

**JYOTI NIVAS COLLEGE AUTONOMOUS
SYLLABUS FOR 2018 BATCH AND THEREAFTER**

Programme: B.A

Semester: IV

**ECONOMICS PAPER IV
STATISTICAL METHODS IN ECONOMICS**

Course Code: 18IVEC4

No. of Hours: 75

COURSE OBJECTIVES:

- To help students to acquire skills in Statistics
- To develop analytical, reasoning and graphical presentation skills
- To facilitate application of statistical methods in economic theory.

LEARNING OUTCOME

- Skills in collecting, analyzing and interpreting data.
- Skills in applying measures of average and dispersion in problem solving.
- The use of correlation and causal analysis in problem solving.
- The skill and ability to relate statistical knowledge to scientific enquiry.
- To analyze the significance of index numbers in understanding the changes in prices.
- To examine trends in business and economic activities through projective techniques.
- Understanding various methods and techniques of research to formulate a research problem.

UNIT 1 : INTRODUCTION TO STATISTICS

14 HRS

Statistics - meaning, importance, limitations.

Primary and secondary data- meaning, census and sample, sources.

Preparing a questionnaire.

Classification of data - objectives, types, preparing a frequency distribution

Tabulation of data- types, parts of a table.

Diagrammatic and graphical representation of data- simple bar diagram, multiple bar diagram, sub-divided bar diagram, pie diagram, histogram, frequency polygon and frequency curve and ogives.

UNIT 2 : MEASURES OF CENTRAL TENDENCY AND DISPERSION

16 HRS

Measures of central tendency - Mean, Median and Mode, Dispersion -Range, Inter quartile range, Mean deviation and standard deviation, coefficient of variation, skewness - Bowley's and Karl Pearson's methods of calculating skewness, Kurtosis – concept

UNIT 3 : CORRELATION ANALYSIS

11 HRS

Correlation analysis –Definition, types, methods-Scatter diagram, Karl Pearson's Coefficient of Correlation, Spearman's Rank correlation- ranks are given, equal ranks are given.

UNIT 4 : REGRESSION ANALYSIS

12 HRS

Regression analysis –Definition, importance; Types- Y on X and X on Y, Regression calculation Methods- Simultaneous equation method and methods of least squares.

UNIT 5 : TIME SERIES ANALYSIS**11 HRS**

Time series analysis - components of time series, Methods of decomposing trend- moving average method- 5 year moving average method, method of least squares.

UNIT 6 : INDEX NUMBERS**11 HRS**

Index Numbers - Simple and aggregative index numbers - Laspeyre's, Paasche's and Fisher's index numbers. Time and Factor reversal tests, consumer price index

REFERENCES:

1. Gupta, S. C. and V. K. Kapoor (1993), Fundamental of Applied Statistics, S. Chand and Sons, New Delhi.
2. Gupta, S.P [2001], Statistical methods, Sultan Chand & Sons, New Delhi.
3. Gupta, S.P [1996], Practical statistics, Sultan Chand & Sons, New Delhi.
4. Nagar A. L. and R.K. Das (1993) Basic Statistics, Oxford University Press, New Delhi
5. Veerachamy, R [2002], Quantitative Methods for Economists, New Age International Publishers.

ADDITIONAL REFERENCES:

1. Agarwal, D.R.[2003], Quantitative Methods, Vrinda Publications
2. Croxton, FE., DJ. Cowden and S. Klein (1973) Applied General Statistics, Prentice Hall NewDelhi.
3. Speigal M,R. (1992), Theory and Problems of Statistics, McGraw Hill Book Co., London
