

Course code	Course Title	L	T	P	C
BCSE207P	Programming for Data Science Lab	0	0	2	1
Pre-requisite	NIL	Syllabus version			
		1.0			
<b>Course Objectives</b>					
<ol style="list-style-type: none"> <li>To provide necessary knowledge on data manipulation and to perform analysis on the practical problems using statistical and machine learning approach.</li> <li>To generate report and visualize the results in graphical form using programming tools.</li> <li>To learn and implement R programs for data science.</li> </ol>					
<b>Course Outcome</b>					
<p>Upon completion of the course, the student will be able to</p> <ol style="list-style-type: none"> <li>Program and use R language to solve problems.</li> <li>Design a suitable form for analysis from real-time data.</li> <li>Formulate insights from the data through statistical inferences.</li> <li>Evaluate and visualize the results, analyze the performance of the models.</li> </ol>					
<b>Indicative Experiments</b>					
1.	Functions in R	4 hours			
2.	Vectors and Lists	2 hours			
3.	Data Frames	4 hours			
4.	Handling Missing Data	4 hours			
5.	Manipulating Data with dplyr and tidyr	2 hours			
6.	Processing JSON Data	2 hours			
7.	APIs	3 hours			
8.	Data Visualization	3 hours			
9.	Interactive Visualization in R	3 hours			
10.	Case Study	3 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	