

Course code	Course Title	L	T	P	C
BCSE333P	Statistical Inference Lab	0	0	2	1
Pre-requisite	NIL	Syllabus version			
		1.0			
<b>Course Objectives</b>					
<ol style="list-style-type: none"> <li>1. To study statistical methods for hypotheses testing and solving inference problems.</li> <li>2. To interpret the results in a way that draws evidence-based and well-informed decisions from data.</li> <li>3. To derive conclusions from data and analyze its implications.</li> </ol>					
<b>Course Outcomes</b>					
At the end of the course, the student will be able to					
<ol style="list-style-type: none"> <li>1. Understand the notion of a parametric model, point estimation of the parameters and properties of a good estimator.</li> <li>2. Conquer the concept of interval estimation and confidence intervals.</li> <li>3. Analyze and perform large-sample tests of hypotheses.</li> <li>4. Discuss nonparametric tests of hypotheses.</li> <li>5. Translate and correlate the statistical analysis into Statistical inference</li> </ol>					
<b>Indicative Experiments</b>					
1	Methods of Estimation – MLE and Method of Moments	2 hours			
2	Estimation of Confidence intervals	4 hours			
3	P- value and Power of the test	2 hours			
4	Large Sample Tests- Test for Population mean & Population proportions	4 hours			
5	Small Sample Tests – t – test for population mean, Paired t-test	4 hours			
6	F- test for population variances	2 hour			
7	Chi-square test for goodness of fit and test for attributes	4 hours			
8	Test for correlation and test for regression	6 hours			
9	Non-parametric tests	4 hours			
<b>Total Laboratory Hours</b>					<b>30 hours</b>
Mode of assessment: Continuous assessment / FAT / Oral examination and others					
Recommended by Board of Studies		12-05-2022			
Approved by Academic Council		No. 66	Date	16-06-2022	