Scheme Document

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

For 2022 Batch Onwards

Year	Semester	Course Code	Course Name	Type	L	T	P	Credits
FIRST YEAR								
1ST	1ST	MAL 105	Calculus for Data Science	BS	3	1	0	4
1ST	1ST	CSL 109	Introduction to Data and Analytics	DC	3	0	2	4
1ST	1ST	HUL 304	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	MAL 107	Introduction to Linear Algebra	BS	3	1	0	4
1ST	2nd	MAL 106	Probability and Statistics	BS	3	1	0	4
1ST	2nd	CSL 102	Data Structures	DC	3	0	2	4
1ST	2nd	CSP 101	Web Programming	DC	0	0	4	2
1ST	2nd	ECL 103	Applied Electronics	ES	3	0	2	4
1ST	2nd	HUL 103	Introduction to Entrepreneurship	HU	3	0	0	3
			Subtotal		**15**	**2**	**8**	**21**
Total								**39**
SECOND YEAR								
2nd	3rd	MAL 202	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	CSL 204	Discrete Maths and Graph Theory	DC	3	1	0	4
2nd	3rd	CSL 210	Data Structures with Applications	DC	2	0	2	3
2nd	3rd	CSP 205	Tools and Practices for Data Science – I	DC	0	0	4	2
2nd	3rd	CSL 214	Data Handling and Visualization	DC	1	0	2	2
			Subtotal		**12**	**2**	**10**	**19**
		CSL 205	Design and Analysis of Algorithms	DC	3	0	2	4
2nd	4th	CSL 207	Operating Systems	DC	3	0	2	4
2nd	4th	CSL 215	Sensor Data Analytics	DC	3	0	2	4

2nd	4th	CSL 216	Foundations of Computing	DC	3	0	0	3
2nd	4th	CSL 217	Web Analytics	DC	3	0	0	3
2nd	4th	CSP 206	Tools and Practices for Data Science – II	DC	0	0	4	2
Subtotal					**15**	**0**	**10**	**20**
Total								**39**
THIRD YEAR								
3rd	5th	CSL 422	Machine Learning	DC	3	0	2	4
3rd	5th	CSL 311	Data Privacy and Security	DC	3	0	2	4
3rd	5th	CSL 301	Database Management Systems	DC	3	0	2	4
3rd	5th	CSL 421	Artificial Intelligence	DC	3	0	2	4
3rd	5th	CSL 302	Computer Networks	DC	3	0	2	4
3rd	5th	CSP 301	Tools and Practices for Data Science - III	DC	0	0	4	2
3rd	5th	CSD 301	Mini Project - I	DE	0	0	6	3
Subtotal					**15**	**0**	**20**	**25**
3rd	6th	CSL 313	Computer Vision and Deep Learning	DC	3	0	2	4
3rd	6th	CSL 444	Big Data Analytics	DC	3	0	2	4
3rd	6th	CSL 436	Data Mining and Warehousing	DC	3	0	2	4
3rd	6th	CSL 314	Design Thinking	DC	3	0	0	3
3rd	6th		Open Course – I	OC	3	0	0	3
3rd	6th	CSD 302	Mini Project - II	DE	0	0	6	3
Subtotal					**15**	**0**	**12**	**21**
Total								**46**

FINAL YEAR								
4th	7th	CSD 401	Project	DE	0	0	16	8
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	2	4
4th	7th		MooC Course / Open Course – II	OC	3	0	0	3
Subtotal					**12**	**0**	**18**	**21**
OR								
4th	7th	CSD 402	Internship	DE	0	0	16	8
Subtotal					**0**	**0**	**16**	**8**
Total								**21/8**
4th	8th	CSD 402	Internship	DE	0	0	16	8

			Subtotal		**0**	**0**	**16**	**8**
OR								
4th	8th	CSD 401/ CSD 403	Project / Internship - II	DE	0	0	16	8
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	2	4
4th	8th		MooC Course / Open Course – II	OC	3	0	0	3
			Subtotal		**12**	**0**	**18**	**21**
				Total				**8/21**
Total								**29**
GRAND TOTAL								**153**

TYPE	CREDITS
BS	16
HU	9
ES	4
OC	6
DE	32
DC	86
Total	**153**