



School of Engineering
Department of Mechanical Engineering
M.Tech Production and Industrial Engineering (Program Structure)
Semester-1

S No	Course Code	Course Title	L	T	P	C	Prerequisite
1		Adv, Numerical and Statistical method	3	1	0	4	-
2		Production and Operations Management	3	0	0	3	-
3		Statistical Quality Control	3	0	0	3	-
4		Advance Manufacturing Processes	3	0	0	3	-
5		Advanced Materials Processing	3	0	0	3	-
6		Rapid Prototyping	2	0	0	2	-
7		Foundations of Research Inclined Design Thinking (RIDT)	1	0	0	1	
8		Rapid Prototyping Lab	0	0	2	1	
	Total credits					20	

Semester-2

S No	Course Code	Course Title	L	T	P	C	Prerequisite
1		Professional and Communication Skills	0	0	4	2	-
2		Industrial Robotics	3	0	0	3	-
3		Precision Engineering	3	0	0	3	-
4		Industrial Automation and Artificial Intelligence	3	0	0	3	-
5		Optimization Techniques and Applications	2	0	0	2	-
6		: Applications of Research Inclined Design Thinking (RIDT)	1	0	0	1	
7		Elective 1	3	0	0	3	-
8		Elective 2	3	0	0	3	
		Total credits				20	

Semester-3

S No	Course Code	Course Title	L	T	P	C	Prerequisite
1		Specialized Topics in Research-Centric Design Thinking	0	2	0	2	
2		Modelling, Simulation and Analysis Lab	2	0	4	4	-
3		Dissertation-1	-	-	-	3	-
4		Elective 3	3	0	0	3	-
5		Elective 4	3	0	0	3	-
6		Elective 5	3	0	0	3	-
7		Seminar/Term Paper	-	-	-	2	
		Total Credits				20	

Semester-4

S No	Course Code	Course Title	L	T	P	C	Pre-requisite
1		Dissertation-2 & Publication	-	-	-	20	
Total credits						20	

ELECTIVE COURSES

Elective 1	
Code	Course
	Supply Chain Management
	Advanced Metal Cutting
	Production planning and control
	Electronics and Microcontrollers

Elective 2	
Code	Course
	Mechanical Automation and Mechatronics
	Non-Destructive Testing
	Unconventional Manufacturing Methods
	Mechanical Metallurgy

Elective 3	
Code	Course
	Reliability Engineering
	Product Design and Manufacturing
	Material Selection in Engineering
	Green & Lean Manufacturing
	Advanced casting

Elective 4	
Code	Course
	Design for Manufacturing and Assembly
	Industrial Economics
	Industrial Corrosion and Tribology
	Finite Element Techniques in Design
	Micro-Electro Mechanical System (MEMS)

Elective 5	
Code	Course
	Facility Planning & Plant Engineering
	Advanced Welding Technology
	Advanced Machining Processes
	Industrial Waste Management
	Ergonomics and Human Factor Engineering