

M.Tech Mechanical Engineering (Manufacturing Technology)

(APPLICABLE FROM 2023 BATCH ONWARDS)

SEMESTER – I (M-1)

Course Code	Title	Core/Elective	L	T	P	Credits
ME501	Analysis and Design of Machine Tools	Core	3	0	0	03
ME502	Metal Machining	Core	3	0	0	03
ME503	Casting and Welding	Core	3	0	0	03
ME504	Unconventional Manufacturing Processes	Core	3	0	0	03
ME601	Metal Machining Lab	Core	0	0	2	01
ME602	Casting and Welding Lab	Core	0	0	1	01
	Elective – I	Elective	3	0	0	03
			Sub Total			17

SEMESTER – II (M-2)

Course Code	Title	Core/Elective	L	T	P	Credits
ME505	Computer Integrated Manufacturing	Core	3	0	0	03
ME506	Mechanics of Metal Forming	Core	3	0	0	03
ME507	Additive Manufacturing Process	Core	3	0	0	03
ME508	Finite Element Analysis	Core	3	0	0	03
ME603	Computer Integrated Manufacturing Lab	Core	0	0	2	01
ME604	Metal Forming Lab	Core	0	0	2	01
	Elective – II	Elective	3	0	0	03
			Sub Total			17

SEMESTER – III (M-3)

Course Code	Title	Core/Elective	L	T	P	Credits
	Elective – III	Elective	3	0	0	03
	Elective – IV	Elective	3	0	0	03
ME605	Seminar I	Core	0	0	4	02
ME606	Dissertation Part I*	Core	0	0	24	12
			Sub Total			20

*The research work of Dissertation Part I is continued in the 4th semester.

SEMESTER – IV (M-4)

Course Code	Title	Core/Elective	L	T	P	Credits
	Elective – V	Elective	3	0	0	03
	Elective – VI	Elective	3	0	0	03
ME607	Seminar II	Core	0	0	4	02
ME608	Dissertation Part II*	Core	0	0	28	14
			Sub Total			22

*The research work in Dissertation Part I is continued in Dissertation Part II. The evaluation of dissertation Part II is done on the basis of the work done in both the semesters.

LIST OF DEPARTMENT ELECTIVES

	Code	Subject
Elective – I	ME701	Industrial Inspection and Quality Control
	ME702	Welding Metallurgy
	ME703	Tool and Die Design
Elective – II	ME704	Design of Experiments
	ME705	Experimental Mechanics and Non-Destructive Testing
	ME706	Advanced Materials Technology

Elective – III	ME707	Hydraulic and Pneumatic Control System
	ME708	Micro-Fabrication
	ME709	Robotics and Automation
	ME710	Operations and Supply Chain Management
	ME711	Modelling and Optimization Techniques in Engineering
Elective - IV	ME712	Laser Beam Machining
	ME713	Advanced Composite Materials
	ME714	Computer Aided Design and Drafting
Elective – V	ME715	Mechatronics
	CL735	Environmental Engineering
	CS701	Artificial Intelligence in Manufacturing
Elective - VI	ME718	Concurrent Engineering
	MA703	Optimization and Statistical Methods
	ME720	Advanced Metrology and Computer Aided Inspection
	ME721	Reliability and Maintenance Engineering