

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

Name of the Teaching Faculty: Er. Sagar Kumar Jena  
 Semester: 3<sup>rd</sup>  
 No. of Periods per Week: 4  
 End Semester Exam: 50  
 Total Marks: 75

Department: Mechanical Engineering  
 Subject: MECHANICAL ENGINEERING LAB - 1  
 Total Periods: 60  
 Sessional- 25  
 Practical - 2

Sl. No.	Week	Period	Topic to be covered
1.	1 <sup>st</sup>	1 <sup>st</sup>	Determine end reactions in a simply supported beam Using parallel force apparatus.
2.		2 <sup>nd</sup>	Do
3.		3 <sup>rd</sup>	Do
4.		4 <sup>th</sup>	Do
5.	2 <sup>nd</sup>	1 <sup>st</sup>	Do
6.		2 <sup>nd</sup>	Do
7.		3 <sup>rd</sup>	Do
8.		4 <sup>th</sup>	Do
9.	3 <sup>rd</sup>	1 <sup>st</sup>	Determination of Young's modulus using Searle's apparatus
10.		2 <sup>nd</sup>	Do
11.		3 <sup>rd</sup>	Do
12.		4 <sup>th</sup>	Do
13.	4 <sup>th</sup>	1 <sup>st</sup>	Do
14.		2 <sup>nd</sup>	Do
15.		3 <sup>rd</sup>	Do
16.		4 <sup>th</sup>	Do
17.	5 <sup>th</sup>	1 <sup>st</sup>	Determination of torsional rigidity of the shaft using torsion testing machine
18.		2 <sup>nd</sup>	Do
19.		3 <sup>rd</sup>	Do
20.		4 <sup>th</sup>	Do
21.	6 <sup>th</sup>	1 <sup>st</sup>	Do
22.		2 <sup>nd</sup>	Do
23.		3 <sup>rd</sup>	Do
24.		4 <sup>th</sup>	Do
25.	7 <sup>th</sup>	1 <sup>st</sup>	Determination of salient points (Young's modulus, yield point, fracture point) from stress- strain curve using Universal Testing Machine
26.		2 <sup>nd</sup>	Do
27.		3 <sup>rd</sup>	Do
28.		4 <sup>th</sup>	Do
29.	8 <sup>th</sup>	1 <sup>st</sup>	Do
30.		2 <sup>nd</sup>	Do
31.		3 <sup>rd</sup>	Do

32.		4 <sup>th</sup>	Do
33.	9 <sup>th</sup>	1 <sup>st</sup>	Determination of hardness number by Rockwell/Vickers hardness testing machine
34.		2 <sup>nd</sup>	Do
35.	10 <sup>th</sup>	3 <sup>rd</sup>	Do
36.		4 <sup>th</sup>	Do
37.		1 <sup>st</sup>	Do
38.		2 <sup>nd</sup>	Do
39.	11 <sup>th</sup>	3 <sup>rd</sup>	Do
40.		4 <sup>th</sup>	Do
41.		1 <sup>st</sup>	Determination of toughness using Impact testing machine (Charpy/Izod)
42.		2 <sup>nd</sup>	Do
43.	12 <sup>th</sup>	3 <sup>rd</sup>	Do
44.		4 <sup>th</sup>	Do
45.		1 <sup>st</sup>	Do
46.		2 <sup>nd</sup>	Do
47.	13 <sup>th</sup>	3 <sup>rd</sup>	Do
48.		4 <sup>th</sup>	Do
49.		1 <sup>st</sup>	Determination of Flash point and fire point
50.		2 <sup>nd</sup>	Do
51.	14 <sup>th</sup>	3 <sup>rd</sup>	Do
52.		4 <sup>th</sup>	Do
53.		1 <sup>st</sup>	Do
54.		2 <sup>nd</sup>	Do
55.	15 <sup>th</sup>	3 <sup>rd</sup>	Joule's experiment
56.		4 <sup>th</sup>	Do
57.		1 <sup>st</sup>	Do
58.		2 <sup>nd</sup>	Do
59.	15 <sup>th</sup>	3 <sup>rd</sup>	Do
60.		4 <sup>th</sup>	Do

The above lesson plan prepared by the concerned faculty.

**Er. Sagar Kumar Jena**

**PTGF, MECHANICAL DEPARTMENT**