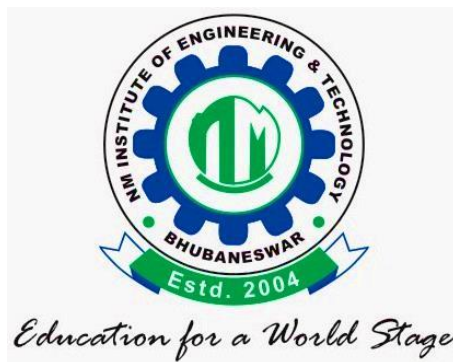


# **NM INSTITUTE OF ENGINEERING & TECHNOLOGY BHUBANESWAR**

## **Mechanical Engineering Department**



## **LESSON PLAN**

### **Session 2023-2024**

Semester: 3<sup>RD</sup>

Subject: PRODUCTION TECHNOLOGY

Faculty Name: Dr. SANTOSH KUMAR SAHU

Subject: PT

No of Days/per week class allotted: 4

Semester from date:

to date:

No. of Weeks: 15

Week	Class Day	Theory topics
1	1	Introduction to Metal Forming Processes.
	2	Extrusion: Definition & Classification.
	3	Explain direct, indirect and impact extrusion process.
	4	Define rolling. Classify it.
2	1	Differentiate between cold rolling and hot rolling process.
	2	List the different types of rolling mills used in Rolling process.
	3	Previous years questions solved.
	4	Introduction to Welding.
3	1	Define welding and classify various welding processes.
	2	Explain fluxes used in welding.
	3	Explain Oxy-acetylene welding process.
	4	Explain various types of flames used in Oxy-acetylene welding process.
4	1	Explain Arc welding process
	2	Specify arc welding electrodes.
	3	Define resistance welding and classify it.
	4	Describe various resistance welding processes such as butt welding.
5	1	Spot welding.
	2	Flash welding.
	3	Projection welding.
	4	Seam welding.
6	1	Explain TIG and MIG welding process.
	2	State different welding defects.
	3	Causes and remedies for welding defects.
	4	Introduction to Casting.
7	1	Define Casting and Classify the various Casting processes.
	2	Explain the procedure of Sand mould casting.
	3	Explain different types of molding sands with their composition and properties.
	4	Classify different pattern and state various pattern allowances.

Signature of Faculty

Subject: PT

No of Days/per week class allotted: 4

Semester from date:

to date:

No. of Weeks: 15

Week	Class Day	Theory topics
8	1	Classify core.
	2	Describe construction and working of cupola.
	3	Describe construction and working of crucible furnace.
	4	Explain die casting method.
9	1	Explain centrifugal casting such as true centrifugal casting, , and.
	2	true centrifugal casting
	3	centrifuging with advantages
	4	Limitation of centrifugal casting.
10	1	Area of application of centrifugal casting.
	2	Explain various casting defects.
	3	Causes and remedies for casting defects.
	4	Introduction to Powder Metallurgy
11	1	Define powder metallurgy process.
	2	State advantages of powder metallurgy technology technique.
	3	Describe the methods of producing components by powder metallurgy technique.
	4	Explain sintering.
12	1	Economics of powder metallurgy.
	2	Solving previous year questions.
	3	Introduction to Press Work.
	4	Describe Press Works: blanking,
13	1	Piercing and trimming.
	2	List various types of die and punch
	3	Explain simple, Compound & Progressive dies
	4	Explain simple, Compound & Progressive dies
14	1	Describe the various advantages & disadvantages of above dies
	2	Introduction to Jigs and fixtures.
	3	Define jigs and fixtures.
	4	State advantages of using jigs and fixtures.
15	1	State the principle of locations.
	2	Describe the methods of location with respect to 3-2-1 point location of rectangular jig.
	3	List various types of jig and fixtures.
	4	Solving previous year questions.

Signature of Faculty