

**NILASAIL INSTITUTE OF SCIENCE & TECHNOLOGY**

SERGARH-756060, BALASORE (ODISHA)

(Approved by AICTE & affiliated to SCTE & VT, Odisha)

**LESSON PLAN****SUBJECT: TH-1 (Production Technology)****CHAPTERWISE DISTRIBUTION OF PERIODS**

Sl.No.	Name of the chapters 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

Discipline: AUTOMOBILE ENGINEERING	Semester: 3 rd	Name of the Teaching Faculty :Er. Subhrajyoti Rout
		Session : 2023-24 Examination : 2023(w)
Week	ClassDay	Topics to be covered
1st	1st	1.1 Extrusion: Definition & Classification
	2nd	1.2 Explain direct, indirect and impact extrusion process.
	3rd	1.2 Explain direct, indirect and impact extrusion process.
	4th	1.3 Define rolling. Classify it
2nd	1st	1.3 Define rolling. Classify it
	2nd	1.4 Differentiate between cold rolling and hot rolling process.
	3rd	1.5 List the different types of rolling mills used in Rolling process.
	4th	2.1 Define welding and classify various welding process.
3rd	1st	2.2 Explain fluxes used in welding.
	2nd	2.3 Explain Oxy-acetylene welding process.
	3rd	2.4 Explain various types of flames used in Oxy-acetylene welding process
	4th	2.4 Explain various types of flames used in Oxy-acetylene welding process
4th	1st	2.5 Explain Arc welding process.
	2nd	2.5 Explain Arc welding process.
	3rd	2.5 Explain Arc welding process.
	4th	2.6 Specify arc welding electrodes.
5th	1st	2.7 Define resistance welding and classify it.
	2nd	2.7 Define resistance welding and classify it.
	3rd	2.8 Describe various resistance welding processes such as butt welding, spot welding, flash welding, projection welding and seam welding.
	4th	2.8 Describe various resistance welding processes such as butt welding, spot welding, flash welding, projection welding and seam welding.
6th	1st	2.8 Describe various resistance welding processes such as butt welding, spot welding, flash welding, projection welding and seam welding.
	2nd	2.9 Explain TIG and MIG welding process
	3rd	2.9 Explain TIG and MIG welding process
	4th	2.10 State different welding defects with causes and remedies.
7th	1st	3.1 Define casting and classify the various casting processes.
	2nd	3.1 Define casting and classify the various casting processes.
	3rd	3.2 Explain the procedure of Sand mould casting
	4th	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 moldings and with their composition and properties.
	2 nd	3.3 Explain different types of moldings and with their composition and properties..
	3 rd	3.4Classifydifferentpatternandstatevariouspatternallowances
	4 th	3.4Classifydifferentpatternandstatevariouspatternallowances
9 th	1 st	3.5Classify core
	2 nd	3.7Explaindiecasting method.
	3 rd	3.7Explaindiecasting method.
	4 th	3.8Explaincentrifugalcastingsuchastruecentrifugal casting,
10 th	1 st	3.8Explaincentrifugalcastingsuchastruecentrifugalcasting,centrifugingwith advantages, limitation and area of application
	2 nd	3.9Explainvariouscastingdefectswiththeircausesandremedies.
	3 rd	INTERNAL ASSESMENT
	4 th	INTERNAL ASSESMENT
11 th	1 st	4.1 Define powder metallurgy process
	2 nd	4.2Stateadvantagesofpowdermetallurgytechnologytechnique
	3 rd	4.3Describethemethodsofproducingcomponentsbypowder metallurgy technique
	4 th	4.4Explainsintering.
12 th	1 st	4.4Explainsintering.
	2 nd	4.5Economicsofpowder metallurgy.
	3 rd	4.6Describepressworks,blanking, piercing and trimming.
	4 th	4.6Describepressworks,blanking, piercing and trimming.
13 th	1 st	5.3Explainsimple,Compound&Progressive dies
	2 nd	5.3Explainsimple,Compound&Progressive dies
	3 rd	5.4Describethevariousadvantages&disadvantagesofabovedies
	4 th	5.4Describethevariousadvantages&disadvantagesofabovedies
14 th	1 st	.1Define jigs and fixtures
	2 nd	6.2Stateadvantagesofusingjigsand fixtures
	3 rd	6.2Stateadvantagesofusingjigsand fixtures
	4 th	6.3Statetheprincipleof locations

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