ADIKAVI SRI MAHARSHI VALMIKI UNIVERSITY, RAICHUR

SYLLABUS

B.A. Three Year Degree Program for the Subject

Economics

With Effect from 2024-25

DISCIPLINE SPECIFIC CORE COURSE (DSC) FOR SEM I - VI, SKILL ENHANCEMENT COURSE (SEC) FOR SEM IV/V/VI and ELECTIVE COURSES FOR SEM V AND VI

AS PER N E P (Revised): 2024

BA III SEMESTER

TITTLE: ELEMENTARY STATISTICS FOR ECONOMICS

CREDITS: 06 INTERNAL MARKS: 20 THEORY MARKS: 80

Course Outcomes:

After successfully completing this course, students will be able to:

1. Understand basic statistical concepts and their role in economic analysis.
2. Organize and present economic data using tables, diagrams, and graphs.
3. Compute and interpret measures of central tendency and dispersion.
4. Analyze economic relationships using correlation and regression tools.
5. Construct and apply index numbers for measuring changes in economic variables .

Module I: Basics of Statistics and Data Classification

Introduction to Statistics: Definition, nature, functions, and importance of statistics in economics- Variables and Data: Qualitative and Quantitative variables - Scales of Measurement: Nominal, Ordinal, Interval, Ratio –Sources of Data: Primary and Secondary Data; Sources like CSO, RBI, NSSO, Economic Survey - Methods of Data Collection: Census and Sample

Module II: Data Presentation Techniques

Importance of visual tools in economic analysis - Textual and Tabular Presentation: Simple economic tables, frequency tables with examples -Diagrams and Graphs:One-dimensional diagrams: bar charts (simple and multiple), Two-dimensional diagrams: circles (pie charts), Frequency diagrams: histogram-Time Series Graphs: Line graphs

Module III: Measures of Central Tendency

Need for Central Tendency in Economics- Arithmetic Mean: Simple mean – applications in economic data (e.g., average income) -Median: Meaning and computation -Mode: Meaning and computation

Module IV: Measures of Dispersion and Distribution Shape

Need for Studying Dispersion: Range and Coefficient of Range - Quartile Deviation and Coefficient of Quartile Deviation -Mean Deviation -Standard Deviation and Variance: Concept, computation and interpretation - Coefficient of Variation.

Module V: Correlation, Regression and Index Numbers

Correlation Analysis:Concept and significance in economics,Types: positive, negative, zero correlation, Karl Pearson's Correlation Coefficient
Regression Analysis:Introduction to regression Simple Linear Regression: Meaning, regression lines and equations (X on Y and Y on X)
Index Numbers:Meaning and uses in economics, Construction of Index Numbers: Weighted Index Numbers: Laspeyres, Paasche, Fisher's formula (price index only)

References

1. Gupta, S.C. & Kapoor, V.K. – *Fundamentals of Mathematical Statistics*, Sultan Chand
2. Goon, A.M., Gupta, M.K., Dasgupta, B. – *Fundamentals of Statistics*, World Press
3. Elhance, D.N. – *Fundamentals of Statistics*, Kitab Mahal
4. Nagar, A.L. & Das, R.K. – *Basic Statistics*, Oxford University Press
5. Monga, G.S. – *Mathematics and Statistics for Economists*, Vikas Publishing
6. Dowling, E.T. – *Statistics for Business and Economics (Schaum's Outline Series)*