

SVKM's NMIMS Deemed-to-be University
Mukesh Patel School of Technology Management and Engineering

Course Structure for B Tech Data Science Programme (Batch 2024-28)					
Year of the Programme: First Year (Academic Year 2024-25)					
Semester - I			Semester - II		
S. No.	Course	Credits	S. No.	Course	Credits
1	Calculus	4	1	Linear Algebra and Differential Equations	4
2	Physics	4	2	Quantum and Statistical Physics	3
3	Elements of Biology	3	3	English Communication	1
4	Programming for Problem Solving	4	4	Basic Electrical and Electronics Engineering	3
5	Engineering Graphics and Design	3	5	Digital Manufacturing Laboratory	1
6	Professional Ethics	1	6	Electrical and Electronics Workshop	1
7	Constitution of India	0	7	Principles of Economics and Management	3
8	Critical Thinking	0	8	Python for Data Analysis	2
			9	Environmental Science	2
			10	Design Thinking	0
	Total	19		Total	20
Year of the Programme: Second Year (Academic Year 2025-26)					
Semester - III			Semester - IV		
S. No.	Course	Credits	S. No.	Course	Credits
1	Optimization Methods	4	1	Stochastic processes and Applications	3
2	Data Structures and Algorithms	4	2	Statistical Structures in Data and Inference	4
3	Managing Uncertainty	4	3	Data Handling and Visualization	2
4	Data Wrangling	3	4	Introduction to Data, Signal and Image Analysis	4
5	Information Security and Privacy	2	5	Management Accounting for Engineers	2
6	Database Management Systems	3	6	Mobile Application Development	3
7	Technical Communication	1	7	Design Experience I	1
8	Community Service	0			
	Total	21		Total	19
Year of the Programme: Third Year (Academic Year 2026-27)					
Semester - V			Semester - VI		
S. No.	Course	Credits	S. No.	Course	Credits
1	Introduction to Modern Application Development	3	1	Computer Vision and Applications	3
2	Applied Artificial Intelligence	4	2	Applications of Machine Learning	3
3	Foundations of Machine Learning	4	3	Advance Data Structure for Analytics	3
4	Department Elective - I	3	4	Department Elective - III	3
5	Department Elective - II	3	5	Open Elective - III	3
6	Open Elective - I	3	6	Open Elective - IV	3
7	Open Elective - II	3	7	Interpersonal Skills	1
8	Design Experience II	2	8	Design Experience III	2
	Total	25		Total	21

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Year of the Programme: Fourth Year (Academic Year 2027-28)					
Semester - VII			Semester - VIII		
S. No.	Course	Credits	S. No.	Course	Credits
1	Neural Networks and Deep Learning	3	1	Project	10
2	Speech and Natural Language Processing	3			
3	Big Data Analytics	3			
4	MLOps	3			
5	Department Elective - IV	3			
6	Department Elective - V	3			
7	Open Elective - V	3			
8	Capstone Project	4			
	Total	25		Total	10

Total Credits for the Programme **160**

Total No. of Subjects **58**

Department Elective - I and II			Department Elective - III		
1	Predictive Analysis	3	1	Quantitative Finance	3
2	Simulation Modelling and Analysis	3	2	Marketing Strategy and Analytics	3
3	Internet of Things Analytics	3	3	Non-parametric Statistical Inference	3
4	Data Driven Program Analysis	3	4	Supply chain and Analytics	3
5	Applied Time Series Analysis	3			
6	Virtualization and Cloud Computing	3			

Department Elective - IV and V			Open Electives		
1	Advanced Database Management Systems	3	1	Data Analytics	3
2	Advanced Computer Vision	3	2	Basic Decision making with Spreadsheet	3
3	DevOps	3	3	Algorithmic Trading	3
4	Metaverse	3			
5	Reinforcement Learning	3			
6	Quantum Machine Learning	3			