

## STATISTICS FOR ECONOMICS

Program Name	<b>B.A. in Economics</b>	Semester	<b>Fourth Semester</b>
Course Title	<b>Statistics for Economics</b>		
Course Code:	<b>BA4- ECOCT8</b>	No. of Credits	<b>3</b>
Contact hours	<b>42 Hours</b>	Duration of SEA/Exam	<b>2 Hours</b>
Formative Assessment Marks	<b>40</b>	Summative Assessment Marks	<b>60</b>

### Course objectives:

1. To enable the students to acquire the basic skills of statistics as applicable in the field of economics.
2. To induce the students to develop analytical reasoning and graphical representation skills in economics.
3. To help the students to understand the economic principles and problems in a clear manner by using various statistical tools.
4. To make economics more relevant for students in their career.

**Course Outcomes (COs):** After the successful completion of the course, the student will be able to:

- CO1. Understand the nature of Data and their presentation
- CO2. Calculate Descriptive statistics like measures of central tendency and dispersion
- CO3. Apply statistical techniques like correlation and regression in Economic analysis

<b>Content of Theory</b>	<b>42 Hrs</b>
<b>Unit-1: Preliminaries</b>	<b>12 Hrs</b>
<b>Chapter:1 Introduction to Statistics:</b> Meaning and Importance of Statistics, Functions of Statistics, Types of Statistics: Descriptive Statistics and Inferential Statistics-Variables; Qualitative Variable and Quantitative Variable	4
<b>Chapter-2:</b> Datatypes, Sources and Collection of Data: Qualitative and Quantitative Data - Cross Section Data, Time Series Data and Panel Data - Primary and Secondary sources of Data – Methods of Collecting Primary Data	4
<b>Chapter-3:</b> Tabulation and Presentation of Data: Classification and tabulation of data - Frequency distributions – Continuous and Discrete frequency distribution. Graphical presentation- Histogram- frequency polygon - Ogive Curves -Bar Diagram, Pie Chart	4
<b>Unit -2: Measures of Central Tendency and Dispersion</b>	<b>14 Hrs</b>
<b>Chapter-4: Arithmetic Average:</b> Definition of Central Tendency, Types of Central Tendency: Arithmetic Mean: Meaning and Properties of Arithmetic Mean – Computation of Arithmetic Mean	5
<b>Chapter-5: Positional Averages-Median and Mode:</b> Definition and importance of Median- Calculation of Median- Definition and importance of Mode - Calculation of Mode.	4

<b>Chapter-6: Dispersion:</b> Meaning of Dispersion- Measures of Dispersion- Range- Quartile deviation- mean deviation - Standard deviation - Coefficient of Variation and Their Computation	5
<b>Unit -3: Correlation, Regression and Time Series Analysis</b>	<b>16 Hrs</b>
<b>Chapter-7: Correlation:</b> Meaning of Correlation - Types of correlation - Methods of measuring Correlation- Karl Pearson's correlation coefficients	5
<b>Chapter-8: Regression:</b> Meaning and Importance of Regression - Regression Equation - Estimation of regression equation - Applications of regression equation in Economics	6
<b>Chapter-9: Time Series Analysis:</b> Definition of Time Series – Components of Time Series – Estimation and Forecasting of Trend	5

**Pedagogy:** Classroom lecture, tutorials, Problem solving exercise

<b>Formative Assessment for C1 &amp; C2</b>		
<b>Assessment Occasion/ type</b>	<b>Marks</b>	
	<b>C1</b>	<b>C2</b>
Internal Test	10	10
Assignment/Seminar	05	
Quiz	05	
Case study / Field work / Project work/ Industrial Visit and Prepare a report	-	10
<b>Total</b>	<b>40 Marks</b>	
<i>Formative Assessment as per NEP guidelines are compulsory</i>		

<b>References</b>	
1	Gupta S P. (2012) Statistical Methods, S. Chand and Company, New Delhi.
2	S. C. Gupta, (New edition) Fundamentals of Statistics, Himalaya publishing house, Mumbai.
3	S. N. Yogish, Statistical methods for Economists- Mangaldeep publications, Jaipur.
4	Anderson, Sweeney & Williams, (2002) Statistics for Business & Economics, Thomson South-Western, Bangalore.
5	Daniel and Terrel: Business Statistics for Management and Economics; oaghton Mifflin Co., Boston, Toronts, 7th Edition, 1995, PP 1 to 972 + 6 Appendices
6	Medhi, J., Statistical Methods: An Introductory Text, Wiley, 1992
7	Morris H. Degroot and Mark J. Schervish, "Probability and Statistics", 4th edition, 2012.