

Lecture Plan		
Name of the College: Government College of Arts, Science and Commerce, Sanquelim-Goa		
Name of Faculty: Alisha Teli	Subject: Mathematics	
Paper code: MAT-112 Elementary Statistics	Program: F.Y.B.Sc..	Division: -
Academic year: 2025-26	Semester: I	Total Lectures: 41
Course Objectives: This course is intended to familiarize students with organizing, summarizing, analyzing data, and drawing appropriate conclusions from it. The various tools and techniques are also intended to be used in day-to-day real – world problems.		
Expected Course Outcome: On successful completing the course a student will have knowledge about: 1) Bar Diagrams, Pie charts, Frequency polygon, Histogram and Ogives and Measures of central tendency. 2) Correlation and regression. 3) Probability, Events and Algebra of Events, Theorems on Probability. 4) Statistical quality control and sampling methods.		
Student Learning Outcome: Student will be able to 1) Interpret data and graphically represent it. 2) Calculate measures of central tendencies and variations. 3) Analyze correlation and regression. 4) Solve problems in Probability theory. 5) Apply statistical quality control.		

Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
July Aug							
	31/07/2025	01/08/2025	2	Bivariate data Definition; Scatter diagram.		Chalk Board	Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.GChitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege.
Aug	04/07/2025	09/08/2025	4	Correlation, Coefficient of correlation Correlation and Regression: Simple, Partial and Multiple Correlation (3 variables only); Rank correlation; Simple linear regression.		Chalk Board	Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.GChitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege.
	11/08/2025	16/07/2025	3 IndependenceDay	Tutorial: 1.Computing and Analyzing the various types of correlation. 2. Finding the Rank correlation.	Problem solving	Chalk Board	Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.GChitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege. S. C. Gupta: Fundamentals of Statistics, 7 th Edition, Himalaya Publishing House, 2018.
	18/08/2025	23/08/2025	4	3. Analysing Multiple correlation.	Problem solving	Chalk Board	Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi,

				4. Analysing Regression			S.GChitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege.
	25/08/2025	25/08/2025	1	Probability: Introduction to Probability, Random experiment, Sample space.		Chalk Board	Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.GChitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege. S. C. Gupta: Fundamentals of Statistics, 7 th Edition, Himalaya Publishing House, 2018.
August Sept	26/08/2025	01/09/2025	0 Chaturthi Break				
September	02/09/2025	06/09/2025	3	Events and algebra of events: Mutually exclusive, Exhaustive and complementary events, Definition of Probability		Chalk Board	Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.GChitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege.
	08/09/2025	13/09/2025	4	Conditional Probability Addition and Multiplication Theorem of probability Independent events			Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.GChitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege.
	15/09/2025	20/09/2025	4	Theorem of Total Probability Bayes Theorem and its applications		Chalk Board	Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi,

							S.GChitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege.
	22/09/2025	27/09/2025	4	Tutorial: 1. Solving problems on the addition and multiplication theorem of probability. 2. Solving problems on conditional probability and total probability. 3. Solving problems on Bayes' theorem. Statistical Quality Control: Introduction, Causes of variation in quality, Objective,	Problem solving		Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.GChitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege. S. C. Gupta: Fundamentals of Statistics, 7 th Edition, Himalaya Publishing House, 2018.
September Oct	29/09/2025	04/10/2025	3 Gandhi Jayanti	Attribute Data: P chart, U chart, C chart Numerical Data: X bar chart, R bar chart, S bar chart	Problem solving	Chalk Board	Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.GChitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege.
	06/10/2025	11/10/2025	4	Sampling techniques- Various methods of data collection; census survey and sample survey Sampling Methods Simple random sampling, Systematic sampling, Stratified, sampling and Clustered sampling		Chalk Board	Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.GChitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege.

	13/10/2025	18/10/2025	4	Non probability sampling methods Convenience sampling, Consecutive sampling, Quota sampling, Purposive or Judgmental, sampling, Snowball sampling Tutorial: 1.Demonstration of quality control using P chart, U chart, C chart. 2. Demonstration of quality control using X bar chart, R bar chart, S bar chart.	Problem solving	Chalk Board	Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.GChitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege. S. C. Gupta: Fundamentals of Statistics, 7 th Edition, Himalaya Publishing House, 2018.

*** Assessment Rubrics**

Component	Max Marks
ISA 1	10
ISA 2	10
ISA 3	10
Project	Nil
Semester End Exam	80