

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								
1 ST	1 ST	MAL105	Calculus for Data Science	BS	3	1	0	4
1 ST	1 ST	CSL109	Introduction to Data and Analytics	DC	3	0	2	4
1 ST	1 ST	HUL304	Professional Ethics	HU	3	0	0	3
1 ST	1 ST	CSL 101	Computer Programming	DC	3	0	2	4
1 ST	1 ST	HUL 101	Communication Skills	HU	2	0	2	3
1 ST	1 ST	SAP 101	Health, Sports & Safety	HU	0	0	2	0
1 ST	1 ST	HUL 102	Environmental Studies	HU	2	0	0	0
Subtotal					16	1	8	18
1 ST	2 nd	MAL107	Introduction to Linear Algebra	BS	3	1	0	4
1 ST	2 nd	MAL106	Probability and Statistics	BS	3	1	0	4
1 ST	2 nd	CSL102	Data Structures	DC	3	0	2	4
1 ST	2 nd	CSP101	Web Programming	DC	0	0	4	2
1 ST	2 nd	ECL103	Applied Electronics	ES	3	0	2	4
1 ST	2 nd	HUL103	Introduction to Entrepreneurship	HU	3	0	0	3
Subtotal					15	2	8	21
Total								39
SECOND YEAR								
2 nd	3 rd	MAL202	Advanced Probability and Statistics	BS	3	1	0	4
2 nd	3 rd	CSL 202	Introduction to Object Oriented Programming	DC	3	0	2	4
2 nd	3 rd	CSL204	Discrete Maths and Graph Theory	DC	3	1	0	4
2 nd	3 rd	CSL210	Data Structures with Applications	DC	2	0	2	3
2 nd	3 rd	CSP205	Tools and Practices for Data Science – I	DC	0	0	4	2
2 nd	3 rd	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
2 nd	4 th	CSL207	Operating Systems	DC	3	0	2	4
2 nd	4 th	CSL215	Sensor Data Analytics	DC	3	0	2	4

2 nd	4 th	CSL216	Foundations of Computing	DC	3	0	0	3
2 nd	4 th	CSL217	Web Analytics	DC	3	0	0	3
2 nd	4 th	CSP206	Tools and Practices for Data Science – II	DC	0	0	4	2
Subtotal					15	0	10	20
Total								39
THIRD YEAR								
3 rd	5 th	CSL422	Machine Learning	DC	3	0	2	4
3 rd	5 th	CSL311	Data Privacy and Security	DC	3	0	2	4
3 rd	5 th	CSL 301	Database Management Systems	DC	3	0	2	4
3 rd	5 th	CSL421	Artificial Intelligence	DC	3	0	2	4
3 rd	5 th	CSL302	Computer Networks	DC	3	0	2	4
3 rd	5 th	CSP301	Tools and Practices for Data Science - III	DC	0	0	4	2
3 rd	5 th	CSD301	Mini Project - I	DE	0	0	6	3
Subtotal					15	0	20	25
3 rd	6 th	CSL313	Computer Vision and Deep Learning	DC	3	0	2	4
3 rd	6 th	CSL444	Big Data Analytics	DC	3	0	2	4
3 rd	6 th	CSL436	Data Mining and Warehousing	DC	3	0	2	4
3 rd	6 th	CSL314	Design Thinking	DC	3	0	0	3
3 rd	6 th		Open Course – I	OC	3	0	0	3
3 rd	6 th	CSD301	Mini Project - II	DE	0	0	6	3
Subtotal					15	0	12	21
Total								46
FINAL YEAR								
4 th	7 th	CSD 401	Project	DE	0	0	16	8
4 th	7 th		Elective – I	DE	3	0	0	3
4 th	7 th		Elective –II	DE	3	0	0/2	3/4
4 th	7 th		Elective – III	DE	3	0	0/2	3/4
4 th	7 th		MooC Course / Open Course – II	OC	3	0	0	3
Subtotal					12	0	18	21-23
OR								
4 th	7 th	CSD 402	Internship	DE	0	0	16	8
Subtotal					0	0	16	8
Total								21-23/8
4 th	8 th	CSD 402	Internship	DE	0	0	16	8

Subtotal					0	0	16	8
OR								
4 th	8 th	CSD 401/ CSD 403	Project / Internship - II	DE	0	0	16	8
4 th	8 th		Elective – I	DE	3	0	0	3
4 th	8 th		Elective – II	DE	3	0	0/2	3/4
4 th	8 th		Elective – III	DE	3	0	0/2	3/4
4 th	8 th		MooC Course / Open Course – II	OC	3	0	0	3
Subtotal					12	0	18	21-23
				Total				8/21-23
Total								31-33
GRAND TOTAL								153-155

TYPE	CREDITS
BS	16
HU	9
ES	4
OC	6
DE	32-34
DC	86
Total	153-155