



# GOVERNMENT POLYTECHNIC, NABARANGPUR

## DEPARTMENT OF MECHANICAL ENGINEERING

Discipline:  
**MECHANICAL  
ENGG**

Semester:  
**4<sup>TH</sup>**

Name of the Teaching Faculty: Lect. Deepak Ranjan Pattnaik

Subject: **ME  
LAB -II**

No. of  
days/per  
week class  
allotted: **06**

Semester From date: 14.02.2023 To Date:


No. of Weeks: **15**

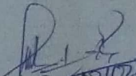
### COURSE OUTCOMES

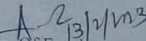
1. Comprehending required material properties for cutting tools
2. Comprehending machining mechanism principle and factors affecting machining performance
3. Comprehending working principle and components in machining tools including lathe, milling, shaping, planing, slotting machines
4. Comprehending requirement of surface finish and realize principles involved in grinding and supper finishing operations

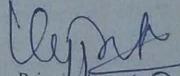
Week	Class Day	Theory/Practical Topics
1 <sup>ST</sup>	1-3	INTRODUCTION
	4-6	1 Study of 2-S, 4-S petrol & diesel engine models
2 <sup>ND</sup>	1-3	2 Determine the brake thermal efficiency of single cylinder petrol engine.(Contd...)
	4-6	2 Determine the brake thermal efficiency of single cylinder petrol engine.
3 <sup>RD</sup>	1-3	3 Determine the brake thermal efficiency of single cylinder diesel engine.(Contd...)
	4-6	3 Determine the brake thermal efficiency of single cylinder diesel engine.
4 <sup>TH</sup>	1-3	QUIZ AND ASSIGNMENT
	4-6	4 Determine the B.H.P, I.H.P BSFC of a multi cylinder engine by Morse test.(Contd...)
5 <sup>TH</sup>	1-3	4 Determine the B.H.P, I.H.P BSFC of a multi cylinder engine by Morse test. (Contd...)
	4-6	4 Determine the B.H.P, I.H.P BSFC of a multi cylinder engine by Morse test.
6 <sup>TH</sup>	1-3	QUIZ AND ASSIGNMENT
	4-6	5 Determine the mechanical efficiency of an air Compressor.(Contd...)
7 <sup>TH</sup>	1-3	5 Determine the mechanical efficiency of an air Compressor.(Contd...)
	4-6	QUIZ AND ASSIGNMENT
8 <sup>TH</sup>	1-3	5 Determine the mechanical efficiency of an air Compressor.
	4-6	6 Study of pressure measuring devices (manometer, Bourdon tube pressure gauge)(Contd...)
9 <sup>TH</sup>	1-3	6 Study of pressure measuring devices (manometer, Bourdon tube pressure gauge)(Contd...)
	4-6	6 Study of pressure measuring devices (manometer, Bourdon tube pressure gauge)
10 <sup>TH</sup>	1-3	7 Verification of Bernoulli's theorem(Contd...)
	4-6	7 Verification of Bernoulli's theorem(Contd...)
11 <sup>TH</sup>	1-3	7 Verification of Bernoulli's theorem

	4-6	QUIZ AND ASSIGNMENT
12 <sup>TH</sup>	1-3	8 Determination of Cd from venturimeter(Contd...)
	4-6	8 Determination of Cd from venturimeter
13 <sup>TH</sup>	1-3	QUIZ AND ASSIGNMENT
	4-6	9 Determination of Cc, Cv, Cd from orifice meter(Contd...)
14 <sup>TH</sup>	1-3	9 Determination of Cc, Cv, Cd from orifice meter
	4-6	10 Determine of Darcy's coefficient from flow through pipe(Contd...)
15 <sup>TH</sup>	1-3	10 Determine of Darcy's coefficient from flow through pipe
	4-6	LAB RECORD SUBMISSION

  
 15.02.23  
 Deepak R. Pattnaik  
 Sign. Of HOD I/C

  
 Academic Coordinator

  
 13/2/23  
 Sign. Of Faculty  
 Concerned

  
 Principal  
 13/2/23