

**SCHEME OF CURRICULUM AND EVALUATION
B.Sc. DATA SCIENCE DEGREE PROGRAM (OL03)**

FIRST SEMESTER

C.No.	Course Code	Category	Course Titles	Credits	Total Hours	Lecture	Tutorial	Practical	Continuous Internal assessment (a)	End Semester Assessment EST (b)	Grand Total a+b=100
			Semester – I								
1	MTH24OCT01	CT1	Mathematics	3	90	90	-	0	30	70	100
2	CDS24OCT01	CT2	Fundamentals of Computer Science	3	90	90	-	0	30	70	100
3	CDS24OCT02	CT3	C Programming	4	120	90	-	30	30	70	100
4	ENG24OCT01	CT4	Communicative English	3	90	90	-	0	30	70	100
5	CDS24OAE01	AE1	Professional Competency Development – I	1	30	30	-	0	100	-	100
6	ENV24OAE01	AE2	Environmental Science	2	60	60	-	0	100	-	100
7	OL324OSE01	SL1	To be Chosen	1	30	-	-	30	100	-	100
			TOTAL	17	510	450	-	60	420	280	700

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SECOND SEMESTER

Course No	Course Code	Category	Course Titles	Credits	Total Hours	Lecture	Tutorial	Practical	Continuous Internal assessment (a)	End Semester Assessment EST (b)	Grand Total a+b=100
8	MTH24OCT02	CT5	Statistics	3	90	90	-	0	30	70	100
9	CDS24OCT03	CT6	Data Structures and Algorithms	4	120	90	-	30	30	70	100
10	CDS24OCT04	CT7	Python Programming	4	120	90	-	30	30	70	100
11	CDS24OCT05	CT8	Introduction to Data Science	3	90	90	-	-	30	70	100
12	CDS24OAE02	AE3	Universal Human Values and Professional Ethics	2	60	60	-	0	100	-	100
13	CDS24OAE03	AE4	Professional Competency Development – II	1	30	30	-	0	100	-	100
14	CDS24OAE04	AE5	Professional Coding Practice – I	1	30	-	-	30	100	-	100
15	OL324OSE02	SL2	To be Chosen	1	30	-	-	30	100	-	100
			TOTAL	19	570	450	-	120	520	280	800

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THIRD SEMESTER

Course No	Course Code	Category	Course Titles	Credits	Total Hours	Lecture	Tutorial	Practical	Continuous Internal assessment (a)	End Semester Assessment EST (b)	Grand Total a+b=100
16	MTH24OCT03	CT9	Discrete Mathematics	3	90	90	-	0	30	70	100
17	CDS24OCT06	CT10	Computer Systems	3	90	90	-	0	30	70	100
18	CDS24OCT07	CT11	R Programming	4	120	90	-	30	30	70	100
19	CDS24OCT08	CT12	Data Visualization Techniques	4	120	90	-	30	30	70	100
20	CDS24OAE05	AE6	Professional Competency Development – III	1	30	30	-	0	100	-	100
21	CDS24OAE06	AE7	Professional coding Practice – II	1	30	-	-	30	100	-	100
22	OL324OSE03	SL3	To be Chosen	1	30	-	-	30	100	-	100
23	CDS24ORP01	RP1	Mini Project – I *	3	90	-	-	90	100	-	100
			TOTAL	20	600	390	-	210	520	280	800

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FOURTH SEMESTER

Course No	Course Code	Category	Course Titles	Credits	Total Hours	Lecture	Tutorial	Practical	Continuous Internal assessment (a)	End Semester Assessment EST (b)	Grand Total a+b=100
24	CDS24OCT09	CT13	Machine Learning	4	120	90	-	30	30	70	100
25	CDS24OCT10	CT14	Software Engineering	4	120	90	-	30	30	70	100
26	CDS24OCT11	CT15	Database Systems	4	120	90	-	30	30	70	100
27	CDS24OCT12	CT16	Big Data Analytics	4	120	90	-	30	30	70	100
28	CDS24OCT13	CT17	Web Programming	4	120	90	-	30	30	70	100
29	CDS24OAE07	AE8	Professional Competency Development – IV	1	30	30	-	0	100	-	100
30	CDS24OAE08	AE9	Professional Coding Practice - III	1	30	-	-	30	100	-	100
31	CDS24OCL01	CL1	Hands on C++ Laboratory	2	60	-	-	60	100	-	100
32	OL3224OSE04	SL4	To be Chosen	1	30	-	-	30	100	-	100
			TOTAL	25	750	480	-	270	550	350	900

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FIFTH SEMESTER

Course No	Course Code	Category	Course Titles	Credits	Total Hours	Lecture	Tutorial	Practical	Continuous Internal assessment (a)	End Semester Assessment EST (b)	Grand Total a+b=100
33	CDS24OCT14	CT18	Artificial Neural Networks and Deep Learning	4	120	90	-	30	30	70	100
34	CDS24OCT15	CT19	Data Storage and Organization	4	120	90	-	30	30	70	100
35	CDS24OCT16	CT20	Business Analytics	4	120	90	-	30	30	70	100
36	OL324ODE01	DE1	Specialization Elective Course – To be Chosen	4	120	90	-	30	30	70	100
37	OL324ODE02	DE2	Specialization Elective Course – To be Chosen	4	120	90	-	30	30	70	100
38	OL324OSE05	SL5	To be Chosen	1	30	-	-	30	100	-	100
39	CDS24ORP02	RP2	Mini Project – II*	3	90	-	-	90	100	-	100
			Total	24	720	450	-	270	350	350	700

SCHEME OF CURRICULUM AND EVALUATION
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SIXTH SEMESTER

Course No	Course Code	Category	Course Titles	Credits	Total Hours	Lecture	Tutorial	Practical	Continuous Internal assessment (a)	End Semester Assessment EST (b)	Grand Total a+b=100
40	OL324ODE03	DE3	Specialization Elective Course –To be Chosen	4	120	90	-	30	30	70	100
41	OL324ODE04	DE4	Specialization Elective Course –To be Chosen	4	120	90	-	30	30	70	100
42	OL324OSE06	SL6	To be Chosen	1	30			30	100	-	100
43	CDS24ORP03	RP3	Major Project	6	240		-	300	100		100
			Total	15	510	180		390	260	140	400

S.No.	SPECIALISATION ELECTIVE COURSES		SKILL ENHANCEMENT COURSES	
1	Healthcare Data Analytics	CDS24ODE01	Advanced Excel	CDS24OSL01
2	Predictive Analytics	CDS24ODE02	Rapid Miner for Visual Workflow	CDS24OSL02
3	Time series Analysis	CDS24ODE03	DevOps for Software Development	CDS24OSL03
4	Computer Vision	CDS24ODE04	Flutter tool for web development	CDS24OSL04
5	Generative AI	CDS24ODE05	Tableau for Data Visualization	CDS24OSL05
6	Clinical Decision Support Systems	CDS24ODE06	Shell Scripting	CDS24OSL06
7	Natural Language Processing	CDS24ODE07	Agile project management	CDS24OSL07
8	Spatial Data Analytics	CDS24ODE08	Advanced SQL	CDS24OSL08
9	Reinforcement Learning	CDS24ODE09	Jamovi for Statistical Analysis	CDS24OSL09
10	Cryptography	CDS24ODE10	Web Scraping Tool	CDS24OSL10
11	Medical Image Processing	CDS24ODE11	PySpark for Data Analysis	CDS24OSL11
12	Object Oriented Programming with Java	CDS24ODE12	Microsoft Azure AI Platform for AI based application development	CDS24OSL12
			Power BI	CDS24OSL13



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