Scheme of

B. Tech. in CSE (Data Science & Analytics)

2022 Onwards

Year	Semester	Course Code	Course Name	Type	L	T	P	Credits
			FIRST YEAR					
1ST	1ST	MAL105	Calculus for Data Science	BS	3	1	0	4
1ST	1ST	CSL109	Introduction to Data and Analytics	DC	3	0	2	4
1ST	1ST	HUL304	Professional Ethics	HU	3	0	0	3
1ST	1ST	CSL 101	Computer Programming	DC	3	0	2	4
1ST	1ST	HUL 101	Communication Skills	HU	2	0	2	3
1ST	1ST	SAP 101	Health, Sports & Safety	HU	0	0	2	0
1ST	1ST	HUL 102	Environmental Studies	HU	2	0	0	0
			Subtotal		**16**	**1**	**8**	**18**
1ST	2nd	MAL107	Introduction to Linear Algebra	BS	3	1	0	4
1ST	2nd	MAL106	Probability and Statistics	BS	3	1	0	4
1ST	2nd	CSL102	Data Structures	DC	3	0	2	4
1ST	2nd	CSP101	Web Programming	DC	0	0	4	2
1ST	2nd	ECL103	Applied Electronics	ES	3	0	2	4
1ST	2nd	HUL103	Introduction to Entrepreneurship	HU	3	0	0	3
			Subtotal		**15**	**2**	**8**	**21**
			Total					**39**
			SECOND YEAR					
2nd	3rd	MAL202	Advanced Probability and Statistics	BS	3	1	0	4
2nd	3rd	CSL 202	Introduction to Object Oriented Programming	DC	3	0	2	4
2nd	3rd	CSL204	Discrete Maths & Graph Theory	DC	3	1	0	4
2nd	3rd	CSL210	Data Structures With Applications	DC	2	0	2	3
2nd	3rd	CSP205	Tools and Practices for Data Science - I	DC	0	0	4	2
2nd	3rd	CSL214	Data Handling and Visualization	DC	1	0	2	2

			Subtotal		**12**	**2**	**10**	**19**
		CSL205	Design and Analysis of Algorithms	DC	3	0	2	4
2nd	4th	CSL207	Operating Systems	DC	3	0	2	4
2nd	4th	CSL215	Sensor Data Analytics	DC	3	0	2	4
2nd	4th	CSL216	Foundations of Computing	DC	3	0	0	3
2nd	4th	CSL217	Web Analytics	DC	3	0	0	3
2nd	4th	CSP206	Tools and Practices for Data Science - II	DC	0	0	4	2
			Subtotal		**15**	**0**	**10**	**20**
			Total					**39**
			THIRD YEAR					
3rd	5th	CSL422	Machine Learning	DC	3	0	2	4
3rd	5th	CSL311	Data Privacy and Security	DC	3	0	2	4
3rd	5th	CSL 301	Database Management Systems	DC	3	0	2	4
3rd	5th	CSL421	Artificial Intelligence	DC	3	0	2	4
3rd	5th	CSL302	Computer Networks	DC	3	0	2	4
3rd	5th	CSP301	Tools and Practices for Data Science - III	DC	0	0	4	2
3rd	5th	CSD301	Mini Project - I	DE	0	0	6	3
			Subtotal		**15**	**0**	**20**	**25**
3rd	6th	CSL313	Computer Vision and Deep Learning	DC	3	0	2	4
3rd	6th	CSL444	Big Data Analytics	DC	3	0	2	4
3rd	6th	CSL436	Data Mining and Warehousing	DC	3	0	2	4
3rd	6th	CSL314	Design Thinking	DC	3	0	0	3
3rd	6th		Open Course – I	OC	3	0	0	3
3rd	6th	CSD301	Mini Project - II	DE	0	0	6	3
			Subtotal		**15**	**0**	**12**	**21**
			Total					**46**
			FINAL YEAR					
4th	7th	CSD 403	Project Phase - I	DE	0	0	4	2
4th	7th		Elective – I	DE	3	0	0	3
4th	7th		Elective –II	DE	3	0	0	3
4th	7th		Elective – III	DE	3	0	0	3

4th	7th		Elective - IV	DE	3	0	0	3
4th	7th		MooC Course / Open Course – II	OC	3	0	0	3
				Subtotal	**15**	**0**	**4**	**17**
				OR				
4th	7th	CSD 402	Industry Internship Project	DE	0	0	12	6
4th	7th	CSD 403	Project Phase - I	DE	0	0	4	2
				Subtotal	**0**	**0**	**16**	**8**
				Total				**17/8 (25)**
4th	8th	CSD 402	Industry Internship Project	DE	0	0	12	6
4th	8th	CSD 404	Project Phase - II	DE	0	0	12	6
				Subtotal	**0**	**0**	**24**	**12**
				OR				
4th	8th	CSD 404	Project Phase - II	DE	0	0	12	6
4th	8th		Elective – I	DE	3	0	0	3
4th	8th		Elective – II	DE	3	0	0	3
4th	8th		Elective – III	DE	3	0	0	3
4th	8th		Elective - IV	DE	3	0	0	3
4th	8th		MooC Course / Open Course – II	OC	3	0	0	3
				Subtotal	**15**	**0**	**12**	**21**
				Total				**12/21 (33)**
			Total					**29**
			GRAND TOTAL					**153**

TYPE	CREDITS
BS	16
HU	9
ES	4
OC	6
DE	32
DC	86

Total	153