

**B.Sc. DATA SCIENCE**  
**DEGREE COURSE**  
**CBCS PATTERN**  
**(With effect from 2022 - 2023)**

**The Course of Study and the Scheme of Examinations**

S. No.	Part	Study Components		Ins. Hrs / week	Credit	Title of the Paper	Maximum Marks		
		Course Title					CIA	Uni. Exam	Total
<b>SEMESTER I</b>									
1.	I	Language	Paper-1	6	4	Tamil/Other Languages	25	75	100
2.	II	English (CE)	Paper-1	6	4	<b>Communicative English I</b>	25	75	100
3.	III	Core Theory	Paper-1	6	4	Programming in C	25	75	100
4.	III	Core Practical	Practical-1	3	2	Programming in C Lab	25	75	100
5.	III	Allied -1	Paper-1	7	3	Discrete Mathematics	25	75	100
<b>6.</b>	<b>III</b>	<b>PE</b>	<b>Paper 1</b>	<b>6</b>	<b>3</b>	<b>Professional English I</b>	<b>25</b>	<b>75</b>	<b>100</b>
7.	IV	Environmental Studies		2	2	Environmental studies	25	75	100
		<b>Sem. Total</b>		<b>36</b>	<b>22</b>		<b>175</b>	<b>525</b>	<b>700</b>
<b>SEMESTER II</b>									
8.	I	Language	Paper-2	6	4	Tamil/Other Languages	25	75	100
9.	II	English (CE)	Paper-2	4	4	<b>Communicative English II</b>	25	75	100
10.	II	<b>NMSDC I : Language Proficiency for Employability</b>	<b>Paper-1</b>	<b>2</b>	<b>2</b>	<b>Effective English</b>	<b>25</b>	<b>75</b>	<b>100</b>
11.	III	Core Theory	Paper-2	5	4	Java Programming	25	75	100
12.	III	Core Practical	Practical-2	2	2	Java Programming Lab	25	75	100
13.	III	Allied-1	Paper-2	7	5	Operations Research	25	75	100
<b>14.</b>	<b>III</b>	<b>PE</b>	<b>Paper 1</b>	<b>6</b>	<b>3</b>	<b>Professional English II</b>	<b>25</b>	<b>75</b>	<b>100</b>
15.	IV	Value Education		2	2	Value Education	25	75	100
16.	IV	Soft Skill		2	1	Soft Skill	25	75	100
		<b>Sem. Total</b>		<b>36</b>	<b>27</b>		<b>200</b>	<b>600</b>	<b>800</b>

S.NO.	Part	Study Components		Ins. hrs /week	Credit	Title of the Paper	Maximum Marks		
		Course Title					CIA	Uni. Exam	Total
<b>SEMESTER III</b>									
17.	I	Language	Paper-3	6	4	Tamil/ Other Languages	25	75	100
18.	II	English	Paper-3	6	4	English	25	75	100
19.	III	Core Theory	Paper-3	3	3	Python for Data Science	25	75	100
20.	III	Core Practical	Practical-3	3	3	Python for Data Science Lab	25	75	100
21.	III	Allied II	Paper-3	4	3	Statistical Methods and Their Applications I	25	75	100
	III	Allied II	Practical	3	0	Statistics Practical	0	0	0
22.	IV	<b>NMSDC: Digital Skills for Employability</b>	Paper-1	3	2	<b>Microsoft Office Essentials</b>	25	75	100
23.	IV	Non-Major Elective	Paper-1	2	2	Introduction to Information Technology	25	75	100
		<b>Sem. Total</b>		<b>30</b>	<b>21</b>		<b>175</b>	<b>525</b>	<b>700</b>
<b>SEMESTER IV</b>									
24.	I	Language	Paper-4	6	4	Tamil/Other Languages	25	75	100
25.	II	English	Paper-4	6	4	English	25	75	100
26.	III	Core Theory	Paper-4	3	3	Advanced Python for Data Science	25	75	100
27.	III	Core	Practical-4	3	3	Advanced Python for Data Science	25	75	100
28.	III	Allied II	Paper-4	4	3	Statistical Methods and their Applications II	25	75	100
29.	III	Allied II	Practical	3	2	Statistics Practical	25	75	100
30.	IV	<b>NMSDC II : Digital Skills for Employability</b>	<b>Paper-2</b>	<b>2</b>	<b>2</b>	<b>Office Fundamentals</b>	<b>25</b>	<b>75</b>	<b>100</b>

