

**SES'S L. S. RAHEJA COLLEGE OF ARTS AND COMMERCE
(AUTONOMOUS)**



Syllabus of Statistics-II under NEP 2020 vertical (OE) with effect from 2024-25

Programme: Bachelor of Arts

Department of Mathematics, Statistics and Computer

HoD/Sr. Person of the Department: Dr. Seema Ukidve

Date of approval by the BoS: 24/04/2024

Approved by the Academic Council: 29/04/2024

Approved by the Governing Body: 06/05/2024



Programme: Bachelor of Arts				Semester: II	
Course: Statistics -II Academic Year: 2024-2025 Batch: 2024-2027				Code: UGBAIIOE124	
Teaching Scheme				Evaluation Scheme	
Lectures	Practicals	Tutorials	Credits	Internal Continuous Assessment (ICA) (weightage)	Term End Examination (TEE) (weightage)
30	Nil	Nil	2	20	30
Internal Component					
Class Test (Duration 30 Mins)			Presentation		Class Participation
10			5		5
Learning Objectives:					
<ul style="list-style-type: none"> • To introduce the technique of data collection and its presentation. • To emphasize the need for numerical summary measures for data analysis. 					
Course Outcomes:					
<ul style="list-style-type: none"> • Possess knowledge of the various summary measures of location (averages) used for data analysis and the basis of their selection. • Acquire the skill to select appropriate methods to present data. • Be able to select and calculate appropriate averages to represent data sets. • Hold the knowledge to select and calculate appropriate measures of dispersion for data sets. • Gain the knowledge about the use of statistical tools to carry out elementary categorical data analysis. 					
Pedagogy: The objective of the course is to encourage students to learn and appreciate the use of the various tools of Statistics with regard to scientific management in businesses. Hence,					
<ul style="list-style-type: none"> • Adaptive teaching methods. • To invoke Computational thinking in problem solving. • Classroom session with applications in MS-excel in Lecture. • Students would be given project/field work for better understanding of the concepts. 					

Detailed Syllabus: (per session plan) Session Outline for Statistics II
Each lecture session would be of one hour duration (30 Sessions)

Module	Module Content	Module Wise Pedagogy Used	Module Wise Duration
I	<p>Correlation and Regression: Correlation and regression Analysis, product moment correlation coefficient, Spearman's Rank Correlation. Concept of linear regression, Principle of least square, fitting A straight line by method of least square, relation between Regression coefficient and correlation coefficient. Fitting of Curves, concept and use of coefficient determination.</p>	Classroom sessions with computational thinking	7+8
II	<p>Use of Excel solving problems Index Number: Analysis of categorical data, Index No as comparative tool, price index number, measure of simple and composite index Number , Quantity Index Number and Value Index Number .Time reversal test , factor reversal test, circular test, fixed base index number, base shifting , splicing and deflating cost of living Index Number ,Concept of Real Income based on wholesale price index Number . Case study</p>	Classroom sessions with computational thinking	7+8

Reference Books:

- Goon A.M., Gupta M.K., Dasgupta B. Fundamentals of Statistics, Volume I, The World Press Private Limited, Calcutta. Fifth edition.
- Kothari, C.R.: Research Methodology, Methods and Techniques, Wiley Eastern Limited. First Edition.
- Shah R.J.: Descriptive Statistics, Seth Publications. Eighth edition.
- Spiegel, M.R.: Theory and Problems of Statistics, Schaum's Publishing Series. Tata McGraw-Hill. First edition.
- Welling, Khandeparkar, Pawar, Naralkar : Descriptive Statistics : Manan Prakashan.
- *M. P. Chaudhary, Advanced Applied Mathematics*, Piyush Book Publication Pvt. Ltd. New Delhi, India, 2003. ISBN:81-86548-64-5.

QUESTION PAPER PATTERN

Details of Internal Continuous Assessment (ICA)

Internal Marks: 20

- 1 Internal Test of 10 marks will be conducted.
- 1 Assignment of 10 Marks will be given.

Term End Examination Question Paper Pattern Total Marks: 30

Q1 Answer any **three** out of the following Four questions (based on Module I) 5*3=15

Q2 Answer any **three** out of the following Four questions (Based on Module II) 5*3=15