

<b>PROGRAMME NAME:</b> B.Sc.(H) Mathematics Sem 1
<b>COURSE NAME:</b> Probability and Statistics
<b>SEMESTER DURATION:</b> August to December 2023

<b>WEEK</b>	<b>TOPIC(S)</b>	<b>TEACHING METHODOLOGY ADOPTED/CONTINUOUS INTERNAL EVALUATION</b>
1-3	Descriptive statistics: Populations, Samples, Stem-and-leaf displays, Dotplots, Histograms, Qualitative data, Measures of location, Measures of variability, Boxplots. Sample spaces and events	Classroom teaching and Practicals using Microsoft Excel
4-6	Probability axioms and properties, Conditional probability, Bayes' theorem and independent events. Discrete random variables and probability distributions, Expected values; Probability distributions with their mean and variance: Binomial, geometric, hypergeometric, negative binomial, Poisson, and Poisson distribution as a limit.	Classroom teaching/ Evaluation through problem Solving
7-8	Continuous random variables, Probability density functions, Uniform distribution, Cumulative distribution functions and expected values.	Classroom teaching
9-10	Normal and standard normal distributions with their	Classroom teaching and

	percentiles, Approximating the binomial distribution; Exponential distribution, Lognormal distribution	Practicals using Microsoft Excel
11	Sampling distribution and standard error of the sample mean,	Classroom teaching Evaluation through quizzes ,surprise test and remedial classes for slow learners
12-13	Central Limit Theorem and applications. Scatterplot of bivariate data,	Classroom teaching and Practical's using Microsoft Excel
14-15	Regression line using principle of least squares (statement with normal equations), Predicted values and the residuals, Error sum of squares, Coefficient of determination, The sample correlation coefficient and properties.	Classroom teaching and Practical's using Microsoft Excel
16	Revision and Test	Evaluation through Question and Answer Session