

**SUDDHANANDA ENGINEERING AND RESEARCH  
CENTER LESSON PLAN**

<b>Discipline : Mechanical ENGG.</b>		<b>Semester: 4th Sem</b>	<b>Name of the Teaching Faculty : Manoj Kumar Behera</b>
<b>Subject : MT</b>		<b>No. of Days / per week class allotted : 04</b>	
<b>MONTH</b>	<b>Week</b>	<b>Day</b>	<b>Topics</b>
<b>FEBRUARY</b>	<b>3rd</b>	2nd	<b>1.0 Tool Materials</b> :1.1 Composition of various tool materials 1.2 Physical properties& uses of such tool materials.
		3RD	<b>Cutting Tools:</b> Cutting action of various and tools such as Chisel, hacksaw blade, dies and reamer
	<b>4TH</b>	1st	2.3 Turning tool geometry .
		2nd	2.3.1 purpose of tool angle
		3rd	2.4 Machining process parameters (Speed, feed and depth of cut)
		6th	2.5 Coolants and lubricants in machining and purpose
	<b>5th</b>	1st	<b>3.0 Lathe Machine: 3.1</b> Construction and working of lathe and CNC lathe 3.1.1 Major components of a lathe and their function
		2nd	Operations carried out in a lathe(Turning, thread cutting, taper turning, internal machining, parting off, facing, knurling) Safety measures during machining
	<b>1ST</b>	3rd	Define multiple tool holders
		6th	<b>3.3 Turret Lathe</b> Difference with respect to capstan lathe and Major components and their function
<b>2ND</b>	1st	<b>3.4</b> Draw the tooling layout for preparation of a hexagonal bolt &bush	
	6th	<b>4.0 Shaper</b>	
<b>3rd</b>	1ST	4.1 Potential application areas of a shaper machine	
	2nd	4.3 Explain the automatic able feed mechanism	
	3rd	4.4 Explain the construction &working of tool head	

MARC	4TH	6th	4.5 Explain the quick return mechanism through sketch	
		1st	<b>Planing Machine</b> Application area of a planer and its difference with respect to shaper	
		2nd	5.2 Major components and their functions	
		3rd	5.3 The table drive mechanism	
		6th	5.5 Clamping of work through sketch.	
	5th	1st	6.2 Explain work holding attachment	
		2nd	<b>Milling Machine</b> Types of milling machine and operations performed by them and also same for CNC milling machine	
		3rd	6.2 Explain work holding attachment	
	APRIL	2ND	1st	6.3 Construction & working of simple dividing head, universal dividing head
			2nd	6.4 Procedure of simple and compound indexing
3rd			6.5 Illustration of different indexing method	
6th			Revision	
3rd		1st	<b>7.0 Slotter</b>	
		2nd	7.1 Major components and their function	
		3RD	7.2 Construction and working of slotter machine	
		6TH	7.3 Tools used in slotter	
4th		1st	Revision	
		2nd	<b>8.0 Grinding</b>	
		3rd	8.1 Significance of grinding operation	
			CLASS TEST-1	
		6TH	8.2 Manufacturing of grinding wheels	
5th		1st	8.3 Criteria for selecting of grinding wheels	
		2nd	8.4 Specification of grinding wheels with example Working of	
		3rd	Cylindrical Grinder	
		6th	Surface Grinder ,Centreless Grinde	
			1st	

<b>MAY</b>	<b>1st</b>	2nd	<b>9.0 Internal Machining operations Classification of drilling machine</b>
		3rd	9.1 Working of ,Bench drilling machine
		6th	Pillar drilling machine
	<b>2nd</b>	1st	Radial drilling machin
		2nd	9.2 Boring , Basic Principle of Boring
		3rd	Different between Boring and drilling
		4th	9.3 Broaching
	<b>3rd</b>	1st	Types of Broaching(pull type, push type) •
		2nd	Advantages of Broaching and applications
		3rd	<b>10 Surface finish, lapping Process</b>
		6th	10.1 Definition of Surface finis
	<b>4th</b>	1st	<b>CLASS TEST-2</b>
		2nd	10.2 Description of lapping& explain their specific cuttin

