

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

Name of the	B.A. / B.Sc. (LIBERAL EDUCATION)			Year/ Semester:	2 <sup>nd</sup> / 4 <sup>th</sup>					
Program										
Course	Testing of	Course	ST202	Туре:	Theory					
Name	Hypothesis	Code:			-					
Credits	05			<b>Total Sessions Hours:</b>	75 Hours					
Evaluation	Internal	50 Marks		End Term Exam:	50 Marks					
Spread	Continuous									
	Assessment:									
Type of Course	C Compulsory	Ocre		C Creative	C Life Skill					
Course	1. This course	attempts	to create	awareness among student	wareness among students about a few most					
Objectives	frequently used sampling distributions that manage to correlate it with pra									
	situations.	<u>-</u>	8			1				
	5 Situations. 2 It will teach students to review every decision making problems around them in the									
	light of hyp	othesis test	ting and ide	entify the most suitable tes	sting strat	regy to reach				
	an optimal a	nd valid co	onclusion.		5	-8,				
	3. It will cover	concepts	such as par	ametric testing and non-pa	rametric	testing large				
	sample test	for mean a	nd proporti	on exact sample tests for r	nean and	variance and				
	their applica	tions in rea	al life in mu	ltiple disciplines	incun unu	(ununee unu				
				tupie disciplines.						
Course Outc	comes (CO): After	the succes	sful course	e completion learners w	vill develo	on following				
attributes		ine succes	sjui course	completion, learners w	<i> ueve</i> .	ip jouoning				
Course										
Outcome			At	tributes						
(CO)	Attributes									
CO1	Student will learn about the basic concept of sampling distributions of different types and									
	their applications.									
CO2	Students will have k	nowledge	of the term	s like null and alternative	hypothese	es, two-tailed				
	and one tailed, alternative hypotheses, type 1 error and type 2 error, level of significance									
	and confidence, p value.									
CO3	Students will develop the ability to understand under what situations one would conduct									
	the large sample tests (in case of one sample and two sample tests).									
CO4	Students will be familiar with one sample and two sample test related to t-test, F-test, Chi									
	Square test and their use in real/daily life scenarios.									
Pedagogy	Interactive, discussion-bases, student-centered, presentation.									
Internal	Mid-term Examination: 20 Marks									
Evaluation	Activity: 10 Marks									
Mode	Class test: 05 Marks									
	Online Test/Objective Test: 05 Marks									
	Assignments/Presentation: 05 Marks									
	Attendance: 05 Mar	ks								
Session		,	Торіс		Hours	Mapped				
Details	~					CO				
Unit 1	Sampling Distribution	ons, Parame	eter, Statisti	c and Standard error.	15	CO1				
	Sampling distributio	n ot Z, t, f	, and chi-so	uare without derivations,						
	Simple properties of these distributions and their interrelationship									

		(without proof).															
		Activity:															
		Compute standard deviation of sample means of multiple samples.								les.							
Unit 2		Statistical Hypothesis (Null and Alternative), Simple and 20 CO2															
		Composite hypothesis, One sided and two sided hypothesis,															
		Decisi p-valu	ion mat	trix, Ty ical re	vpe –l a	ind Typ	pe - II e	errors,	Signifi	cance I	evel,						
		p-value, critical region, acceptance region, degree of freedom, power of test.															
		Activity:															
Unit 3		Making models of real life scenarios of Testing of Hypothesis.								03							
		Varial	oles) p	roporti	ons and	d mear	ns for c	one sa	mple a	nd for	two	20		05			
		sampl	es. Test	ting of	Correla	tion co	efficien	t.	1								
		A	4														
		Testin	ity:	lation h	betweer	n BMI a	and TSH	[ level	using d	ata.							
Unit 4		Tests	based	on exa	act san	npling	distribu	tions f	for sma	ıll sam	ples:	20	C	04			
		Testin	ig equa	lity of	means	using	one sa	mple t	- test,	two sa	mple						
		indepe E-test	for equ	t- test (: ality o	tor equation for the second	al varia	nces) an	nd paire	ed t-test	t. goodne	ss of						
		fit and	l indepe	endence	e of attr	ibutes.	a em-sq		515 101	goodile	35 01						
		Activi	ity:	aistion	ofottri	hutog h	aturaan	aanda	, and ar	inion	hout						
		PTM	Parent	s teach	er meet	ing)	etween	gender	and of		looui						
										P I M (Parents teacher meeting)							
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CO-PO CO CO1	D and F PO1	PSO Ma PO2	apping PO3	PO4	PO5	PO6	PO7	PO8	<b>PSO1</b>	PSO2	PSO3	PSO4	PSO5	PSO6			
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Recapitulation & Examination Pattern						
Internal Continuous Assessment:						
Component	Marks	Pattern				
Mid Semester	20	Section A: Contains 10 MCQs/Fill in the blanks/One Word				
		Answer/ True-False type of questions. Each question carries 0.5				
		mark.				
		Section B: Contains 07 descriptive questions out of which 05				
		questions are to be attempted. Each question carries 03 marks.				
Activity	10	Will be decided by subject teacher				
Class Test	05	Contains 05 descriptive questions. Each question carries 01				
		mark.				
Online Test/ Objective	05	Contains <b>10 multiple choice questions.</b> Each question carries <b>0.5</b>				
Test		mark.				
Assignment/ Presentation	05	Assignment to be made on topics and instruction given by subject				
		teacher				
Attendance	05	As per policy				
Total Marks	50					

Course created by:	Dr. Nazia Naqvi
	Dr. Abdul Quddoos

Approved by: Prof. Shashi Bhushan

Shashi Bhushan

Signature:

Signature:

Department of Liberal Education, Era University, Lucknow