

SRI VENKATESWARA UNIVERSITY:: TIRUPATI
Programme: B.A. Houours in Economics (Major) w.e.f. AY 2026-27
COURSE STRUCTURE

Semester	Course Number	Course Name	No.of Hrs/ Week	No.of Credits
III	5	Economic Thought	4	4
	6	Statistical Methods for Economics	4	4
	7	Indian Economy	4	4

COURSE 6: STATISTICAL METHODS FOR ECONOMICS

Theory

Credits: 4

4 hrs/week

Course Objective: The objective of this course is to make the students learn basics of statistics with a view to applying them to day-to-day applications in economics.

Course Learning Outcomes:

At the end of the course, the student is expected to demonstrate the following skills

1. Understands the nature of statistics and able to collect data using questionnaire;
2. Draws appropriate diagrams and graphs for presentation of data effectively;
3. Calculates and analyses Averages and Dispersions for the given data and interpret them meaningfully;
4. Explains the uses of correlation, simple regression and time series in economic analysis.
5. Calculates index numbers and interprets them correctly.



Dr. M. RUKMANI
M.A., Ph.D., UGC-NET.,
Chairperson of BoS In Economics (PASS),
S.V. University, Tirupati.

SEMESTER-III**COURSE 6: STATISTICAL METHODS FOR ECONOMICS****Theory****Credits: 4****4 hrs/week**

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Unit – 1: Introduction to Statistics

- Nature and Definition of Statistics, scope, importance and limitations of Statistics
- Data: Meaning, Types of data - Primary and Secondary data, and their sources
- Census and Sample - Merits and Demerits
- Schedule and Questionnaire

Unit – 2: Diagrammatic Analysis

- Frequency distribution - Meaning, Types, Tabulation,
- Histogram, Frequency Polygon, Cumulative Frequency Curves
- Graphical presentation of data: Line graph, Bar Diagrams, Pie Charts
- MS. Excel for Diagrammatic Analysis

Unit – 3: Measures of Central Tendency and Dispersion

- Measures of Central Tendency and Dispersion - Meaning and Importance
- Averages: Arithmetic Mean, Median, Mode
- Dispersion: Range, Mean Deviation
- Standard Deviation, Coefficient of Variation with numerical examples

Unit – 4: Correlation, Regression and Time Series

- Correlation – Types and Measurement
- Simple Regression Model
- Time Series: Definition and Components
- Measurement of Time Series: Moving Averages



Dr. M. RUKMANI
M.A., Ph.D., UGC-NET.

Chairperson of BOS in Econ-

Unit - 5: Index Numbers

- Index Numbers: Concepts of Price and Quantity Relatives
- Laspeyres's, Paasche's and Fisher's Ideal Index Numbers
- Uses and Limitations of Index Numbers

References:

1. B. R. Bhat, T. Srivenkataramana and K.S. Madhava Rao (1996): *Statistics: A Beginner's Text*, Vol. I, New Age International (P) Ltd
2. Goon A.M, Gupta M.K., Das Gupta B. (1991), *Fundamentals of Statistics*, Vol. I, World Press, Calcutta.
3. M. R. Spiegel (1989): *Schaum's Outline of Theory and Problems in Statistics*, Schaum's Outline Series.
4. S.P. Gupta (1985), *Statistical Methods*, S. Chand & Co, 1985
5. K.V.S Sarma (2003) , *Statistics Made Simple*, Second edition, New Delhi: PHI Learning
6. Telugu Academy Book, Parimanathmaka Paddathulu (For B.A.).

Suggested Activities:

- Unit-1. Assignments of the application of various statistical methods
- Unit-2. Student Seminar on themes requiring usage of tables, diagrams, statistical analysis and interpretation
- Unit-3. Group project work for collection of data on locally relevant economic problems
- Unit-4. Exercise on calculation of correlation and regression using Excel.
- Unit-5. Chart Preparation on formulas of different index numbers

THREE YEAR B.A. DEGREE EXAMINATION – Dec/Jan 2025
CHOICE BASED CREDIT SYSTEM

SEMESTER – III

COURSE 6: STATISTICAL METHODS FOR ECONOMICS

Under CBCS New Regulation w.e.f. Academic Year 2025–26

Time: 3 Hours

Max. Marks: 75

SECTION – A

Write any five of the following. Each question carries 3 marks. ($5 \times 3 = 15$)

1. Calculate the Arithmetic Mean of the following data: 10, 12, 15, 18, 20.
2. Find the Median of the data: 5, 9, 12, 15, 21.
3. Calculate the Range for the following values: 8, 14, 19, 22, 30.
4. What is Statistics? Explain its scope.
5. Distinguish between Primary and Secondary data.
6. Calculate the Mean Deviation from Mean for the data: 4, 6, 8, 10.
7. Define correlation.
8. Calculate the Coefficient of Variation for the data: Mean = 50, SD = 5.
9. What is an Index Number?
10. Write about the uses of Index numbers.

SECTION – B

Answer the following questions. Each question carries 12 marks. ($5 \times 12 = 60$)

11. a) Calculate Mode for the following data:

Class: 0–10, 10–20, 20–30, 30–40

Frequency: 5, 9, 14, 7

(or)

- b) Explain the meaning and importance of Measures of Central Tendency.

12. a) Calculate Standard Deviation and Coefficient of Variation for the following data:

X: 10, 20, 30, 40, 50

(or)

- b) Explain the concept of Dispersion and its measures.


Dr. M. RUKMANI
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13. a) From the following data, calculate Karl Pearson's coefficient of correlation:

X: 5, 10, 15, 20

Y: 8, 12, 18, 25

(or)

b) Explain the types of correlation.

14. a) Fit a simple regression equation of Y on X from the following data:

X: 2, 4, 6, 8

Y: 5, 11, 17, 23

(or)

b) Explain the Simple Regression Model.

15. a) Calculate Laspeyres, Paasche and Fisher's Ideal Index Numbers from the following data:

Prices (Base): 10, 12

Prices (Current): 15, 18

Quantities (Base): 5, 6

Quantities (Current): 4, 7

(or)

b) Explain the uses and limitations of Index Numbers.


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