

# PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH



## LESSON PLAN Session-2023-2024

Discipline: Mechanical Engg. Engg. Semester: 4<sup>th</sup>

Subject: Manufacturing Technology

Name of the Teaching Faculty: Sanil Kumar Mahapatra

Subject: MT. No. of Days/per week class allotted : 04

Semester From Date : 16-01-2024 To Date : 26-04-2024 No. of Weeks : 15

Week	Class Day	Theory / Practical Topics
01	01	Composition of various tool materials.
	02	Physical properties of tool materials.
	03	Uses of tool materials.
	04	Uses of tool materials.
02	01	Cutting action of various tools such as chisel, hacksaw blade.
	02	Cutting action of hacksaw, blade, dies & reamer.
	03	Turning tool geometry.
	04	Purpose of tool angle.
03	01	Machining process parameter. (Speed, feed & depth of cut)
	02	Coatings and Lubrication in M/C
	03	Purpose of Coatings.
	04	Construction and working of lathe.

  
Signature of the Faculty

Subject: M7 No. of Days/per week class allotted : 04

Semester From Date : 16-01-2024 To Date : 26-04-2024 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
04	01	Construction and working of CMC lathe.
	02	major components of a lathe and their function.
	03	Operation carried out in a lathe turning, thread cutting, taper turning.
	04	operation carried out in a lathe internal m/c, parting off, facing, knurling.
05	01	Safety measures during machine.
	02	Capstan lathe difference w.r.t. engine lathe.
	03	major components and their function.
	04	Define multiple tool holder.
06	01	turret lathe - Difference w.r.t. Capstan lathe major components.
	02	Draw the tooling layout for perpendicular of a hexagonal bolt ad nut.
	03	Shaper - potential application areas of a shaper machine.
	04	major components and their function.


  
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Semester From Date : 16-01-2024 To Date : 26-04-2024

No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
07	01	Explain the automatic table feed mechanism.
	02	Explain the construction and working of tool head.
	03	Explain the quick return mechanism through sketch.
	04	State the specification of a shaping machine.
08	01	Planing machine : application area of a planer.
	02	Its difference with shaper.
	03	major components and their functions.
	04	the table drive mechanism.
09	01	working of tool and tool support.
	02	Clamping of work through sketches.
	03	millery machine. type of millery machine.
	04	operations performed.

  
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Subject: MT No. of Days/per week class allotted: 2

Semester From Date: 16-01-2024 To Date: 26-04-2024

No. of Weeks: 15

Week	Class Day	Theory / Practical Topics
10	01	CNC milling machine
	02	operatn. of CNC milling M/C
	03	Explain work holdy attachment.
	04	Construction and worky. of simple, dividing head, Universal dividing head.
11	01	Procedure of simple and compound indexing and different indexing method.
	02	slotter - major component, and their function.
	03	Construction and worky and slotter. m/c.
	04	Tools used in slotter.
12	01	Grinding - significance of grinding operation
	02	manufacturing of grinding wheels.
	03	Criteria for selecting of grinding wheels.
	04	Specificection of grinding wheels with example worky. of cylindrical.



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Subject: MT No. of Days/per week class allotted : 04

Semester From Date : 16-01-2024 To Date : 26-04-2024

No. of Weeks : 15

Week	Class Day	Theory / Practical Topics
13	01	2. Surface grinder 3. Centerless grinder.
	02	Classification of drilling machine.
	03	Working of Bench drilling machine.
	04	pillar drilling machine
14	01	Radial drilling machine.
	02	Boring : Basic principle of Boring.
	03	Difference between Boring and drilling.
	04	Broaching : Type of Broaching. (Pull type, Push type)
15	01	Advantages of Broaching of shaft
	02	Definition of Surface finish.
	03	Definition of Lapping.
	04	Explanation of Super finish.



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