



Code	Subject Title	Cr. Hrs	Semester
STAT-221	Probability and Statistics	3	IV
Year	Discipline		
2	Information Technology		

Objectives

This course is aimed to introduce the concept of statistics, randomness and probability and build on these concepts to develop tools and techniques to work with random variables. The following topics will be covered in this course: Introduction to Statistics, Descriptive Statistics, Statistics in decision making, Graphical representation of Data Stem-and Lead plot, Box- Cox plots, Histograms and Ogive, measures of central tendencies, dispersion for grouped and ungrouped Data, Moments of frequency distribution; examples with real life, use of Elementary statistical packages for explanatory Data analysis. Counting techniques, definition of probability with classical and relative frequency, subjective approaches, sample space, events, laws of probability. General Probability Distributions, Conditional probability, Bayes theorem with application to Random variable (Discrete and continuous) Binomial, Poisson, Geometric, Negative Binomial Distributions, Exponential Gamma and Normal distributions, Regression and Correlation.

Prerequisites

None

Text Book

Walpole, *Introduction to Statistics*, Prentice Hall, 1982, ISBN: 0024241504.

Reference Material:

- G. Cowan G, *Statistical Data Analysis*, Clarendon, Oxford, 1998, ISBN13: 9780198501558
- Mariano R, *Advances in Statistical Analysis and Statistical Computing III*, JAI Press, Greenwich, Conn, 1993