

**2023 BATCH MSc(Data Science) TRIMESTER PROGRAMME STRUCTURE****TRIMESTER-I**

Course Code	Course Title	Hours Per Week	Credits	Marks
MDS131	Principles of Data Science	4	3	100
MDS132	Probability and Distribution Theory	5	4	100
MDS133	Mathematical Foundations for Data Science	4	3	100
<b>Choose Any One (Foundational Elective)</b>				
MDS161A	Foundation Elective-I	3	2	50
MDS161B	Foundation Elective-II			
MDS161C	Foundation Elective-III			
MDS171	Programming using Python	8	4	150
MDS172	Applied Excel	4	2	50
HOLODD	HOLISTIC EDUCATION	1	1	50
<b>Total</b>	-	<b>29</b>	<b>19</b>	<b>600</b>

**TRIMESTER-II**

Course Code	Course Title	Hours Per Week	Credits	Marks
MDS231	Design and Analysis of Algorithms	4	3	150
MDS232	Mathematics	4	3	100
MDS233	Research Methodology	3	2	50
MDS271	Database Technologies	6	4	100
MDS272	Inferential Statistics using R	6	4	100
MDS273	Full Stack Web Development	6	4	100
	<b>Total</b>	<b>29</b>	<b>20</b>	<b>600</b>

**TRIMESTER-III**

Course Code	Course Title	Hours Per Week	Credits	Marks
MDS331	Regression Modelling	4	3	100
MDS371	Java Programming	6	4	100
MDS372	Machine Learning	8	5	150
	ELECTIVE (Statistics - Concepts Based)			

MDS332A	Categorical Data Analysis	4	3	100
MDS332B	Multivariate Analysis			
MDS332C	Stochastic Processes			
MDS381	SEMINAR	3	2	50
VAC1	Cloud Services	3		100
HED	HOLISTIC EDUCATION	1	1	50
	<b>Total</b>	<b>29</b>	<b>18</b>	<b>650</b>

#### TRIMESTER-IV

Course Code	Course Title	Hours Per Week	Credits	Marks
MDS431	Data driven Modelling and Visualization	4	3	100
MDS432	RESEARCH PROBLEM identification	2	1	50
MDS471	Neural Networks and Deep Learning	6	4	150
MDS472	Time Series and Forecasting Techniques	6	4	100
	ELECTIVES (Data Science - Important data types)			
MDS473A	Web Analytics	6	4	100
MDS473B	IoT Analytics			
MDS473C	Natural Language Processing			
MDS473D	Image and Video Analytics			
MDS481	PROJECT-I (Web project with Data Science concepts)	5	2	100
	<b>Total</b>	<b>29</b>	<b>18</b>	<b>600</b>

#### TRIMESTER-V

Course Code	Course Title	Hours Per Week	Credits	Marks
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MDS571	Big Data Analytics	6	5	150
	ELECTIVE - 1 (Applied Statistics)			
MDS531A	Econometrics	4	3	100
MDS531B	Bayesian Inference			
MDS531C	Bio-statistics			
	ELECTIVE-2 (Emerging analysis paradigms)			
MDS572A	Evolutionary Algorithms	6	3	100
MDS572B	Quantum Machine Learning			
MDS572C	Reinforcement Learning			
	ELECTIVE-3 (Unconventional Data Analysis)			
MDS573A	Geospatial Data Analytics	6	3	100
MDS573B	Bio-Informatics			
MDS573C	Graph Analytics			
MDS581	Project - II (Research Project/ Data Science Capstone Project)	5	2	100
	<b>Total</b>	<b>27</b>	<b>16</b>	<b>550</b>

### TRIMESTER-VI

Course Code	Course Title	Hours Per Week	Credits	Marks
MDS681	Industry Project	2	10	300
MDS682	RESEARCH PUBLICATION	2	2	50
	<b>Total</b>		<b>12</b>	<b>350</b>