

## MS (Data Science)

<b>Customized Non-Credit Courses</b>		
<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
CT-492	Object Oriented Programming.	0
CT-493	Data Structure and Algorithm Design.	0
CT-494	Introduction to Databases.	0
<p>Note: For those candidates who have qualifications other than BS (CSIT) or equivalent, a departmental admission committee shall decide on the number and the particular deficiency courses (non-credit) which a candidate shall have to take based on his/her previous qualification</p>		

<b>Compulsory Courses</b>		
<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
CT-530	Data Mining.	3
CT-562	Machine Learning .	3
CT-581	Statistics & Probability for Data Science.	3
CT-583	Tools and Techniques for Data Science.	3
CT-592	Big Data Analytics.	3

<b>Elective Courses</b>		
<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hours</b>
CT-521	Distributed Intelligence System.	3
CT-524	Knowledge Based System.	3
CT-525	Modeling and Simulation.	3
CT-527	Image Processing and Computer Vision.	3
CT-528	Advance Database Techniques.	3
CT-529	Object Oriented Databases.	3
CT-559	Artificial Neural Networks.	3
CT-560	Deep Learning.	3
CT-561	Natural Language Processing.	3
CT-563	Business Intelligence.	3
CT-564	Web Intelligence and Big Data.	3
CT-569	Virtualization and Cloud Computing.	3
CT-582	Numerical Linear Algebra.	3
CT-587	Distributed Computing.	3
CT-588	Information Retrieval.	3
CT-589	Social Media Analysis.	3
CT-590	Data Visualization.	3
CT-591	Text Processing.	3
CT-593	Data Warehousing.	3
CT-594	Optimization Methods.	3
CT-595	Pattern Recognition.	3
CT-596	Web Mining.	3
CT-597	Time Series Analysis & Forecasting.	3
CT-598	Financial Data Analysis.	3
CT-599	Speech Processing.	3
CT-5002	Thesis.	6
CT-5013	Generative Artificial Intelligence	3