

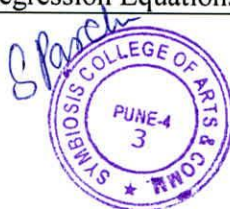


SYMBIOSIS

# Symbiosis College of Arts and Commerce

(An Autonomous College Affiliated to University of Pune)

Subject code	Semester	I	II	III	IV	V	VI	M.Com.	I	II	III	IV
Title of Subject For Approval of BOS		<b>Statistics for Economics: Theory and Applications</b> <b>T.Y.BA Semester VI Special Paper 8</b>										
Objectives	<ol style="list-style-type: none"> <li>The course aims to strengthen fundamental knowledge and understanding of the principles and nature of statistics.</li> <li>The course enables students to develop the skills to select, apply and use a wide variety of statistical and quantitative techniques in economic analysis and in the real-world context.</li> <li>The course enables students to be able to identify and analyze economic problems and opportunities and formulate recommendations for courses of action.</li> </ol>											
Detailed syllabus												
Unit	Contents of the syllabus											Number of Lectures
<b>1.</b>	<b>Measures of Central Tendency</b>											<b>10</b>
	1.1 Classification and Tabulation of Data											
	1.2 Graphical Representation of Data											
	1.3 Computation of the three measures of Central tendency:											
	a) For an individual series											
	b) for discrete series											
	c) for a continuous series											
	1.4 Computation of Quartiles, Deciles and Percentiles											
	1.5 Selection of a Suitable Average											
	1.6 Practical Applications of Mean, Median and Mode											
<b>2.</b>	<b>Measures of Dispersion</b>											<b>10</b>
	Contents:											
	2.1 Absolute and relative measures of Dispersion											
	2.2 Computation of Mean Deviation, Quartile Deviation & Standard deviation											
	2.3 Relation between various measures of Dispersion											
	2.4 Concept of Lorenz Curve											
	2.5 Concept of Skewness and Kurtosis											
<b>3.</b>	<b>Correlation and Regression</b>											<b>16</b>
	3.1 Meaning of Correlation Analysis											
	3.2 Computation of Correlation through:											
	a) Karl Pearson's correlation coefficient											
	b) Rank Correlation											
	3.3 Meaning of Regression Analysis											
	3.4 Properties of Linear Regression											
	3.5 Line of Best Fit											
	3.6 Derivation of Regression Equations											



4.	<b>Probability Theory</b>	<b>10</b>
	4.1 Concept of Probability	
	4.2 Types of Events	
	4.3 Theorems of Probability: a) Addition Theorem b) Multiplication Theorem	
5	<b>Association of Attributes</b>	<b>08</b>
	5.1 Notation and Terminology	
	5.2 Yule's coefficient of association	
	<b>Total No. of lectures</b>	<b>54</b>

**Learning Outcomes:**

- To develop an outlook of logical, critical and creative thinking in problem-solving.
- To apply statistical concepts to economic theory and analysis.
- To acquire practical insights of various statistical concepts.

**Suggested References:**

- S.C Gupta (2018), 'Fundamentals of Statistics', Himalaya Publishing House, Mumbai.
- S. N. Dey (2015), Business Mathematics and Statistics, Chhaya Prakashani Publishers
- S. Baruah (2011), 'Basic Mathematics and its Application in Economics', Macmillan
- S. Chand (2010), 'Business Statistics', S.Chand & Company Ltd., New Delhi.
- J. Chakrabarti (2008), 'Advanced Business Mathematics and Statistics', Dey Book Concern
- David Freedman, Robaert Pisani and Roger Purves (Fourth Edition) (2007), 'Statistics', Viva Books.
- J. Medhi (2007), 'Statistical Methods -An Introductory Text', New Age International Publishers.
- J. E. Freund and Benjamin Perles (12<sup>th</sup> Edition) (2007), 'Modern Elementary Statistics'
- Akhilesh and Balasubrahmanyam, 'Mathematics and Statistics for Management', (Vikash Publishing House Pvt.Ltd.)
- Murray Spiegel and Larry Stephens, 'Schaum's Easy Outline of Statistics'.
- Case Studies - <http://www.stat.ucla.edu/cases/>

