BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF AUTOMOBILE ENGINEERING

LESSON PLAN

SUBJECT: **MANUFACTURING TECHNOLGY**

FACULTY: **INAYAT ALLI KHAN**

ACCADEMIC SESSION: **2022-23**

SEMESTER: **4TH**

Sd/-
H O D (Automobile Engg.)

Sr. Lecturer
Automobile Engg. Dept.
BOSE, Cuttack

AUTOMOBILE ENGINEERING DEPATMENT

VISSION:

To develop competent, disciplined imaginative Automobile engineers, equipped with core competency and technical skills useful to the learning / teaching community and the industrial fraternity.

MISSION:

M1: To provide with operational and technical inputs to get innovative and research ideas in the field of automotive engineering.

M2: To give inputs for higher education with management qualities for the betterment of the society.

M3: Skilling with modern engineering tools necessary to meet and solve engineering problems.

PROGRAM EDUCATIONAL OBJECTIVES

PEO1: To provide technical skills to diagnose and apply the concept of automotive system

PEO2: To prepare to design, fabricate and innovate in automobile sector to face the industrial challenges.

PEO3: To inculcate with good communication skills, ethics and entrepreneurship skills to play the key role in automotive industry.

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Discipline:-**AutomobileEngg.**	Semester:-**4th**	Nameoftheteachingfaculty:- **INAYATALLIKHAN**
SubjectName:-**MANUFACTURING TECHNOLOGY**	No.OfDays/WeekClassAllotted :- **04 Periods/Week(Monday, Tuesday,Wednesday,Thursday)**	SemesterfromDate-**14/02/2023**ToDate **23/05/2023No.of Weeks:15**
Week	ClassDay	Theorytopics
1st	14/02/2023	IntroductiontoManufacturing Technology
	15/02/2023	**1.0 Tool Materials** 1.1 Composition of various tool materials
	16/02/2023	1.2 Physical properties & uses of such tool materials
2nd	20/02/2023	**2.0 Cutting Tools** **2.1** Cutting action of various hand tools such as Chisel, hack saw blade, dies and reamer
	21/02/2023	2.2 Turning tool geometry and purpose of tool angle
	22/02/2023	2.2 Turning tool geometry and purpose of tool angle
	23/02/2023	**2.3** Machining process parameters (Speed, feed and depth of cut)
3rd	27/02/2023	**2.3** Machining process parameters (Speed, feed and depth of cut)
	28/02/2023	2.4 Coolants and lubricants in machining and purpose
	01/03/2023	**3.0 Leth machine** **3.1** Construction and working of lathe • Major components of a lathe and their function • Operations carried out in a lathe (Turning, thread cutting, taper turning, internal machining, parting off, facing, knurling) • Safety measures during machining
	02/03/2023	**3.1** Construction and working of lathe • Major components of a lathe and their function • Operations carried out in a lathe (Turning, thread cutting, taper turning, internal machining, parting off, facing, knurling) • Safety measures during machining

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4th	06/03/2023	**3.2** Capstan lathe • Difference with respect to engine lathe • Major components and their function • Define multiple tool holders
	09/03/2023	**3.2** Capstan lathe • Difference with respect to engine lathe • Major components and their function • Define multiple tool holders
5th	13/03/2023	**3.3** Turret Lathe • Difference with respect to capstan lathe • Major components and their function
	14/03/2023	**3.3** Turret Lathe • Difference with respect to capstan lathe • Major components and their function
	15/03/2023	**4.0 Shaper** 4.1 Potential application areas of a shaper machine
	16/03/2023	4.2 Major components and their function
6th	20/03/2023	4.2 Major components and their function
	21/03/2023	4.3 Explain the automatic table feed mechanism
	22/03/2023	4.4 Explain the construction & working of tool head
	23/03/2023	4.5 Explain the quick return mechanism through sketch
7th	27/03/2023	4.6 State the specification of a shaping machine

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	28/03/2023	4.6 State the specification of a shaping machine
	29/03/2023	**CLASSTEST**
8th	03/04/2023	**5.0 Planning Machine** 5.1 Application area of a planar and its difference with respect to shaper
	04/04/2023	5.2 Major components and their functions
	05/04/2023	5.2 Major components and their functions
	06/04/2023	5.3 The table drive mechanism
9th	10/04/2023	5.4 Working of tool and tool support
	11/04/2023	5.4 Working of tool and tool support
	12/04/2023	5.5 Clamping of work through sketch
	13/04/2023	**6.0 Milling Machine** 6.1 Types of milling machine and operations performed by them
10th	17/04/2023	**6.2** Explain work holding attachment
	18/04/2023	**6.2** Explain work holding attachment
	19/04/2023	6.3 Construction & working of simple dividing head, universal dividing head
	20/04/2023	6.3 Construction & working of simple dividing head, universal dividing head
11th	24/04/2023	6.4 Procedure of simple and compound indexing
	25/04/2023	**6.5** Illustration of different indexing methods
	26/04/2023	7.0 **Slotter** 7.1 Major components and their function
	27/04/2023	7.1 Major components and their function

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12th	01/05/2023	7.2 Construction and working of slotter machine
	02/05/2023	7.2 Construction and working of slotter machine
	03/05/2023	7.3 Tools used in slotter
	04/05/2023	**8.0 Grinding** 8.1 Significance of grinding operations
13th	08/05/2023	8.2 Manufacturing of grinding wheels
	09/05/2023	8.3 Criteria for selecting of grinding wheels
	10/05/2023	8.4 Specification of grinding wheels with example Working of • Cylindrical Grinder • Surface Grinder • Centre less Grinder
	11/05/2023	8.4 Specification of grinding wheels with example Working of • Cylindrical Grinder • Surface Grinder • Centre less Grinder
14th	15/05/2023	**9.0 Internal Machining operations** Classification of drilling machines 9.1 Working of • Bench drilling machine • Pillar drilling machine • Radial drilling machine
	16/05/2023	9.2 Boring • Basic Principle of Boring • Different between Boring and drilling
	17/05/2023	9.3 Broaching • Types of Broaching (pull type, push type) • Advantages of Broaching and applications
	18/05/2023	**10 Surface finish, lapping** 10.1 Definition of Surface finish • Define super finishing
15th	22/05/2023	10.2 Description of lapping &explain their specific cutting
	23/05/2023	**CLASSTEST**