

# LESSON PLAN

**SUB: AMP**

**BRANCH:- MECHANICAL ENGG.**

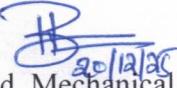
**SEMESTER: 6TH**

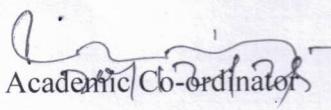
**NAME OF FACULTY: KEDAR PRUSTY**

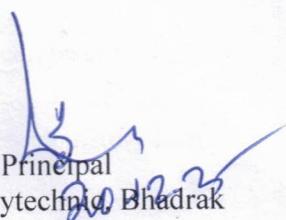


**GOVERNMENT POLYTECHNIC,  
BHADRAK**

**SESSION:2025-26**

  
Hod ,Mechanical

  
Academic Co-ordinator

  
Principal  
Govt. Polytechnic, Bhadrak  
20/12/23

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

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

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

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