LESSON PLAN

Subject Name – Theory of Machine	Branch – Production Engineering
Subject Code – BPE04001	Semester – 4th

Sl no.	Module	Topic(s)	Period/Hours
1.	I	Mechanism: Basic Kinematic concepts and definitions	1
2.	I	mechanism, link, kinematic pair, classification of kinematic pairs, degree of freedom, kinematic chain	2-3
3.	I	binary ternary and quaternary joints and links	4-5
4.	I	Tutorial	6
5.	I	degrees of freedom for plane mechanism, Grubler's equation	7
6.	I	inversion of mechanism, four bar chains and their inversions	8-9
7.	I	single slider crank chain, double slider crank chain and their inversion.	10-13
8.	I	Tutorial	14
9.	II	Velocity Analysis of plane mechanism: Velocity of a point on a link by relative velocity method and instantaneous center method.	15-18
10.	II	Acceleration analysis of a plane mechanism: Acceleration of a point on a link, Acceleration in the slider crank mechanism.	19-22
11.	II	Tutorial	23
12.	III	Friction of a screw and nut, square threaded crew, V-threaded screw, pivot and collar,	24-25
13.	III	friction circle, friction axis, friction clutches, transmission of power by single plate, multiple and cone clutches.	26-27
14.	III	Gear trains: simple train, compound train, reverted train, epicyclic train and their application.	28-29
	III	Tutorial	30
15.	IV	Toothed gears: Theory of shape and action of tooth properties methods of generation of standard Tooth profiles, Standard proportions,	31
16.	IV	Interference and Under-cutting, methods of Eliminating Interference, Minimum numbers of teeth to avoid interference	32-33
17.	IV	Tutorial	34
18.	V	Governors: Centrifugal Governors-Watt,	35
19.	V	Porter Governors	36
20.	V	Spring loaded Governor- Hartnell Governor	37
21.	V	sensitiveness, stability, Isochronism, Hunting, Governor effort,	38
22.	V	power, curves of controlling force.	39
23.	V	Tutorial	40