



GOVERNMENT POLYTECHNIC, NABARANGPUR
DEPARTMENT OF MECHANICAL ENGINEERING

Discipline:
**MECHANICAL
ENGG**

Semester:
4TH

Name of the Teaching Faculty: Sri Deepak Ranjan Pattnaik

Subject:
**TOM&M LAB
(PR.1)**

No. of
days/per
week class
allotted: 06

Semester From date: 04.02.2025 To Date: 17.05.2025

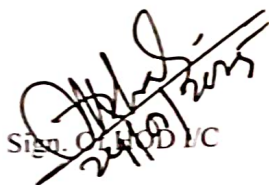
No. of Weeks: 15

**COURSE
OUTCOMES**

CO1: Comprehending Working principle of machine components such as clutch, brakes, bearings based on friction, power transmission systems and predicting the work involved and efficiency.
CO2: Comprehending working principle in speed and torque regulating devices such as governor and flywheels, Determination of amount and position of masses required towards static and dynamic balancing
CO3: Comprehending types and causes of vibration in machines and predicting remedial measures

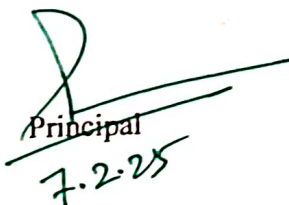
Week	Class Day	Theory/Practical Topics
1 ST	1-3	INTRODUCTION
	4-6	1 Determination of centrifugal force of a governor (Hart Nell / Watt/Porter).
2 ND	1-3	1 Determination of centrifugal force of a governor (Hart Nell / Watt/Porter).
	4-6	2 Study & demonstration of static balancing apparatus.
3 RD	1-3	2 Study & demonstration of static balancing apparatus.
	4-6	3 Study & demonstration of journal bearing apparatus.
4 TH	1-3	QUIZ AND ASSIGNMENT
	4-6	3 Study & demonstration of journal bearing apparatus.
5 TH	1-3	4 Study of different types of Cam and followers.
	4-6	4 Study of different types of Cam and followers.
6 TH	1-3	QUIZ AND ASSIGNMENT
	4-6	5 Study & demonstration of epicyclic gear train.
7 TH	1-3	5 Study & demonstration of epicyclic gear train.
	4-6	QUIZ AND ASSIGNMENT
8 TH	1-3	6 Determination of the thickness of ground M.S flat to an accuracy of 0.02mm using Vernier Caliper.
	4-6	6 Determination of the thickness of ground M.S flat to an accuracy of 0.02mm using Vernier Caliper.
9 TH	1-3	7 Determination of diameter of a cylindrical component to an accuracy of 0.01mm using micrometer.
	4-6	7 Determination of diameter of a cylindrical component to an accuracy of 0.01mm using micrometer.
10 TH	1-3	8. Determine the heights of gauge blocks or parallel bars to accuracy of 0.02mm using Vernier height gauge.
	4-6	8. Determine the heights of gauge blocks or parallel bars to accuracy of 0.02mm using Vernier height gauge.
11 TH	1-3	8. Determine the heights of gauge blocks or parallel bars to accuracy of 0.02mm using Vernier height gauge.
	4-6	8. Determine the heights of gauge blocks or parallel bars to accuracy of 0.02mm using Vernier height gauge.
12 TH	1-3	QUIZ AND ASSIGNMENT
	4-6	9. Determine the thickness of ground MS plates using slip gauges.

	4-6	9. Determine the thickness of ground MS plates using slip gauges.
13 TH	1-3	QUIZ AND ASSIGNMENT
	4-6	9. Determine the thickness of ground MS plates using slip gauges.
14 TH	1-3	10. Determination of angel of Machined surfaces of components using sin bar with slip gauges
	4-6	10. Determination of angel of Machined surfaces of components using sin bar with slip gauges
15 TH	1-3	10. Determination of angel of Machined surfaces of components using sin bar with slip gauges
	4-6	LAB RECORD SUBMISSION


 Sign. Of HOD / C


 Academic Coordinator

Deepak K. Pattnaik
 24.01.2025
 Sign. Of Faculty
 Concerned


 Principal
 7.2.25