Module Code:	STAT-314 STAT-315
Module Title:	• Multivariate Techniques (Theory) – 3 Credit Hours • Practical – 1 Credit Hour
Name of Scheme:	BS Statistics

Course Outline

Review of matrix algebra, Notions of multivariate distributions. The multivariate normal distribution and its properties. Linear compound and linear combinations. Estimation of the mean vector and the covariance matrix. The Wishart distribution and its properties. The joint distribution of the sample mean vector and the sample covariance matrix.

Books Recommended

1. Johnson, R.A., & Wichern, D.W. (2008). Applied multivariate statistical analysis, Pearson Education: Singapore.
2. Anderson, T.W. (2003). An introduction to multivariate statistical analysis (3rd ed.). John Wiley & Sons: New York.
3. Chatfield, C. & Collins, A.J. (1980). Introduction to multivariate analysis. Chapman and Hall: London.
4. Morrison, D.F. (1990). Multivariate statistical methods (3rd ed.). McGraw Hill Publishing Co.: New York.

Reference Books

1. Kandall, M.G., & Stuart, A. (1983). The advanced theory of statistics (4th ed.). Charles Griffin and Company: London.
2. Rao, C.R. (1973). Linear statistical inference and its applications (2nd ed.). John Wiley and Sons: New York.