discriminant Analysis, Classification, Copula Methods.	
11.	**Textbook(s):** 1. Anderson T W, *An Introduction to Multivariate Statistical Analysis*, John Wiley (2003). 2. Nelsen R B, *An Introduction to Copulas*, Springer (2007).	
12.	**Reference(s):** 1. Johnson R A and Wichern D W, *Applied Multivariate Statistical Analysis*, Prentice Hall India (2012).	