

**Curriculum Structure of MSc in Data Science
Semester I**

Course Code	Course Title	No.ofHrs	Marks	Credits
MDS131	Mathematical Foundation For Data Science – I	04	100	04
MDS132	Probability And Distribution Theory	04	100	04
MDS133	Principles of Data Science	04	100	04
MDS134	Data Base Technologies (CIA only)	06	150	05
MDS135	Research Methodology (CIA only)	02	50	02
MDS151	Inferential Statistics Lab (CIA only)	06	150	05
MDS152	Programming for Data Science in Python (CIA only)	06	100	04
MDS141	Foundational Elective (CIA only)	02	50	02
MDS111	Holistic Education	01	-	01
Total		35	800	31

Semester II

Course Code	Course Title	No.ofHrs	Marks	Credits
MDS231	Mathematical Foundation For Data Science – II	04	100	04
MDS232	Regression Analysis	04	100	04
MDS233	Design and Analysis of Algorithms	04	100	04
MDS234	Machine Learning	04	100	04
Elective – I (Choose any one)				
MDS241A	Multivariate Analysis	04	100	04
MDS241B	Stochastic Process			
MDS251	Programming for Data Science in R (CIA only)	06	100	04
Elective – II (Theory and Lab) (Choose any one)				
MDS252A	Hadoop (CIA only)	06	150	05
MDS252B	Image and Video Analytics (CIA Only)			
MDS252C	Internet of Things (CIA only)			
MDS271	Research Problem Identification and Data Collection	01	-	-
MDS211	Holistic Education	01	-	01

Total	34	750	30
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Semester III

Course Code	Course Title	No.ofHrs	Marks	Credits
MDS331	Deep Learning	04	100	04
MDS332	Cloud Computing for Data Science	04	100	04
MDS333	Web Analytics	04	100	04
Elective – III (Choose any one)				
MDS341A	Time Series Analysis and Forecasting Techniques	04	100	04
MDS341B	Bayesian Inference			
Elective – IV (Choose any one)				
MDS342A	Genomics	04	100	04
MDS342B	Natural Language Processing			
MDS342C	Exploratory Data Analysis			
MDS351	Case Based Learning Lab	04	100	02
Elective – IV Lab (Choose any one)				
MDS352A	Genomics Lab	04	100	02
MDS352B	Natural Language Processing Lab			
MDS352C	Exploratory Data Analysis Lab			
MDS371	Research Modelling and Implementation	04	50	02
MDS372	Seminar	02	50	01
Total		34	800	27

Semester IV

Course Code	Course Title	No.ofHrs	Marks	Credits
MDS481	Industry Project	30	300	06
MDS471	Research Publication		100	02
Total		30	400	8