31.	IV	Non-Major Elective	Paper-2	2	2	Internet Technology	25	75	100
		<b>Sem. Total</b>		<b>30</b>	<b>23</b>		<b>200</b>	<b>600</b>	<b>800</b>

S.NO.	Part	Study Components		Ins. hrs /week	Credit	Title of the Paper	Maximum Marks		
		Course Title					CIA	Uni. Exam	Total
<b>SEMESTER V</b>									
32.	III	Core Theory	Paper-5	6	4	Relational Database Management System	25	75	100
33.	III	Core Theory	Paper-6	6	4	Data Visualization Techniques	25	75	100
34.	III	Core Theory	Paper-7	4	3	Natural Language Processing	25	75	100
35.	III	Core Practical	Practical-5	4	3	Relational Database Management System Lab	25	75	100
36.	III	Core Practical	Practical-6	4	3	Data Visualization Techniques Lab	25	75	100
37.	III	Internal Elective	Paper-1	3	3	Tensor Flow	25	75	100
38.	IV	Skill Based Subject	Paper-2	3	2	Machine Learning	25	75	100
				<b>30</b>	<b>22</b>		<b>175</b>	<b>525</b>	<b>700</b>
<b>SEMESTER VI</b>									
39.	III	Core Theory	Paper-8	4	4	Big Data Analytics	25	75	100
40.	III	Core Theory	Paper-9	4	4	R for Analytics	25	75	100
41.	III	Core Practical	Practical-7	4	3	Big Data Analytics Lab	25	75	100
42.	III	Core Practical	Practical-8	4	2	R for Analytics Lab	25	75	100
43.	III	Project		5	5	Project Work (Group/Individual Project)	25	75	100

44.	III	Internal Elective	Paper - 2	3	3	Artificial Intelligence	25	75	100
45.	III	Internal Elective	Paper - 3	3	3	Operating System	25	75	100
46.	III	<b>NMSDC III : Data Analytics with Advanced Tools for Employabilit</b>	<b>Paper – 3</b>	<b>2</b>	<b>2</b>	<b>Project based learning III</b>	<b>25</b>	<b>75</b>	<b>100</b>
47.	V	Extension Activities		0	1		100	0	100
		<b>Sem. Total</b>		<b>30</b>	<b>27</b>		<b>300</b>	<b>600</b>	<b>900</b>
					<b>142</b>				<b>4600</b>

Part	Subject	Papers	Credit	Total Credits	Marks	Total Marks
Part I	Languages	4	4	16	100	400
Part II	Communicative English & English	4	4	16	100	400
Part II	Effective English	1	2	2	100	100
Part III	Allied (Odd Semester)	2	3	6	100	200
	Allied (Even Semester)	2	5	10	100	200
	Allied Practical	1			100	100
	Electives	3	3	9	100	300
	Core	10	(3-5)	36	100	900
	Core practical	8	(2-3)	21	100	800
	Professional English	2	3	6	100	200
	Compulsory Project (Group/Individual Project)	1	5	5	100	100
Part IV	Environmental Science	1	2	2	100	100
	Soft skill	1	1	1	100	100
	Value Education	1	2	2	100	100

	Lang. & Others /NME	2	2	4	100	200
	Skill Based	4	2	8	100	400
Part V	Extension Activities	1	1	1	100	100
	<b>Total</b>	<b>46</b>		<b>142</b>		<b>4700</b>