



# SYMBIOSIS COLLEGE OF ARTS & COMMERCE

An Autonomous College | Under Savitribai Phule Pune University  
 Reaccredited 'A+' with 3.51 CGPA For Third Cycle By NAAC | College with Potential for Excellence

COURSE TITLE	<b>Applications of Statistics for Economic Analysis</b>	
<p><b>Course Learning Outcomes:</b>  <b>On successful completion of the module students will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Strengthen fundamental knowledge and understanding of the principles and nature of statistics.</li> <li>2. Be able to identify and analyze economic problems and opportunities and formulate recommendations for courses of action.</li> <li>3. 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>4. Develop logical, critical and creative thinking, and patience and persistence in problem-solving.</li> </ol>		
<b>Gist of this course in maximum 3 to 4 lines</b>	The course is based on basic statistical methods and applications to the discipline of economics that would enable students to comprehend statistical techniques that can be applied to analyze various economic scenarios/problems.	
<b>Detailed syllabus</b>		
Unit	CONTENTS OF THE COURSE	No. of Lectures
1)	<b>1. <u>Title of the Topic:</u> Introduction to Statistics</b> 1.1 Descriptive and inferential statistics 1.2 Types and collection of data 1.3 Graphical representation of data: Types of Bar charts, Scatter Plots, Stem & Leaf plot, pie charts -Numerical analysis	<b>12</b>
2)	<b>2. <u>Title of the Topic:</u> Measures of central tendency</b> 2.1 Requisites of a good measure of central tendency 2.2 Types of Mean: Geometric Mean and Harmonic Mean 2.3 Relationship between Arithmetic Mean, Geometric Mean and Harmonic Mean 2.4 Calculation of mean: Assumed Mean, Step Deviation Method, Missing frequencies and Corrected Mean 2.5 Calculation of median and mode	<b>14</b>
3)	<b>3. <u>Title of the Topic:</u> Measures of Dispersion</b> 3.1 Absolute and relative measures 3.2 Standard deviation – merits, demerits and computation 3.3 Quartile Deviation - merits, demerits and computation 3.4 Mean deviation, Coefficient of Variation 3.5 Applications of Absolute and Relative Measures	<b>5</b>
4.	<b>4. <u>Title of the Topic:</u> Correlation and Regression</b> 4.1 Theory of Correlation Analysis	<b>15</b>

	4.2 Karl Pearson's correlation coefficient 4.3 Spearman's Rank Correlation 4.4 Regression Equations 4.5 Applications of Correlation and Regression	
<b>5.</b>	<b>5. <u>Title of the Topic:</u> Association of Attributes</b> 5.1 Terminology and Notation 5.2 Types of Association 5.3 Yule's coefficient of association 5.4 Coefficient of Colligation 5.5 Proportion Method	<b>8</b>
	<b>Total Number of Lectures</b>	<b>54</b>

**Suggested Reference Books:**

- 1) Fundamentals of Statistics S.C. Gupta
- 2) Statistical Methods S.P. Gupta, Sultan Chand & Sons
- 3) G. C. Beri, Business Statistics, Tata McGraw Hill
- 4) Statistical Methods (Volumes 1 and 2) by N.G Das

**Recommended Readings:**

- 1) Elementary Statistics by William Cyrus Navidi, Barry J Monk (3<sup>rd</sup> Edition)
- 2) J K Sharma, Business Statistics, Pearson Education