

Devi Ahilya University, Indore, India Institute of Engineering & Technology				III Year B.E. (Mechanical Engg.) (Full Time)			
Subject Code & Name	Instructions Hours per Week			Credits			
	L	T	P	L	T	P	Total
6MERL4 Workshop/Practical(MACHINE DESIGN – II)	0	0	2	0	0	1	1

Course Objective:

The course is designed

1. To solve the Practical based problems forthe designing the Mechanical Components.
2. To introduce the market survey practice to the students.
3. To develop the practice for literature survey to the students.
4. To prepare the students to work in a team.

Pre requisite(s): Machine Design I, Material Science, Strength of Material.

COURSE CONTENTS

1. Problem on Design of Single Plate Clutch/Cone Clutch
2. Problem on Design of Centrifugal Clutch.
3. Problem on Design of Flat/V Belt.
4. Problem on Design of Screw Jack.
5. Problem on Design of Spur/Helical/Bevel Gears.
6. Problem on Design of parts subjected to Fatigue Loading.
7. Problem on Design of Shoe/Band/Block/Internal Expanding Brake.
8. Problem on Design of Engine Cylinder/Piston/Connecting rod.
9. Problem on Design of Crank Shaft.
10. Problem on Design of Valve and Valve gear mechanism.

Course Outcome:

Students earned credits will develop ability to

- CO1. Get the practical knowledge of designing the various components of Internal Combustion Engine.
- CO2. Learn the market survey practice.
- CO3. Get practice of literature survey.
- CO4. Learn to work in a team.

BOOKS RECOMMEDED:

- [1]. Shigley J.E., *Mechanical Engineering Design*, McGraw-Hill 2015.
- [2]. Spotts M.F., Shoup T.E., Hrnberger L.E., *Design of Machine Elements*, Pearson Education ,8e,2007.
- [3]. Sharma P.C. & Aggarwal D.K., *Machine Design*, S.K.Kataria & Sons, 11e, 2013
- [4]. Bhandari V.B., *Design of Machine Elements*, McGraw-Hill, 4e, 2017.
- [5]. Black and Adams, *Machine Design*, Mc.Graw Hill, 1968.
- [6]. Maleev V.L., *I.C.Engine Design*, Mc.Graw Hill ,1945.

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Course Outcome:

Students earned credits will develop ability to

CO.No.	CO	PO
CO1	Get the practical knowledge of designing the various components of Internal Combustion Engine.	PO1, PO2
CO2	Learn the market survey practice.	PO1, PO5
CO3	Get practice of literature survey.	PO1, PO12
CO4	Learn to work in a team.	PO1, PO9, PO12

CO-PO Relationship

CO	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12
CO1	3	3										
CO2	3				3							
CO3	3											2
CO4	3								3			2
CO5												

* CO (rows) mention nil/very small/insignificant contribution to the PO(column)

1→ relevant and small significance 2 → medium or moderate and 3 →strong