Code	Subject Title	Cr. Hrs	Semester
STAT-414	**Multivariate Analysis**	**3**	**VIII**
Year	Discipline		
4	**Statistics**		

Course Outline

The Hotelling's T^2 distribution. The linear discriminant function, Mahalanobis distances. Tests of hypotheses and confidence intervals for mean vectors: One sample and two-sample procedures. Multivariate statistical procedures: Discriminant analysis, Principal component analysis, Factor analysis, and Canonical correlation analysis.

Recommended Books:

- Johnson, R.A., & Wichern, D.W. (2008). Applied multivariate statistical analysis. Pearson Education: Singapore.
- Anderson, T.W. (2003). An introduction to multivariate statistical analysis (3rd ed.). John Wiley & Sons: New York.
- Rencher, A.C. (2002). Methods of multivariate analysis (2nd ed). John Wiley & Sons: New York.
- Tabachnick, B.G., & Fidell, L.S. (2006). Using multivariate statistics (5th ed.). Allyn & Bacon: Boston.
- Bhuyan, K.C. (2008). Multivariate analysis and its applications. New Central Book Agency: Kolkata.
- Chatfield, C., & Collins, A.J. (1980). Introduction to multivariate analysis. Chapman and Hall: London.

Reference Books

- Morrison, D.F. (1990). Multivariate statistical methods (3rd ed.). McGraw Hill Publishing Co.: New York.
- Kandall, M.G., & Stuart, A. (1983). The advanced theory of statistics (4th ed.). Charles Griffin and Company: London.
- Rao, C.R. (1973). Linear statistical inference and its applications (2nd ed.). John Wiley and Sons: New York.