Lecture Plan

Name of the College: Government College of Arts, Science and Commerce, Sanquelim-Goa

Name of Faculty: Nirmiti Shankar Naik

Subject: Mathematics

Paper code: MAT-142 (Practical)

Program: FY B.Sc.

Division: -

Academic year: 2025-26

Semester: II

Total Lectures: 60

Course Objectives:
1. To make students aware of various statistical methods that can be employed in data analysis, hypothesis testing and research.

Expected Course Outcome:
1) Calculate measures of central tendencies and dispersion, Correlation and regression analysis.
2) Solve problems in Probability theory.
3) Understand testing of hypothesis.
4) Demonstrate based on various statistical tests using statistical software.

Student Learning Outcome: Student will be able to
1) Apply statistical methods for data analysis, hypothetical testing and research using statistical software.

Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books

December	01/12/2025	06/12/2025	St. Francis Xaviers Feast 01	Finding measures of central tendency, namely, mean, median and mode on software and manually	Problem Solving	Smarboard Typed Notes	1.S. C. Gupta: Fundamentals of Statistics, 7 th Edition, Himalaya Publishing House, 2018. 2. Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.G. Chitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege.
	08/12/2025	13/12/2025	04	Finding measures of dispersion, namely, range, quartile deviation, mean deviation and standard deviation manually	Problem Solving	Smarboard Typed Notes	S. C. Gupta: Fundamentals of Statistics, 7 th Edition, Himalaya Publishing House, 2018.
	15/12/2025	20/12/2025	Liberation Day 01	Importing data from CSV or Excel file. Data entry in R/SPSS/PSPP.		SPSS software, Smart board	

	22/12/2025	23/12/2025 04	Working with questionnaires for understanding the collected data and their analysis.	Questionnaire	SPSS software, Smart board	
January	02/01/2026	03/01/2026 04	Working with questionnaires for understanding the collected data and their analysis.	Questionnaire	SPSS software, Smart board	
	05/01/2026	10/01/2026 04	Finding measures of dispersion, namely, range, quartile deviation, mean deviation and standard deviation using Software	Problem solving	Chalkboard Smart board, Software	1.S. C. Gupta: Fundamentals of Statistics, 7 th Edition, Himalaya Publishing House, 2018. 2. Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.G. Chitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege.
	12/01/2026	17/01/2026 04	Graphical representations and their interpretations		Typed Notes, Smartboard	1. S. C. Gupta: Fundamentals

						of Statistics, 7 th Edition, Himalaya Publishing House, 2018.
	19/01/2026	24/01/2026	04	Analyzing correlation and regression.	Problem solving	Typed Notes,SPSS software, Smart board	
	26/01/2026	31/01/2026	04 Republic Holiday	Theory of Probability	Problem solving	Typed Notes, Smart board	1.S. C. Gupta: Fundamentals of Statistics, 7 th Edition, Himalaya Publishing House, 2018. 2.Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.G. Chitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege
February	02/02/2026	07/02/2026	04	Random Variables			
	09/02/2026	14/02/2026	04	Theoretical Distributions : problem	Problem solving	Notes, Smart board	

			solving manually			
	16/02/2026	21/02/2026			Problem solving	SPSS software, Smart board, Notes	S. C. Gupta: Fundamentals of Statistics, 7 th Edition, Himalaya Publishing House, 2018.
			04	Testing of hypothesis for single mean and difference of means using independent t- test and paired t-test.			
	23/02/2026	28/02/2026			Problem solving	SPSS software, Notes, Smart board	S. C. Gupta: Fundamentals of Statistics, 7 th Edition, Himalaya Publishing House, 2018.
			04	Testing hypothesis for One Way ANOVA			
March	02/03/2026	07/03/2026	03 Holi	Testing of hypothesis for more than two means using ANOVA	Problem solving	Notes, SPSS software, Smart board	1.S. C. Gupta: Fundamentals of Statistics, 7 th Edition, Himalaya Publishing House, 2018. 2.Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.G. Chitale, Mrs.

						Gomathi Venkat, Late Shree S.R.Rege
09/03/2026	14/03/2026	04	Testing of hypothesis regarding independence of attributes using Chi square test	Problem solving	SPSS software, Smart board	1.S. C. Gupta: Fundamentals of Statistics, 7 th Edition, Himalaya Publishing House, 2018. 2.Statistical Techniques, S.Y.B.Com(sem-III & IV) by Dr. Neena Joshi, S.G. Chitale, Mrs. Gomathi Venkat, Late Shree S.R.Rege
16/03/2026	21/03/2026	02 Gudi Padva / Id-Ul Fitr	Testing the hypothesis stating that the k independent samples have been drawn from the populations which have identical distributions using Kruskal Wallis test.	Problem solving	SPSS software, Smart board	
23/03/2026	28/03/2026	03 Ram Navami	Revision			
30/03/2026	31/03/2026	02	Revision			

* Assessment Rubrics

Component	Max Marks
ISA 1	5
ISA 2	5
ISA3	5
Project	Nil
Semester End Exam	40