

**Course Structure of
M. Tech (Mechanical Engineering) programme
M. Tech in Smart Manufacturing**

(Mechanical Engineering)

Two Year Full Time Degree (Entry Batch 2024 Onwards)

Semester I

S. No	Course Type	Course code	Course Title	L	T	P	Credit
1	Core -I	MEL DC 601	Automation in Manufacturing Systems	3	0	0	3
2	Core-II	MEL DC 603	Design for Manufacturing	3	0	0	3
	Core-III	MEL DC 605	Materials Selection Strategies	3	0	0	3
3	Program Elective-I	MEL DE 601	Modeling and Simulation of Manufacturing Systems	3	0	0	3
		MEL DE 603	Kinematics and Dynamics Of Robots				
		MEL DE 605	Introduction to ML & AI				
		MEL DE 607	Planning and control of Manufacturing Systems				
		MEL DE 609	Applied Operation Research				
4	Core	MEP DC 601	Industrial Automation Lab	0	0	2	2
5	Core	MEP DC 603	Computer Aided Manufacturing lab	0	0	2	2
6	Core	MEL DC 607	Research Methodology	3	1	0	4
7	Audit		Audit -I	2	0	0	NC
Total Credit							20

Semester II

Second Semester							
S. No	Course Type	Course code	Course Title	L	T	P	Credit
1.	Core-IV	MEL DC 602	Mechatronics for Advance Manufacturing	3	0	0	3
2.	Core-V	MEL DC 604	Additive Manufacturing	3	0	0	3
3.	Program Elective-II	MEL DE 602	Computer Integrated Manufacturing Systems	3	0	0	3
		MEL DE 604	MEMS & NEMS				

		MEL DE 606	Applied AI for Manufacturing				
		MEL DE 608	Design for Internet of Things				
		MEL DE 610	Smart Maintenance				
4.	Program Elective-III	MEL DE 612	Sustainable Manufacturing	3	0	0	3
		MEL DE 614	Human Machine Interfaces for Manufacturing				
		MEL DE 616	Industrial IoT and Cloud Computing				
		MEL DE 618	Cyber-Physical Systems for Manufacturing				
		MEL DE 620	Data Analytics for Manufacturing				
		MEL DE 622	Supply Chain Management				
5.	Core	MEP DC 602	Mechatronics for Advance manufacturing Lab	0	0	4	2
6.	Core	MEP DC 604	Additive Manufacturing Lab	0	0	4	2
11.	Core	MED PR 602	Mini Project	0	0	8	4
12.	Audit		Audit 2	2	0	0	NC
Total Credit							20

Audit 1 & 2

1. Constitution of India
2. Presentation skills and technical writing
3. Disaster Management
4. Discourse of Human Virtues

Third Semester							
S. No	Course Type	Course code	Course Title	L	T	P	Credit
3.	Dissertation	MED PR 701	Dissertation Phase-I/Internship	0	0	40	20
Total Credit							20

Fourth Semester							
S. No	Course Type	Course code	Course Title	L	T	P	Credit
3.	Dissertation	MED PR 702	Dissertation Phase-II/Internship	0	0	40	20
Total Credit							20