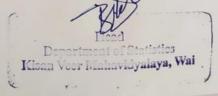
CO for First Year UG AY 2022-23 Revised as per NEP

Faculty of Science

Department of Statistics

Descriptive Statistics – I	1. meaning and scope of Statistics, various statistical organizations,
	2. data and types of data, various data presenting methods,
	3. population, sample and various methods of sampling,
	4. various measures of central tendencies and dispersion,
	5. moments, skewness and kurtosis.
Elementary Probability Theory	1. distinguish between random and non-random experiments
	2. acquire knowledge of concepts of probability
3	3. use the basic probability rules, including additive and multiplicative laws
	 understand concept of conditional probability and independence of events.
	5. understand concept of univariate random variable and its probability distributions
	 acquire knowledge of mathematical expectation of univariate random variable.
Descriptive Statistics – II	1.correlation coefficient and interpret its value.
	2. regression coefficients, interpret its value and use in regression analysis.
	3. qualitative data including concept of independence and association between two attributes
۵	4. vital statistics and concept of mortality and fertility and growth rates.
rete Probability Distributions	bivariate discrete distributions, independence of bivariate r.vs., Mathematical expectation of bivariate discrete random variable. one point distribution, two point distribution, Bernoulli distribution
	3. Uniform distribution, Binomial distribution, Hypergeometric distribution,
	4. Poisson distribution, Geometric distribution and Negative binomial distribution.





Class	Subject	Program outcomes
B.Sc.	Statistics	> knowledge of important univariate distributions such as Laplace, Cauchy,
III		Lognormal, Weibull, Logistic, Pareto, Power Series Distribution.
		➤ knowledge of Multinomial and Bivariate Normal Distribution.
		➤ knowledge of Truncated Distributions.
		information of various measures of these probability distributions.
		acumen to apply standard continuous probability distributions to different situations.
		knowledge about important inferential aspect of point estimation.
		concept of random sample from a distribution, sampling distribution of a statistic,
		standard error of important estimates such as mean and proportions.
		knowledge of various important properties of estimator,
		knowledge about inference of parameters of standard discrete and continuous distributions.
	1	concept of Fisher information and CR inequality.
		knowledge of different methods of estimation.
		knowledge of basic terms used in design of experiments.
		concept of one-way and two-way analysis of variance.
		knowledge of various designs of experiments such as CRD, RBD, LSD and factorial experiments.
		knowledge of using an appropriate experimental design to analyze the experimental data
		> importance of R- programming
		knowledge of identifiers and operators used in R.
		knowledge of conditional statements and Loops used in R.
		> knowledge of quality tools used in Quality management.
		knowledge of process and product control used in Quality management.
		> knowledge about order statistics and associated distributions
		concept of convergence and Chebychev's inequality and its uses
		concept of law large numbers and central limit theorem and its uses.
		 knowledge of terms involved in reliability theory as well as concepts and measures.
		account of interval estimation.
		I be availed as of interval estimation of mean, variance and population proportion.
		 knowledge of interval estimated. knowledge of important aspect of test of hypothesis and associated concept.
		the state of the s
		basic knowledge of complete enumeration and sample, sampling that errors, principle steps in sample surveys, sample size determination, limitations of sampling etc.

- concept of various sampling methods such as simple random sampling, stratified random sampling, systematic sampling and cluster sampling.
- an idea of conducting sample surveys and selecting appropriate sampling techniques.
- knowledge of comparing various sampling techniques.
- knowledge of ratio and regression estimators.
- Concept of Linear programming problem.
- > Knowledge of solving LPP by graphical and Simplex method.
- > Knowledge of Transportation, Assignment and Sequencing problems.
- Concept of queuing theory.
- > Knowledge of simulation technique and Monte Carlo technique of simulation



Flood
Department of Chatistics
Kisan Voor Mahavidyalaya, Wai

Class	subject		Program outcomes
B.Sc. II	Statistics	Theory	 understand concept of discrete and continuous probability distributions with real life situations. distinguish between discrete and continuous distributions. find the various measures of random variable and probabilities using its probability distribution. know the relations among the different distributions. understand the concept of transformation of univariate and bivariate continuous random variable understand the concept of Multiple Linear Regression. understand the concept of Multiple Correlations and Partial Correlation. know the concept of sampling theory. understand the need of vital statistics and concept of mortality and fertility. know some standard continuous probability distributions with real life situations. distinguish between various continuous distributions. find the various measures of continuous random variable and probabilities using its probability distribution. understand the relations among the different distributions. understand the Chi-Square, t and F distributions with their applications and inter relations. know the concept and use of time series. understand the meaning, purpose and use of Statistical Quality Control, construction and working of control charts for variables and attributes. apply the small sample tests and large sample tests in various situations.
		Practical	compute probabilities of standard probability distributions. compute the expected frequency and test the goodness of fit. understand how to obtain random sample from standard probability distribution and sketch of the p. m. f. / p. d. f. for given parameters. fit plane of Multiple regression and compute Multiple and Partial correlation coefficients. draw random samples by various sampling methods construct various control charts. understand the applications of Poisson, Geometric and Negative Binomial distributions.



Department of Ctelletics
Kitom Voor Kalanvidyalaya, Wai