

Master of Technology (M.Tech)
Aerospace Engineering
Faculty of Engineering and Technology
Parul University
Teaching and Examination Scheme for Batch 2025-26 (As per NEP 2020)

Semester 1

NCrF Credit Level	Subject Code	Subject Name	Credit	Teaching Scheme (Hours / Week)			Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
				Lect	Lab	Tut	T	P	CE	T	P	Int.+Ext.	Int.+Ext.	
6.5		Professional Core Courses (PCC)												
	03022701PC01	Aerospace Structures	3	2	2	0	20	20	20	60	30	50	-	150
	03022701PC02	Flight Dynamics and Performance	4	3	0	1	20	-	20	60	-	50	-	100
	03022701PC03	Aerodynamics	3	2	2	0	20	20	20	60	30	50	-	150
		Professional Elective Courses (PECs)												
	03022701PE01	Theory of Elasticity	3	2	2	0	20	20	20	60	30	50	-	150
	03022701PE02	Aviation Fuels & Propellant	3	2	2	0	20	20	20	60	30	50	-	150
	03022701PE03	Aerospace Materials and Manufacturing Process	3	2	2	0	20	20	20	60	30	50	-	150
		Professional Elective Courses (PECs)												
	03022701PE04	Engineering Optimization	3	3	0	0	20	-	20	60	-	50	-	100
	03022701PE05	Space Dynamics and Orbital Mechanics	3	3	0	0	20	-	20	60	-	50	-	100
	03022701PE06	Engineering Mathematics	3	3	0	0	20	-	20	60	-	50	-	100
		Humanities and Social Science, including Management Courses (HSMC)												
		Research Methodology & IPR	4	3	0	1	20	-	20	60	-	50	-	100
		Mandatory courses (MNC)												
	03020001MC01	English for Research Paper Writing	0	2	0	0	20	-	20	60	-	50	-	100
	03020401MC01	Disaster Management	0	2	0	0	20	-	20	60	-	50	-	100
	03020001MC02	Value Education	0	2	0	0	20	-	20	60	-	50	-	100

		Total credits	20												
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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.	
6.5		Professional Core Courses (PCC)												
	03022702PC01	Aerospace Propulsion	3	3	0	0	20	-	20	60	-	50	-	100
	03022702PC02	UAS	4	3	1	0	20	20	20	60	30	50	25	150
	03022702PC03	Space Technology	3	3	0	0	20	-	20	60	-	50	-	100
		Professional Elective Courses (PECs)												
	03022702PE01	Finite Element Method	3	3	0	0	20	-	20	60	-	50	-	100
	03022702PE02	Computational Fluid Dynamics	3	3	0	0	20	-	20	60	-	50	-	100
	03022702PE03	Hypersonic Aerodynamics	3	3	0	0	20	-	20	60	-	50	-	100
		Professional Elective Courses (PECs)												
	03022702PE04	Fatigue and Fracture Mechanics	3	3	0	0	20	-	20	60	-	50	-	100
	03022702PE05	Conceptual Design of Aerospace Vehicle	3	3	0	0	20	-	20	60	-	50	-	100
	03022702PE06	Turbomachinery	3	3	0	0	20	-	20	60	-	50	-	100
		Multidisciplinary Open Professional Electives Courses (MOPECs)												
	03020502UE01	Augmented Reality and Virtual Reality	4	3	0	1	20	-	20	60	-	50	-	100
	03022602UE01	Cyber Physical Systems	4	3	0	1	20	-	20	60	-	50	-	100
	03020502UE02	Social Networking	4	3	0	1	20	-	20	60	-	50	-	100
	03020802UE01	Business Analytics	4	3	0	1	20	-	20	60	-	50	-	100
	03020602UE01	Industrial Safety	4	3	0	1	20	-	20	60	-	50	-	100
	03020902UE01	Operations Research	4	3	0	1	20	-	20	60	-	50	-	100
	03020702UE01	IOT and Smart Cities	4	3	0	1	20	-	20	60	-	50	-	100

		Mandatory courses (MNC)												
	03022602MC01	Indian Cyber Law and Ethics	0	2	0	0	20	-	20	60	-	50	-	100
	03020002MC01	Pedagogy Studies	0	2	0	0	20	-	20	60	-	50	-	100
	03020002MC02	Personality Development through Life Enlightenment Skills	0	2	0	0	20	-	20	60	-	50	-	100
		Vocational Training / Professional Experience/Courses-(Mandatory for Exit)												
	03022702EX01	Computational Science in Enigneering												
		Artificial Intelligence (AI) (Swayam+, NcRF 6)												
		Industrial Training												
		Total credits	20											

Semester 3

				Teaching Scheme (Hours / Week)			Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
NCrF Credit Level	Subject Code	Subject Name	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int.+Ext.	Int.+Ext.	
7		Disseration												
	03022703DP01	Disseration Phase-I	20	0	20	0	-	100	-	-	100	-	100	200
		Total credits	20											

Semester 4

				Teaching Scheme (Hours / Week)			Internal Marks			External Marks		Passing Marks (Theory + CE)	Passing Marks (Practical)	Total Marks
NCrF Credit Level	Subject Code	Subject Name	Credit	Lect	Lab	Tut	T	P	CE	T	P	Int.+Ext.	Int.+Ext.	
7		Disseration												
	03022704DP02	Disseration Phase-II	20	0	32	0	0	100	0	0	100	0	100	200
		Total credits	20											
				(Hours / Week)										