DEPARTMENT OF STATISTICS

Course Outcomes:

Paper	Paper Name	Outcomes **After completion of the course the student should be able to**
SEMESTER I		
PAPER – I	**Descriptive Statistics**	**CO 1**.knowledge of Statistics and its scope and importance in various areas such as Medical, Engineering, Agricultural and Social Sciences etc. **CO 2**.knowledge of various types of data, their organization and evaluation of summary measures such as measures of central tendency and dispersion etc. **CO 3**. knowledge of other types of data reflecting quality characteristics including concepts of independence and association between two attributes, **CO4**. Insights into preliminary exploration of different types of data. **CO5.**Knowledgeof correlation, regression analysis, regression diagnostics, partial and multiple correlations
SEMESTER II		

PAPER – II	**Probability Theory and Distributions**	**CO1**.Ability to distinguish between random and non-random experiments, **CO 2**. knowledge to conceptualize the probabilities of events including frequentist and axiomatic approach. Simultaneously, they will learn the notion of conditional probability including the concept of Bayes' Theorem, **CO 3**.knowledge related to concept of discrete and continuous random variables and their probability distributions including expectation and moments, **CO 4**.knowledge of important discrete and continuous distributions such as Binomial, Poisson, Geometric, Negative Binomial and Hyper-geometric, normal, uniform, exponential, beta and gamma distributions, **CO5.**Acumen to apply standard discreteand continuous probability distributions to different situations.

SEMESTER III

PAPER – III	Statistical Inference	**CO1**.Concept of law large numbers and their uses **CO 2**.Concept of central limit theorem and its uses in statistics **CO 3**.concept of random sample from a distribution, sampling distribution of a statistic, standard error of important estimates such as mean and proportions, **CO4**.knowledge about important inferential aspects such as point estimation, test of hypotheses and associated concepts, **CO5.**knowledge about inferences from Binomial, Poisson and Normal distributions as illustrations,

SEMESTER IV

PAPER – IV:	**Sampling Techniques and Designs of Experiments**	**CO1**.Introduced to various statistical sampling schemes such as simple, stratified and systematic sampling. **CO 2**.An idea of conducting the sample surveys and selecting appropriate sampling techniques, **CO 3**.Knowledge about comparing various sampling techniques. **CO4**.carry out one way and two way Analysis of Variance, **CO5.**understand the basic terms used in design of experiments,
PAPER – V:	**Applied Statistics**	**CO1**.time series data, its applications to various fields and components of time series, **CO 2**.fitting and plotting of various growth curves such as modified exponential, Gompertz and logistic curve, **CO 3**.fitting of trend by Moving Average method, **CO4**.measurement of Seasonal Indices by Ratio-to-Trend , Ratio-to-Moving Average and Link Relative methods, **CO5.**Applications to real data by means of laboratory assignments.

SEMESTER V

PAPER – VI(A)	**Operations Research - I**	**CO1**.To know the scope of Operations Research **CO 2**. To link the OR techniques with business environment and life sciences **CO 3**. To convert real life problems into mathematical models **CO4**. To find a solution to the problem in different cases **CO5.** To inculcate logical thinking to find a solution to the problem.
PAPER – VI(B)	**OPERATIONS RESEARCH - II**	**CO1**.To solve the problems in logistics **CO 2**.To find a solution for the problems having space constraints **CO 3**.To minimize the total elapsed time in an industry by efficient allocation of jobs to the suitable persons. **CO4**. To find a solution for an adequate usage of human resources **CO5.**To find the most plausible solutions in industries and agriculture when a random environment exists.