



NILASAIL INSTITUTE OF SCIENCE & TECHNOLOGY

SERGARH-756060, BALASORE (ODISHA)
(Approved by AICTE & affiliated to SCTE & VT, Odisha)



LESSON PLAN

SUBJECT: TH-1 (Production Technology)

Name Of The Faculty :- Er. Debashis Biswal
Branch :- Mechanical Engineering
Session :- 2024-25

Semester :- 3rd
Examination :- 2024(w)

CHAPTERWISE DISTRIBUTION OF PERIODS

Sl.No.	Name of the chapter as per the Syllabus	No. of Periods as per the Syllabus	No. of periods actually needed
1	Metal Forming Processes	07	07
2	Welding	16	16
3	Casting	16	16
4	Powder Metallurgy	07	07
5	Press Work	07	07
6	Jigs and fixtures	07	07
TOTAL		60	60

D. Biswal
29/06/2024
Sign of Faculty

[Signature]
29/06/24
Sign of H.O.D

Discipline: MECHANICAL ENGG	Semester: 3 rd	Name of the Teaching Faculty: Er. Dobashis Biswal	
		Session : 2024-25	Examination : 2024(w)
Week	Class Day	Topics to be covered	
1 st	1 st	1.1 Extrusion: Definition & Classification	
	2 nd	1.2 Explain indirect, indirect and impact extrusion process.	
	3 rd	1.2 Explain indirect, indirect and impact extrusion process.	
	4 th	1.3 Define rolling. Classify it	
2 nd	1 st	1.3 Define rolling. Classify it	
	2 nd	1.4 Differentiate between cold rolling and hot rolling process.	
	3 rd	1.5 List the different types of rolling mills used in Rolling process.	
	4 th	2.1 Define welding and classify various welding process.	
3 rd	1 st	2.2 Explain fluxes used in welding.	
	2 nd	2.3 Explain Oxy-acetylene welding process.	
	3 rd	2.4 Explain various types of flames used in Oxy-acetylene welding process	
	4 th	2.4 Explain various types of flames used in Oxy-acetylene welding process	
4 th	1 st	2.5 Explain Arc welding process.	
	2 nd	2.5 Explain Arc welding process.	
	3 rd	2.5 Explain Arc welding process.	
	4 th	2.6 Specify arc welding electrodes.	
5 th	1 st	2.7 Define resistance welding and classify it.	
	2 nd	2.7 Define resistance welding and classify it.	
	3 rd	2.8 Describe various resistance welding processes such as butt welding, spot welding, flash welding, projection welding and seam welding.	
	4 th	2.8 Describe various resistance welding processes such as butt welding, spot welding, flash welding, projection welding and seam welding.	
6 th	1 st	2.8 Describe various resistance welding processes such as butt welding, spot welding, flash welding, projection welding and seam welding.	
	2 nd	2.9 Explain TIG and MIG welding process	
	3 rd	2.9 Explain TIG and MIG welding process	
	4 th	2.10 State different welding defects with causes and remedies.	
7 th	1 st	3.1 Define casting and classify the various casting processes.	
	2 nd	3.1 Define casting and classify the various casting processes.	
	3 rd	3.2 Explain the procedure of Sand mould casting	
	4 th	3.2 Explain the procedure of Sand mould casting	

Week	ClassDay	Topics to be covered
8 th	1 st	3.3 Explain different types of molding sands with their composition and properties.
	2 nd	3.3 Explain different types of molding sands with their composition and properties.
	3 rd	3.4 Classify different pattern and state various pattern allowances
	4 th	3.4 Classify different pattern and state various pattern allowances
9 th	1 st	3.5 Classify core
	2 nd	3.7 Explain die casting method.
	3 rd	3.7 Explain die casting method.
	4 th	3.8 Explain centrifugal castings such as true centrifugal casting.
10 th	1 st	3.8 Explain centrifugal castings such as true centrifugal casting, centrifuging with advantages, limitation and area of application
	2 nd	3.9 Explain various casting defects with their causes and remedies.
	3 rd	INTERNAL ASSESMENT
	4 th	INTERNAL ASSESMENT
11 th	1 st	4.1 Define powder metallurgy process
	2 nd	4.2 State advantages of powder metallurgy technology technique
	3 rd	4.3 Describe the methods of producing components by powder metallurgy technique
	4 th	4.4 Explain sintering.
12 th	1 st	4.4 Explain sintering.
	2 nd	4.5 Economics of powder metallurgy.
	3 rd	4.6 Describe press works, blanking, piercing and trimming.
	4 th	4.6 Describe press works, blanking, piercing and trimming.
13 th	1 st	5.3 Explain simple, Compound & Progressive dies
	2 nd	5.3 Explain simple, Compound & Progressive dies
	3 rd	5.4 Describe the various advantages & disadvantages of above dies
	4 th	5.4 Describe the various advantages & disadvantages of above dies
14 th	1 st	6.1 Define jigs and fixtures
	2 nd	6.2 State advantages of using jigs and fixtures
	3 rd	6.2 State advantages of using jigs and fixtures
	4 th	6.3 State the principle of locations

Week	ClassDay	Topics to be covered
15 th	1 st	6.4 Describethemethodsoflocationwithrespectto3-2-1pointlocationof rectangularjig
	2 nd	6.4 Describethemethodsoflocationwithrespectto3-2-1pointlocationof rectangularjig
	3 rd	6.5 List various types of jig and fixtures
	4 th	6.5 List various types of jig and fixtures

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