

LESSIONPLAN

<b>Discipline:- MECHANICAL ENGG.</b>	<b>SEM:-6TH</b>	<b>NameofTeachingFaculty:-ANANDITA NANDA</b>
<b>SUB:-Advance Manufacturing Process</b>	<b>NoofDays /per week class allotted:-4</b>	<b>SemesterFromDate:-13.02.2023ToDate:-23.05.2023, No of Weeks:-15</b>
<b>Week</b>	<b>ClassDay</b>	<b>TheoryTopics</b>
1ST	1st	Introduction,ComparisonwithTraditionalmachining.
	2nd	UltrasonicMachining:Principle,applications.
	3rd	Descriptionofequipment.
	4th	Electricdischargemachining:Principle,Descriptionof equipment.
2ND	1st	Dielectric fluid,tools(electrodes),processparameters.
	2nd	OutputCharacteristics, Applications.
	3rd	WirecutEDM:Principle, Descriptionofequipment.
	4th	ControllingParameters, Applications.
3RD	1st	AbrasivejetMachining:Principle,Descriptionof equipment.
	2nd	Materialremovalrate,Application.
	3rd	LaserBeamMachining:Principle,Descriptionofequipment.
	4th	Materialremovalrate,Application
4TH	1st	ElectrochemicalMachining:Principle,Descriptionof equipment.
	2nd	Materialremovalrate,Application
	3rd	PlasmaArcMachining:Principle,Descriptionofequipment.
	4th	Materialremovalrate,Application
5TH	1st	ProcessParameters,PerformanceCharacterization,

	2nd	ElectronBeamMachining:Principle,Descriptionof equipment.
	3rd	Materialremovalrate,Application
	4th	ProcessParameters,PerformanceCharacterization,
6TH	1st	PlasticProcessing:Processingofplastics.
	2nd	MouldingProcesses:Injectionmoulding
	3rd	Compressionmoulding
	4th	Transfermoulding
7TH	1st	Extruding:Casting.
	2nd	Calendering.
	3rd	Fabricationmethods:Sheetforming.
	4th	Blowmolding,Reinforcing.
8TH	1st	Laminatingplastics(sheets,rods&tubes),
	2nd	ApplicationsofPlastics.
	3rd	AdditiveManufacturingProcess:Introduction,NeedforAdditive Manufacturing.
	4th	FundamentalsofAdditiveManufacturing.
9TH	1st	AMProcessChain.
	2nd	ClassificationofAMprocess.
	3rd	FundamentalAutomatedProcesses.
	4th	DistinctionbetweenAMandCNC,otherrelatedtechnologies.
10TH	1st	Application–ApplicationinDesign,AerospaceIndustry, Automotive Industry, Jewelry industry
	2nd	ArtandArchitecture,MedicalandBioengineering Applications.
	3rd	WebBasedRapidPrototypingSystems.
	4th	WebBasedRapidPrototypingSystems.

11TH	1st	WebBasedRapidPrototypingSystems.
	2nd	ConceptofFlexiblemanufacturingprocess,
	3rd	Concurrentengineering,productiontoolslikecapstanand turret lathes
	4th	Rapidprototypingprocesses.
12TH	1st	DiscussionofChapter&Assignment,Questions
	2nd	SpecialPurposeMachines(SPM):Concept,Generalelementsof SPM
	3rd	SpecialPurposeMachines(SPM):Concept,Generalelementsof SPM
	4th	ProductivityimprovementbySPM
13TH	1st	ProductivityimprovementbySPM
	2nd	ProductivityimprovementbySPM
	3rd	PrinciplesofSPMdesign
	4th	PrinciplesofSPMdesign
14TH	1st	MaintenanceofMachineTools:Typesofmaintenance.
	2nd	Repaircycleanalysis.
	3rd	Repaircomplexity.
	4th	Maintenancemanual.
15TH	1st	Maintenancerecords.
	2nd	Housekeeping.
	3rd	IntroductiontoTotalProductiveMaintenance(TPM).
	4th	DiscussionofChapter&AssignmentQuestions

**E.LEARNINGRESOURCES:**

Sl.No.	NameofAuthors	TitleoftheBook	NameofthePublisher
1	O.P.KHANNA	Productiontechnology–Vol-II	DhanpatRaiPublication
2	B.S.Raghuwanshi	WorkshopTechnology,Vol–II	DhanpatRai Publication
3	HMT,Bangalore	ProductionTechnology	TataMc-GrawHill

4	ChuaC.K., LeongK.F.andLIM C.S	Rapidprototyping:PrinciplesandApplications	Worldscientificpublication,thirde dition,2010
5	StephenF.Krar&Arthur Gil	ExploringAdvancedManufacturingTechnologies	IndustrialPress