LESSON PLAN

SUB: AMP

BRANCH:- MECHANICAL ENGG.

SEMESTER: 6TH
NAME OF FACULTY: KEDAR PRUSTY

GOVERNMENT POLYTECHNIC, BHADRAK

SESSION:2025-26

Hod ,Mechanical

Academic Co-ordinator

Principal
Govt. Polytechnic, Bhadrak

Discipline: MECHANICAL ENGG	Semester :6th	Name of the Teaching Faculty:KEDAR PRUSTY LECTURER(GF) MECHANICAL
Subject AMP	No. of days/perweek class allotted: 4	Semester From date: 22.12.2025 To date: 18.04.2026 No of weeks: 15
Week	**Class Day**	**Theory Topics:**
1st	1st	Modern Machining Processes: Introduction – comparison with traditional machining
	2nd	Ultrasonic Machining: principle, Description of equipment, applications.
	3rd	Ultrasonic Machining: principle, Description of equipment, applications.
	4th	Electric Discharge Machining: Principle, Description of equipmen
2nd	1st	Electric Discharge Machining: Principle, Description of equipmen
	2nd	Electric Discharge Machining: Principle, Description of equipment, Dielectric fluid, tools (electrodes), Process parameters, Output characteristics, appl
	3rd	Electric Discharge Machining: Principle, Description of equipment, Dielectric fluid, tools (electrodes), Process parameters, Output characteristics, appl
	4th	Electric Discharge Machining: Principle, Description of equipment, Dielectric fluid, tools (electrodes), Process parameters, Output characteristics, appl
3rd	1st	Wire cut EDM: Principle, Description of equipment, controlling paramete
	2nd	Wire cut EDM: Principle, Description of equipment, controlling paramete
	3rd	Wire cut EDM: Principle, Description of equipment, controlling paramete
	4th	Abrasive Jet Machining: principle, description of equipment, Material removal rate, application.
4th	1st	CLASS TEST-1
	2nd	Abrasive Jet Machining: principle, description of equipment, Material removal rate, application
	3rd	Abrasive Jet Machining: principle, description of equipment, Material removal rate, application
	4th	Laser Beam Machining: principle, description of equipment, Material removal rate, applica
	1st	Laser Beam Machining: principle, description of equipment, Material removal rate, applica
	2nd	Electro Chemical Machining: principle, description of equipment, Material removal rate, application.

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5th	3rd	Plasma Arc Machining – principle, description of equipment, Material removal rate, Process par
	4th	Electron Beam Machining - principle, description of equipment, Material removal rate, Process parameters,
6th	1st	Plastic Processing: Processing of plastics.
	2nd	Moulding processes: Injection moulding, Compression moulding, Transfer moulding.
	3rd	Moulding processes: Injection moulding, Compression moulding, Transfer moulding.
	4th	Moulding processes: Injection moulding, Compression moulding, Transfer moulding.
7th	1st	Extruding; Casting; Calendering.
	2nd	Extruding; Casting; Calendering.
	3rd	Fabrication methods-Sheet forming, Blow moulding, Laminating plastics (sheets, rods & tubes), Reinforcing.
	4th	CLASS TEST
8th	1st	Fabrication methods-Sheet forming, Blow moulding, Laminating plastics (sheets, rods & tubes), Reinforcing.
	2nd	Applications of Plastics.
	3rd	Additive Manufacturing Process: Introduction, Need for Additive Manufacturing
	4th	Fundamentals of Additive Manufacturing, AM Process Chain
9th	1st	Advantages and Limitations of AM, Commonly used Terms
	2nd	Advantages and Limitations of AM, Commonly used Terms
	3rd	Classification of AM process, Fundamental Automated Processes, Distinction between AM and CNC, other related technologies.
	4th	Classification of AM process, Fundamental Automated Processes, Distinction between AM and CNC, other related technologies.
10th	1st	Application –Application in Design, Aerospace Industry, Automotive Industry, Jewelry Industry, Arts and Architecture. RP Medical and Bioengineering Applications.
	2nd	Application –Application in Design, Aerospace Industry, Automotive Industry, Jewelry Industry, Arts and Architecture. RP Medical and Bioengineering Applications.
	3rd	Web Based Rapid Prototyping Systems.
	4th	Web Based Rapid Prototyping Systems.
	1st	Concept of Flexible manufacturing process, concurrent engineering, production tools like capstan and turret lathes, rapid prototyping processes.
	2nd	Concept of Flexible manufacturing process, concurrent engineering, production tools like capstan and turret lathes, rapid prototyping

		processes.
11th	3rd	Concept of Flexible manufacturing process, concurrent engineering, production tools like capstan and turret lathes, rapid prototyping processes.
	4th	Concept of Flexible manufacturing process, concurrent engineering, production tools like capstan and turret lathes, rapid prototyping processes.
12th	1st	Special Purpose Machines (SPM):
	2nd	Concept, General elements of SPM, Productivity improvement by SPM, Principles of SPM design.
	3rd	CLASS TEST-2
	4th	Concept, General elements of SPM, Productivity improvement by SPM, Principles of SPM design.
13th	1st	Concept, General elements of SPM, Productivity improvement by SPM, Principles of SPM design.
	2nd	Maintenance of Machine Tools:
	3rd	Types of maintenance, Repair cycle analysis, Repair complexity, Maintenance manual, Maintenance records, Housekeeping. Introduction to Total Productive Maintenance (TPM).
	4th	Types of maintenance, Repair cycle analysis, Repair complexity, Maintenance manual, Maintenance records, Housekeeping. Introduction to Total Productive Maintenance (TPM).
14th	1st	Types of maintenance, Repair cycle analysis, Repair complexity, Maintenance manual, Maintenance records, Housekeeping. Introduction to Total Productive Maintenance (TPM).
	2nd	Types of maintenance, Repair cycle analysis, Repair complexity, Maintenance manual, Maintenance records, Housekeeping. Introduction to Total Productive Maintenance (TPM).
	3rd	Types of maintenance, Repair cycle analysis, Repair complexity, Maintenance manual, Maintenance records, Housekeeping. Introduction to Total Productive Maintenance (TPM).
	4th	Discussion of PYQS
15th	1st	Discussion of PYQS
	2nd	Discussion of PYQS
	3rd	Extra class for weak student
	4th	Extra class for weak student

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