

MTech in Manufacturing Technology and Automation

Session 2022 - 24

Semester I

SN	Subject Code	Subject	Periods per Week			Scheme of Examination		Total Marks	Credit L+(T+P)/2
			L	T	P	Theory / Practical			
						ESE	TA		
1	SOE-M-MTA101	Computational Methods and Optimization	4	0	0	50	50	100	4
2	SOE-M-MTA102	Advanced Manufacturing Processes	4	0	0	50	50	100	4
3	SOE-M-MTA103	Advanced Materials and Processing	4	0	0	50	50	100	4
4	SOE-M-MTA104	Industrial Automation and Robotics	4	0	0	50	50	100	4
5	SOE-M-MTA105 (1-5)	Program Elective I (Annexure -I)	4	0	0	50	50	100	4
6	SOE-M-MTA106	Computational Methods and Optimization Techniques Lab	0	0	4	50	50	100	2
7	SOE-M-MTA107	Advanced Manufacturing and Processing Lab	0	0	4	50	50	100	2
8	SOE-M-MTA108	Scientific Paper Writing & Seminar	1	0	1	25	25	50	2
Total			21	0	10	375	375	750	26

Program Elective I (Annexure - I)

Sr. No.	Subject Code	Name of the Courses
1	SOE-M- MTA105 (1)	Micro and Nano Machining
2	SOE-M- MTA105 (2)	Design and Metallurgy of Welded Joint
3	SOE-M- MTA105 (3)	Manufacturing Management
4	SOE-M- MTA105 (4)	Quantitative Decision Making
5	SOE-M- MTA105 (5)	Finite Element Analysis in Manufacturing

Semester II

SN	Subject Code	Subject	Periods per Week			Scheme of Examination		Total Marks	Credit L+(T+P)/2
			L	T	P	Theory / Practical			
						ESE	TA		
1	SOE-M-MTA201	Industrial Instrumentation and Control	4	0	0	50	50	100	4
2	SOE-M-MTA202	Digital Manufacturing	4	0	0	50	50	100	4
3	SOE-M-MTA203	Flexible Manufacturing Systems	4	0	0	50	50	100	4
4	SOE-M-MTA204	Quality Engineering in Manufacturing	4	0	0	50	50	100	4
5	SOE-M-MTA205 (1-5)	Professional Elective -II (Annexure -II)	4	0	0	50	50	100	4
6	SOE-M-MTA206	Advanced Welding Lab	0	0	4	50	50	100	2
7	SOE-M-MTA207	CAD/CAM/CIM Lab	0	0	4	50	50	100	2
8	SOE-M-MTA208	Project report writing and Seminar	1	0	1	25	25	50	2
Total			21	0	10	375	375	750	26

Program Elective II (Annexure - II)

Sr. No.	Subject Code	Name of the Courses
1	SOE-M- MTA205 (1)	Product Design and Development
2	SOE-M- MTA205 (2)	Digital Twin
3	SOE-M- MTA205 (3)	Product Analysis and Cost Optimization
4	SOE-M- MTA205 (4)	Industry 4.0
5	SOE-M- MTA205 (5)	Lean Manufacturing

Semester III

SN	Subject Code	Subject	Periods per Week			Scheme of Examination		Total Marks	Credit L+(T+P)/2
			L	T	P	Theory / Practical			
						ESE	TA		
1	SOE-M-MTA301	Plant Maintenance & Safety	4	0	0	50	50	100	4
2	SOE-M-MTA302	Industrial Training	0	0	8	100	100	200	4
3	SOE-M-MTA303	Research Seminar	0	0	4	25	25	50	2
4	SOE-M-MTA304	Dissertation – I	0	0	24	125	125	250	10
Total			4	0	36	300	300	600	20

Semester IV

SN	Subject Code	Subject	Periods per Week			Scheme of Examination		Total Marks	Credit L+(T+P)/2
			L	T	P	Theory / Practical			
						ESE	TA		
1	SOE-M-MTA401	Dissertation – II	0	0	28	200	200	400	14
Total			0	0	28	200	200	400	14