



Code	Subject Title	Cr. Hrs	Semester
MATH-419	Mathematical Statistics - II	3	VIII
Year	Discipline		
4	Mathematics		

Objectives:

Functions of Random Variables

- Distribution function technique
- Transformation technique: One variable, several variables
- Moment-generating function technique

Sampling Distributions

- The distribution of the mean
- The distribution of the mean: Finite populations
- The Chi-Square distribution.
- The t distribution
- The F distribution

Regression and Correlation

- Linear regression
- The methods of least squares
- Normal regression analysis
- Normal correlation analysis
- Multiple linear regression
- Multiple linear regression (matrix notation)

Recommended Books:

- J. E. Freund, Mathematical Statistics, (Prentice- Hall Inc., 1992).
- Hogg and Craig, Introduction to Mathematical Statistics, (Collier Macmillan, 1958).
- Mood, Greyill and Boes, Introduction to the Theory of Statistics, (McGraw Hill).
- R. E. Walpole, Introduction to Statistics, 3rd edition, (Macmillan Publishing Company London, 1982)
- M. R. Spiegel, L. J. Stephens, Statistics, (McGraw Hill Book Company, 1984)