

Master of Technology (M.Tech)
Artificial Intelligence and Data Science
Faculty of Engineering and Technology
Parul University
Teaching and Examination Scheme for M.TECH 2025-26 (As per NEP 2020)

Semester 1

				Teaching Scheme			Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
				(Hours / Week)										
NCrF	Subject Code	Subject Name	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int.+Ext.	Int.+Ext.	
4.5		Professional Core Courses (PCC-I)												
	03023401PC01	Mathematical Foundations for Data Science	4	3	-	1	20	-	20	60	-			100
		Professional Core Courses (PCC-II)												
	03023401PC02	Advanced Data Structures & Algorithm	4	3	2	-	20	20	20	60	30			150
		Professional Core Courses (PCC-III)												
	03023401PC03	Machine Learning	4	3	2	-	20	20	20	60	30			150
		Professional Elective Courses (PECs-I)												
	03023401PE01	Big Data Framework for Data Science	4	3	2	-	20	20	20	60	30			150
	03023401PE02	Disributed System	4	3	2	-	20	20	20	60	30			150
	03023401PE03	Artificial & Computational Intelligence	4	3	2	-	20	20	20	60	30			150
	03023401PE04	Internet of Things (IoT)	4	3	2	-	20	20	20	60	30			150
		Humanities and Social Science, including Management Courses (HSMC-I)												
		Research Methodology & IPR	4	4	-	-	20	-	20	60	-			100
		Mandatory courses (MNC-I)												
	03020001MC01	English for Research Paper Writing	-	2	0	0								
	03020401MC01	Disaster Management	-	2	0	0								
	03020001MC02	Value Education	-	2	0	0								
	Total credits		20											

Semester 2

				Teaching Scheme			Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
				(Hours / Week)										
NCrF Credit Level	Subject Code	Subject Name	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int.+Ext.	Int.+Ext.	

4.5		Professional Core Courses (PCC-IV)											
	03023402PC04	Data Analytics and Data Visualization	4	3	2	-	20	20	20	60	30		150
		Professional Core Courses (PCC-V)											
	03023402PC05	Deep Learning	4	3	2	-	20	20	20	60	30		150
		Professional Elective Courses (PECs-II)											
	03023402PE05	High Performance Computing	4	3	2	-	20	20	20	60	30		150
	03023402PE06	Quantum Computing	4	3	2	-	20	20	20	60	30		150
	03023402PE07	Data Science in Bioinformatics	4	3	2	-	20	20	20	60	30		150
	03023402PE08	Generative AI with Prompt Engineering	4	3	2	-	20	20	20	60	30		150
		Professional Elective Courses (PECs-III)											
	03023402PE09	Natural Language Processing	4	3	2	-	20	20	20	60	30		150
	03023402PE10	Blockchain Technologies	4	3	2	-	20	20	20	60	30		150
	03023402PE11	Cloud Computing for Data Science	4	3	2	-	20	20	20	60	30		150
	03023402PE12	Data Science for Security & Forensics	4	3	2	-	20	20	20	60	30		150
		Multidisciplinary Open Professional Electives Courses (MOPECs)											
	03022602UE01	Cyber Physical Systems	4	3	2	-	20	20	20	60	30		150
	03020502UE01	Augmented Reality and Virtual Reality	4	3	2	-	20	20	20	60	30		150
	03020502UE02	Social Networking	4	3	2	-	20	20	20	60	30		150
	03020802UE01	Business Analytics	4	3	2	-	20	20	20	60	30		150
	03020602UE01	Industrial Safety	4	3	2	-	20	20	20	60	30		150
	03020902UE01	Operations Research	4	3	2	-	20	20	20	60	30		150
	03020702UE01	IOT and Smart Cities	4	3	2	-	20	20	20	60	30		150
		Mandatory courses (MNC-II)											
	03020002MC01	Pedaogy Studies	-	2	0	0							
	03022602MC01	Indian Cyber Law and Ethics	-	2	0	0							
	03020002MC02	Personality Developement through life enlightenment skills	-	2	0	0							
		Total credits	20										

Semester 3

				Teaching Scheme			Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
				(Hours / Week)										
NCrF	Subject Code	Subject Name	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int.+Ext.	Int.+Ext.	
5		DP-1												
	03023403IN01	Disseration Phase-I	20	-	40	-								
		Total credits	20											

Semester 4

				Teaching Scheme						Passing Marks (Theory + CE)	Passing	
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