MECHANICS OF MACHINES LAB**(ME- 312 L)**

Pre-requisite: None
Credit Hours: 01
Contact Hours: 48

RECOMMENDED BOOK(S)

Theory of Machines, by R.S. Khurmi, J:K. Gupta, Eurasia Publishing House, 2005

REFERENCE BOOK(S)

Theory of Machines and Mechanisms, *By J. E. Shigley*&*Uicker*, McGraw-Hill
Mechanism Design, *By Erdman and Sanders*, McGraw-Hill.
Principles of Mechanisms, *By F. Dyson*, Oxford University Press.
Theory of Machines, *By W.G. Green* Blackie & Son.
Design of Machinery, 2nd Ed, Norton

COURSE OBJECTIVES

To understand the mechanics and mechanisms involved in various machine elements
To learn the application of various machine components.

S. No.	CLO/PLOS MAPPING	DOMAIN	PLO
1	**Analyze** problems related to the mechanics of machines and data from the experiments in relation to the theoretical aspects	C4	02
2	**Conduct** experiments in groups according to the standard operating procedure	P4	04

COURSE CONTENTS

Demonstration of the following
Spur Gear, Helical Gear
Demonstration of the following
Bevel Gear, Helical Bevel Gear
To study the characteristics of four bar mechanism.
Apply Grash of conditions on a slider crank mechanism
To study the variation in velocity and acceleration of the slider when the crank is rotated with a constant angular velocity in a slotted link slider-crank mechanism.
To study the variation and acceleration of the Whitworth's quick return Mechanism.
To verify the Gyrosopic effect
To study the motion of Governer
Static and Dynamic Balancing apparatus
Find out the velocity, Mechanical Advantage and efficiency of worm and worm wheel
Internal Gear Apparatus

Epicyclical Gear Train Model
Whirling of Shaft Apparatus
Study the effects of Journal Bearing.