

## LESSON PLAN (SUMMER- 2022)

Subject- Electric Vehicle

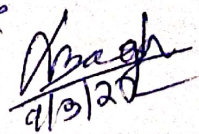
Semester- 6th

Branch- Electrical Engineering

NAME OF THE FACULTY-ZAHID AKHTAR

Sl. No.	Date	Chapter	Topic Name	No. of periods
1	10-03-2022	Introduction to Hybrid Electric Vehicles	Evolution of Electric vehicles	1
2	11-03-2022		Advanced Electric drive vehicle technology Vehicles-Electric vehicles (EV)	1
3	12-03-2022		cont.....	1
4	14-03-2022		Hybrid Electric drive (HEV)	1
5	15-03-2022		Plug in Electric vehicle (PIEV),	1
6	17-03-2022		Components used Hybrid Electric Vehicle	1
7	21-03-2022		Economic and environmental impacts of Electric hybrid vehicle Parameters affecting Environmental and economic analysis	1
8	22-03-2022		Comparative study of vehicles for economic, environmental aspects	1
9	24-03-2022		Dynamics of hybrid and Electric vehicles	General description of vehicle movement
10	25-03-2022	Factors affecting vehicle motion- Vehicle resistance, tyre ground adhesion, rolling resistance, aerodynamic drag		1
11	26-03-2022	quation of grading resistance, dynamic equation.		1
12	28-03-2022	Drive train configuration, Automobile power train, classification of vehicle power plant.		1
13	29-03-2022	cont.....		1
14	31-03-2022	Performance characteristics of IC engine, electric motor, need of gear box.		1
15	02-04-2022	cont.....		1
16	04-04-2022	Classification of motors used in Electric vehicles		1
17	05-04-2022	Basic architecture of hybrid drive trains		1
18	07-04-2022	types of HEVs Energy saving potential of hybrid drive trains		1
19	08-04-2022	HEV Configurations-Series, parallel, Series-parallel, complex.	1	
20	09-04-2022	DC-DC Converters for EV and HEV Applications	EV and HEV configuration based on power converters	1
21	11-04-2022		Classification of converters -unidirectional and bidirectional,	1
22	12-04-2022		Principle of step down operation	1
23	16-04-2022		Boost and Buck- Boost converters	1

24	18-04-2022		Principle of Step-Up operation,	1	
25	19-04-2022		Two quadrant converters; multi quadrant converters,	1	
26	21-04-2022		Electrical Engineering Curriculum Structure 210	1	
27	22-04-2022	DC-AC Inverter & Motors for EV and HEVs	DC-AC Converters	1	
28	23-04-2022		Principle of operation of half bridge DC-AC inverter (R load, R-L load)	1	
29	25-04-2022		cont.....	1	
30	26-04-2022		Single phase Bridge DC-AC inverter with R load, R-L load	1	
31	28-04-2022		cont.....	1	
32	29-04-2022		Electric Machines used in EVs and HEVs,	1	
33	30-04-2022		cont.....	1	
34	02-05-2022		principle of operation	1	
35	05-05-2022		working & control	1	
36	06-05-2022		Permanent magnet motors	1	
37	07-05-2022		their drives	1	
38	09-05-2022		switched reluctance motor	1	
39	10-05-2022		Characteristics and applications of above motors.	1	
40	12-05-2022		cont..	1	
41	13-05-2022		question answer discussion	1	
42	14-05-2022		Batteries	Overview of batteries,	1
43	17-05-2022			Battery Parameters	1
44	19-05-2022			cont.....	1
45	20-05-2022			types of batteries	1
46	21-05-2022	cont.....		1	
47	23-05-2022	Battery Charging		1	
48	24-05-2022	alternative novel energy sources-solar photovoltaic cells		1	
49	26-05-2022	cont.....		1	
50	27-05-2022	fuel cells,		1	
51	28-05-2022	super capacitors,flywheels		1	
52	31-05-2022	Control system for EVs and HEVs		1	
53	02-06-2022	cont...		1	
54	03-06-2022	overview, Electronic control unit ECU,		1	
55	04-06-2022	Schematics of hybrid drive train		1	
56	06-06-2022	control architecture Regenerative braking in EVs		1	
57	07-06-2022	question answer discussion		1	
58	09-06-2022			revision	1
59	10-06-2022		revision	1	

for  
  
 21/5/22  
 HOD (Electrical)