

Discipline Mechanical Engg	Semester 6th	Name of the teaching Faculty H. Patra		
Subject Advance Manufacturing Processes	No. of Days per weeks 1	Semester Starts :-> 10.3.22 Semester ends :-> 30.6.22 No. of weeks :-> 15		
Month	Week	Class Day	Theory Topic	
March	2nd	1st	comparison with traditional machining	
		2nd	ultrasonic Machining principle	
		3rd	Description of equipment	
	3rd	1st		Dielectric fluid process parameter
		2nd		Output characteristic application
		3rd		EDM principal Description equipment
		4th		controlling parameter application
	4th	1st		Abrasive Jet, description of equipment, Material removal
		2nd		Removal rate, application
		3rd		Laser Beam Machining, principle Description of equipment
		4th		Material removal rate application

Month	Week	class day	Theory Topic	
April	5th	1st	Electro chemical Machine	
	1st	1st	Description, material removal rate application	
		2nd	plasma Arc M/cing principle	
		3rd	Description of equipment Material Removal rate.	
		4th	process parameter, performance characterization, Application.	
	2nd	1st	Electron Beam Maching principle, description of equipment Material removal rate	
		2nd	Process parameters, Performance Characterization Application.	
		3rd	plastic Processing	
		4th	processing of plastics	
		3rd	1st	Moulding process (Injection moulding)
			2nd	compression moulding, Transfer moulding
			3rd	Extruding, Casting, calendaring Fabrication methods
			4th	sheet forming Blow moulding, laminating plastics
		4th	1st	sheets, rods & tubes Reinforcing

Month	Week	Class Day	Theory Topic
		2nd	Applications of plastics
		3rd	Additive manufacturing, Additive manufacturing (Fundamentals)
		4th	AM process chain
	5th	1st	Advantages and limitation of AM commonly used terms
May	1st	1st	Classification of AM process
		2nd	fundamental Additive manufacturing processes
		3rd	Distinction between AM & CNC
		4th	Other related technologies
	2nd	1st	Application in Design
		2nd	Aerospace Industry
		3rd	Automotive Industry
		4th	Jewelry Industry
	3rd	1st	Arts and Architecture,
		2nd	RP Medical & Biotechnology
		3rd	Application
		4th	Web Based Rapid Prototyping Systems

Month	Week	Class Day	Theory Topic
	4th	1st	concept of Flexible manufacturing process,
		2nd	concurrent engineering
		3rd	production tools like tools capstan and turned lathes
		4th	-do-
	5th	1st	Rapid prototyping processes
June	1st	1st	Special purpose Machines
		2nd	concept, General elements of SPM
		3rd	productivity improvement by SPM
		4th	Principles of SPM Design
	2nd	1st	Maintenance of Machines Tools
		2nd	Types of maintenance
		3rd	Repair cycle analysis
		4th	Repair complexity
	3rd	1st	Maintenance manual
		2nd	Maintenance records
		3rd	Housekeeping

