

ASIAN SCHOOL OF TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING
SESSION -2024-25

LESSON PLAN

DISCIPLINE:	SEMESTER:			
MECHANICAL	6TH Sem	NAME OF THE TEACHING FACULTY: Sudhir ku mahapatra		
SUBJECT:	No of Days/Per week class allotted: 4 Class P/W(60)	Semester From Date:		
AUTOMOBILE ENGINEERING AND HYBRID VEHICLES		To Date:		
		No. Of Weeks: 15		
WEEK	CLASS DAY	THEORY TOPICS	REMARKS	
1 st	1 st	Automobiles: Definition, need and classification: Layout of automobile chassis with major components (Line diagram)	Date	Dean/Principal
	2 nd	Automobiles: Definition, need and classification: Layout of automobile chassis with major components (Line diagram)		
	3 rd	Clutch System: Need, Types (Single & Multiple) and Working principle with sketch		
	4 th	Clutch System: Need, Types (Single & Multiple) and Working principle with sketch		
2 nd	1 st	Gear Box: Purpose of gear box, Construction and working of a 4 speed gear box		
	2 nd	Gear Box: Purpose of gear box, Construction and working of a 4 speed gear box		
	3 rd	Concept of automatic gear changing mechanisms		
	4 th	Concept of automatic gear changing mechanisms		
3 rd	1 st	Propeller shaft: Constructional features		
	2 nd	Propeller shaft: Constructional features		
	3 rd	Differential: Need, Types and Working principle		
	4 th	Differential: Need, Types and Working principle		
4 th	1 st	Braking systems in automobiles: Need and types		
	2 nd	Mechanical Brake 2.3 Hydraulic Brake		
	3 rd	Air Brake		
	4 th	Air assisted Hydraulic Brake		
5 th	1 st	Vacuum Brake		
	2 nd	Describe the Battery ignition and Magnet ignition system		
	3 rd	Describe the Battery ignition and Magnet ignition system		

	4 th	Spark plugs: Purpose, construction and specifications		
6 th	1 st	Spark plugs: Purpose, construction and specifications		
	2 nd	State the common ignition troubles and its remedies		
	3 rd	State the common ignition troubles and its remedies		
	4 th	Description of the conventional suspension system for Rear and Front axle		
7 th	1 st	Description of independent suspension system used in cars (coil spring and tension bars)		
	2 nd	Description of independent suspension system used in cars (coil spring and tension bars)		
	3 rd	Engine cooling: Need and classification		
	4 th	Engine cooling: Need and classification		
8 th	1 st	Describe defects of cooling and their remedial measures		
	2 nd	Describe defects of cooling and their remedial measures		
	3 rd	Describe the Function of lubrication		
	4 th	Describe the Function of lubrication		
9 th	1 st	Describe the lubrication System of I.C. engine		
	2 nd	Describe the lubrication System of I.C. engine		
	3 rd	Describe Air fuel ratio		
	4 th	Describe Air fuel ratio		
10 th	1 st	Describe Carburetion process for Petrol Engine		
	2 nd	Describe Carburetion process for Petrol Engine		
	3 rd	Describe Multipoint fuel injection system for Petrol Engine		
	4 th	Describe Multipoint fuel injection system for Petrol Engine		
11 th	1 st	Describe the working principle of fuel injection system for multi cylinder Engine 5.5 Filter for Diesel engine		
	2 nd	Describe the working principle of fuel injection system for multi cylinder Engine 5.5 Filter for Diesel engine		
	3 rd	Describe the working principle of Fuel feed pump and Fuel Injector for Diesel engine		
	4 th	Describe the working principle of Fuel feed pump and Fuel Injector for Diesel engine		

12 th	1 st	Introduction, Social and Environmental importance of Hybrid and Electric Vehicles		
	2 nd	Introduction, Social and Environmental importance of Hybrid and Electric Vehicles		
	3 rd	Introduction, Social and Environmental importance of Hybrid and Electric Vehicles		
	4 th	Description of Electric Vehicles, operational advantages, present performance and applications of Electric Vehicles		
13 th	1 st	Description of Electric Vehicles, operational advantages, present performance and applications of Electric Vehicles		
	2 nd	Description of Electric Vehicles, operational advantages, present performance and applications of Electric Vehicles		
	3 rd	Battery for Electric Vehicles, Battery types and fuel cells		
	4 th	Battery for Electric Vehicles, Battery types and fuel cells		
14 th	1 st	Battery for Electric Vehicles, Battery types and fuel cells		
	2 nd	Hybrid vehicles, Types of Hybrid and Electric Vehicles: Parallel, Series, Parallel and Series configurations		
	3 rd	Hybrid vehicles, Types of Hybrid and Electric Vehicles: Parallel, Series, Parallel and Series configurations		
	4 th	Drive train		
15 th	1 st	Drive train		
	2 nd	DOUBT CLEAR CLASS		
	3 rd	Solar powered vehicles		
	4 th	Solar powered vehicles		