

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			
MER5L3 Workshop/Practical (MACHINE DESIGN – I)	L	T	P	L	T	P	Total
	0	0	2	0	0	1	1

Learning Objectives:

1. To solve the Practical based problems for the 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 based on theory of failure.
2. Problem on Design for Helical Spring.
3. Problem on Design for Leaf Spring.
4. Problem on Design for Pressure Vessels
5. Problem on Design for Pipe Joints.
6. Problem on Design for Rotating Disc
7. Problem on Design for Flywheel.
8. Problem on Design for Pulleys.
9. Problem on Design for Crane Hook.
10. Problem on Design for Chain Drive

Learning Outcomes:

Upon Completing the Course, Student will able to:

1. Get the practical knowledge of designing the various components of Internal Combustion Engine.
2. Learn the market survey practice.
3. Get practice of literature survey.
4. Learn to work in a team.

BOOKS RECOMMENDED:

- [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.