

**Department of Liberal Education**  
**Era University, Lucknow**  
**Course Outline**  
**Effective From: 2023-24**

<b>Name of the Program</b>		<b>B.A. / B.Sc. (LIBERAL EDUCATION)</b>		<b>Year/ Semester:</b>		<b>3<sup>rd</sup> / 6<sup>th</sup></b>	
<b>Course Name</b>	<b>Introductory Econometrics and Statistics</b>	<b>Course Code:</b>	<b>ECO309</b>	<b>Type:</b>	<b>Theory</b>		
<b>Credits</b>	<b>04</b>			<b>Total Sessions Hours:</b>	<b>60 Hours</b>		
<b>Evaluation Spread</b>	<b>Internal Continuous Assessment:</b>	<b>50 Marks</b>		<b>End Term Exam:</b>	<b>50 Marks</b>		
<b>Type of Course</b>	<input type="radio"/> Compulsory	<input checked="" type="radio"/> Core	<input type="radio"/> Creative	<input type="radio"/> Life Skill			
<b>Course Objectives</b>	1. To provide an understanding of the concepts and methods of Statistics, for application in data analysis. 2. To get the statistical skills required for the analysis of socio-economic data.						
<b>Course Outcomes(CO): <i>After the successful course completion, learners will develop the following attributes:</i></b>							
<b>Course Outcome (CO)</b>	<b>Attributes</b>						
<b>CO1</b>	Understand Introductory Econometrics & Statistics, and its application						
<b>CO2</b>	Be able to apply a variety of statistical distributions and estimation techniques proficiently						
<b>CO3</b>	Explain the concept, types, and problems in constructing index number						
<b>CO4</b>	Describe how correlation is used to identify relationships between variables						
<b>Pedagogy</b>	Interactive, discussion-bases, student-centered, presentation.						
<b>Internal Evaluation Mode</b>	Mid-term Examination: 20 Marks Activity: 10 Marks Class test: 05 Marks Online Test/Objective Test: 05 Marks Assignments/Presentation: 05 Marks Attendance: 05 Marks						
<b>Session Details</b>	<b>Topic</b>			<b>Hours</b>	<b>Mapped CO</b>		
<b>Unit 1</b>	<b>Introduction to Econometrics &amp; Statistics</b> Aims of econometrics, Application of Econometric Methods to Various Economic Problems, Types of data, Distinction between Economic Model and Econometric model. What is Statistics? Statistics Examples, Basics of Statistics, Applications of Statistics			15	CO1		
<b>Unit 2</b>	<b>Statistical Concepts</b> Normal distribution, Chi-square, t & F distribution, Estimation of Parameters, Testing of Hypothesis, Parametric & Non-Parametric Estimations, Type-I and Type-II Errors.			15	CO2		
<b>Unit 3</b>	<b>Index Numbers</b>			15	CO3		

	Index numbers: meaning and importance, Problems in the construction of index numbers, Types of index numbers: price index, Quantity index, Value index, Construction of price index numbers, Consumer price index number: meaning and uses, Problems in the construction of cost of living index number, Limitations of index numbers.													
<b>Unit 4</b>	<b>Correlation Analysis</b> Meaning, Types of correlation, Methods of studying correlation, Scatter diagram method, Graphic method, Karl Pearson's coefficient of correlation.											15	CO4	
<b>CO-PO and PSO Mapping</b>														
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	1	1							2	2			1	
CO2	1					1	1		1				1	
CO3	1	1	3		1	1			1				1	
CO4	1					1	1		1	2			1	
<i>Strong contribution-3, Average contribution-2, Low contribution-1,</i>														
<b>Suggested Readings:</b>														
<b>Text- Books</b>	<ol style="list-style-type: none"> <li>1. S P Gupta, Statistical Methods, Sultan Chand &amp; Sons; 1st edition (2014).</li> <li>2. D. N. Gujarati and D.C. Porter, Essentials of Econometrics, McGraw Hill, 4th edition, International Edition, 2009.</li> </ol>													
<b>Reference Books</b>	<ol style="list-style-type: none"> <li>1. Clark, Megan J. and John A. Randal (2010) A First Course in Applied Statistics, 2nd edition, Pearson Education.</li> <li>2. Lewis, Margaret (2011) Applied Statistics for Economists, Routledge.</li> </ol>													
<b>Para Text</b>	<b>Unit 1</b> <a href="https://www.youtube.com/watch?v=vEP4RIOKuE4">https://www.youtube.com/watch?v=vEP4RIOKuE4</a> <b>Unit 2</b> <a href="https://www.youtube.com/watch?v=zKUB0GhD1Xo">https://www.youtube.com/watch?v=zKUB0GhD1Xo</a> <b>Unit 3</b> <a href="https://www.youtube.com/watch?v=dUe3U0BTb4k">https://www.youtube.com/watch?v=dUe3U0BTb4k</a> <b>Unit 4</b> <a href="https://www.driveresearch.com/market-research-company-blog/what-is-correlation-analysis-in-market-research/">https://www.driveresearch.com/market-research-company-blog/what-is-correlation-analysis-in-market-research/</a>													
<b>Recapitulation &amp; Examination Pattern</b>														
<b>Internal Continuous Assessment:</b>														
<b>Component</b>	<b>Marks</b>	<b>Pattern</b>												
<b>Mid Semester</b>	20	<b>Section A:</b> Contains 10 MCQs/Fill in the blanks/One Word Answer/ True-False type of questions. Each question carries 0.5 mark. <b>Section B:</b> Contains 07 descriptive questions out of which 05 questions are to be attempted. Each question carries 03 marks.												
<b>Activity</b>	10	Will be decided by subject teacher												
<b>Class Test</b>	05	Contains 05 descriptive questions. Each question carries 01 mark.												
<b>Online Test/ Objective Test</b>	05	Contains 10 multiple choice questions. Each question carries 0.5 marks.												
<b>Assignment/ Presentation</b>	05	Assignment to be made on topics and instruction given by subject teacher												
<b>Attendance</b>	05	As per policy												
<b>Total Marks</b>	<b>50</b>													

**Course created by: Dr. Samreen Naqvi**



**Signature:**

**Approved by:**

**Signature:**