NILASAILA INSTITUTE OF SCIENCE & TECHNOLOGY
SERGARH-756060, BALASORE (ODISHA)
(Approved by AICTE& affiliated to SCTE&VT, Odisha)

LESSON PLAN

SUBJECT: TH -1 (Production Technology)

CHAPTER WISE 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

Discipline: MECHANICAL ENGG.	Semester: 3rd	Name of the Teaching Faculty: Er. DEBASISH BISWAL
Week	**Class Day**	**Theory / Practical Topics**
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 proces
	3rd	2.9 Explain TIG and MIG welding proces
	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

8th	1st	3.3 Explain different types of molding sands with their composition and properties.
	2nd	3.3 Explain different types of molding sands with their composition and properties..
	3rd	3.4 Classify different pattern and state various pattern allowances
	4th	3.4 Classify different pattern and state various pattern allowances
9th	1st	3.5 Classify core
	2nd	3.7 Explain die casting method.
	3rd	3.7 Explain die casting method.
	4th	3.8 Explain centrifugal casting such as true centrifugal casting,
10th	1st	3.8 Explain centrifugal casting such as true centrifugal casting, centrifuging with advantages, limitation and area of applicatio
	2nd	3.9 Explain various casting defects with their causes and remedies.
	3rd	3.9 Explain various casting defects with their causes and remedies.
	4th	4.1 Define powder metallurgy process.
11th	1st	4.2 State advantages of powder metallurgy technology technique
	2nd	4.3 Describe the methods of producing components by powder metallurgy technique
	3rd	4.3 Describe the methods of producing components by powder metallurgy technique
	4th	4.4 Explain sintering.
12th	1st	4.4 Explain sintering.
	2nd	4.5 Economics of powder metallurgy.
	3rd	4.6 Describe press works,blanking,piercing and trimming.
	4th	4.6 Describe press works,blanking,piercing and trimming.
13th	1st	5.3 Explain simple, Compound & Progressive dies
	2nd	5.3 Explain simple, Compound & Progressive dies
	3rd	5.4 Describe the various advantages & disadvantages of above dies
	4th	5.4 Describe the various advantages & disadvantages of above dies
14th	1st	.1 Define jigs and fixtures
	2nd	6.2 State advantages of using jigs and fixtures
	3rd	6.2 State advantages of using jigs and fixtures
	4th	6.3 State the principle of locations
15th	1st	6.4 Describe the methods of location with respect to 3-2-1 point location of rectangular jig
	2nd	6.4 Describe the methods of location with respect to 3-2-1 point location of rectangular jig
	3rd	6.5 List various types of jig and fixtures
	4th	6.5 List various types of jig and fixtures