

UTKAL GOURAV MADHUSUDAN INSTITUTE OF TECHNOLOGY, RAYAGADA
Academic Lesson Plan for Winter Semester- 2022

Name of the Teaching Faculty: Er. Sagar Kumar Jena
 Semester: 3rd
 No. of Periods per Week: 4
 End Semester Exam: 80
 Total Marks: 100

Department: Mechanical Engineering
 Subject: PRODUCTION TECHNOLOGY
 Total Periods: 60
 Class Test- 20
 Theory - 1

Sl. No.	Week	Period	Topic to be covered
1.	1 st	1 st	About Metal Forming Process
2.		2 nd	Extrusion: Definition & Classification
3.		3 rd	Explain direct, indirect and impact extrusion process.
4.		4 th	Define rolling. Classify it.
5.	2 nd	1 st	Differentiate between cold rolling and hot rolling process.
6.		2 nd	List the different types of rolling mills used in Rolling process.
7.		3 rd	Do
8.	3 rd	4 th	Define welding and classify various welding processes.
9.		1 st	Explain fluxes used in welding.
10.		2 nd	Explain Oxy-acetylene welding process.
11.		3 rd	Explain various types of flames used in Oxy-acetylene welding Process.
12.	4 th	4 th	Do
13.		1 st	Explain Arc welding process.
14.		2 nd	Specify arc welding electrodes.
15.		3 rd	Define resistance welding and classify it.
16.	5 th	4 th	Do
17.		1 st	Describe various resistance welding processes
18.		2 nd	Do
19.		3 rd	Do
20.	6 th	4 th	Explain TIG and MIG welding process
21.		1 st	Do
22.		2 nd	State different welding defects with causes and remedies.
23.		3 rd	Do
24.	7 th	4 th	Define Casting and Classify the various Casting processes.
25.		1 st	Explain the procedure of Sand mould casting.
26.		2 nd	Explain different types of molding sands with their composition and properties.
27.		3 rd	Do
28.	8 th	4 th	Classify different pattern and state various pattern allowances.
29.		1 st	Classify core.
30.		2 nd	Do
31.		3 rd	Describe construction and working of cupola and crucible furnace.

32.		4 th	Do
33.	9 th	1 st	Explain die casting method.
34.		2 nd	Do
35.		3 rd	Explain centrifugal casting .
36.		4 th	Do
37.	10 th	1 st	Do
38.		2 nd	Explain various casting defects with their causes and remedies.
39.		3 rd	Do
40.		4 th	Define powder metallurgy process.
41.	11 th	1 st	State advantages of powder metallurgy technology technique
42.		2 nd	Methods of producing components by powder metallurgy.
43.		3 rd	Do
44.		4 th	Explain sintering.
45.	12 th	1 st	Do
46.		2 nd	Economics of powder metallurgy.
47.		3 rd	Describe Press Works: blanking, piercing and trimming.
48.		4 th	Do
49.	13 th	1 st	List various types of die and punch
50.		2 nd	Explain simple, Compound & Progressive dies
51.		3 rd	Do
52.		4 th	Describe the various advantages & disadvantages dies
53.	14 th	1 st	Do
54.		2 nd	Define jigs and fixtures
55.		3 rd	State advantages of using jigs and fixtures
56.		4 th	State the principle of locations
57.	15 th	1 st	Describe the methods of location with respect to 3-2-1 point
58.		2 nd	location of rectangular jig
59.		3 rd	List various types of jig and fixtures.
60.		4 th	Do

The above lesson plan prepared by the concerned faculty.

Er. Sagar Kumar Jena

PTGF, MECHANICAL DEPARTMENT