

# LESSON PLAN

Name of Teacher :- Rishu Dhiman

Subject: Basics of Electric & Hybrid Vehicle

Class: 6th Semester Automobile Engg.

S. No.	Month	Week	Date	Name of Chapter	Contents to be taught	Remarks
1	JANUARY	5th Week	27,28,29	Electric Vehicles	Introduction; History of Hybrid and Electric Vehicles; Social and Environmental importance of Hybrid and Electric Vehicles	
2	FEBRUARY	1st Week	2,3,4,5		Components, Vehicle mechanics: Roadway fundamentals	
3		2nd Week	9,10,11,12		Vehicle kinetics, Dynamics of vehicle motion; Propulsion System Design	
4		3rd Week	16,17,18,19	Battery Basics	Types; Parameters: Capacity, Discharge rate, State of charge, State of Discharge	
5		4th Week	23,24,25,26		Depth of Discharge; Technical characteristics	
6	MARCH	1st Week	2,3,5		Battery pack Design, Properties of Batteries.	
7		2nd Week	9,10,11,12	DC & AC Electrical Machines	Motor and Engine rating; Requirements	
8		3rd Week	16,17,18,19		DC machines; Three phase A/c machines;	
9		4th Week	23,24,25,		Induction machines	
10		5th Week	30,31,		Permanent magnet machines	
11	APRIL	1st Week	1,2	Electric Vehicle Drive Train	Switched reluctance machines.	
13		2nd Week	6,7,8,9		Transmission configuration	
14		3rd Week	13,16		Components: Gears, Differential Clutch, Brakes; Regenerative braking	
15		4th Week	20,21,22,23		Motor sizing; Fuel efficiency analysis.	
16		5th Week	27,28,29,30			
17	MAY	2nd Week			HOUSE TEST	
18		3rd Week	11,12,13,14	Hybrid Electric Vehicles	Types: Parallel, Series, Parallel and Series configurations	
19		4th Week	18,19,20,21		Drive train; Sizing of components; Basics of Micro	
20		5th Week	25,26		Mild, Mini, Plugin and Fully hybrid.	

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LESSON PLAN						
Name of Teacher :- Ravi Sankhyan			Subject: Industrial Engg.		Class: 6th Semester Automobile Engg.	
S. No.	Month	Week	Date	Name of Chapter	Contents to be taught	Remarks
1	JANUARY	5th Week	28,29,30,31	Plant Engineering	Plant; Selection of site of industry; Plant layout; Principles of a good layout; Types; Process; Product and Fixed position; Techniques to improve Layout; Principles of Material handling equipment	
2	FEBRUARY	1st Week	4,5,6,7		Plant maintenance; Importance; Break down maintenance; Preventive maintenance and Scheduled maintenance. Plant Safety: Importance	
3		2nd Week	11,12,13,		Accident: Causes and Cost of an Accident, Accident Proneness, Prevention of Accidents; Industrial disputes; Settlement of Industrial disputes; Collective bargaining; Conciliation; Mediation; Arbitration; Indian Factories Act 1948 and its provisions related to health, welfare and safety.	
4		3rd Week	18,19,20,21	Work Study	Productivity; Methods of improving Productivity, Importance of good working conditions. Method Study: Definition; Objectives; Selection of a job for method study; Basic procedure for conduct of Method study; Tools used; Operation process chart	
5	MARCH	4th Week	25,26,27,28		Flow process chart; Two handed process chart; Man Machine chart; String diagram and flow diagram. Work Measurement: Definition; Basic procedure in making a time study; Employees rating factor	
6		1st Week	5,6,7		Application of time allowances: Rest, Personal, Process, Special and Policy allowances; Calculation of standard time; Numerical Problems; Basic concept of production study; Techniques of Work Measurement; Ratio delay study; Synthesis from standard data; Analytical estimating and Pre determined Motion Time System (PMTS).	
7	MARCH	2nd Week	11,12,13,	Production Planning and Control	Introduction; Major functions of Production Planning and Control; Pre planning; Methods of forecasting; Routing and Scheduling; Dispatching and Controlling; Concept of Critical Path Method (CPM)	
8		3rd Week	18,19,20,		Types of Production: Mass Production, and Job Order Production; Characteristics; Economic Batch Quantity (EBQ); Principles of Product and Process Planning; Make or Buy decision; Numerical problems. Sampling Inspection; Single and Double Sampling plan; Concept of ISO 9001:2008	
9		4th Week	25,27,28		Quality Control: Definition; Objectives; Types of Inspection: First piece, Floor and Centralized Inspection; Advantages and Disadvantages; Statistical Quality Control; Types of Measurements; Method of Variables; Method of Attributes; Uses of X, R, p and c charts; Operating Characteristics curve (O.C curve) Quality Management System Registration/Certification procedure; Benefits of ISO to the organization.	
11	APRIL	1st Week	1,2,4	Principles of Management	Definition of Management; Administration; Organization; F.W. Taylor's and Henry Fayol's Principles of Management; Functions of Manager; Types of Organization: Line, Staff, Taylor's Pure functional types; Line and staff and committee type	
13		2nd Week	8,9,10,		Directing; Leadership; Styles of Leadership; Qualities of a good leader; Motivation; Positive and Negative Motivation; Modern Management Techniques; Just In Time; Total Quality Management (TQM); Quality circle; Zero defect concept; 5S Concept	
14		3rd Week	16,17,18		Management Information Systems. Personnel Management: Responsibility of Human Resource Management; Selection Procedure; Training of Workers; Apprentice Training; On the Job training and Vestibule School Training; Job Evaluation and Merit Rating	
15		4th Week	22,23,24,25		Objectives and Importance; Wages and Salary Administration; Components of Wages; Wage Fixation; Type of Wage Payment: Halsey's 50% Plan, Rowan's Plan and Emerson's efficiency plan; Numerical Problems.	
16		5th Week	29,30	Financial Management	Fixed and Working Capital; Resources of Capital; Shares Preference and Equity Shares; Debentures; Type of debentures; Public Deposits; Factory Costing: Direct Cost	
17	MAY	1st Week	2,	Financial Management	Indirect Cost; Factory Overhead;	
18		2nd Week			Selling Price of a product; Profit; Numerical Problems,	
19		3rd Week	13,14,15,16	Financial Management	HOUSE TEST	
20		4th Week	20,21,22,23		Depreciation; Causes; Methods: Straight line, sinking fund and percentage on Diminishing Value Method; Numerical Problems. Material Management: Objectives of good stock control system; ABC analysis of Inventory, Procurement and Consumption cycle; Minimum Stock, Lead Time, Reorder Level-Economic Order Quantity problems; Supply Chain.	

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LESSON PLAN						
Name of Teacher :- Virender Kumar			Subject: Entrepreneurship and Startups		Class: 6th Semester Automobile Engg.	
S. No.	Month	Week	Date	Name of Chapter	Contents to be taught	Remarks
1	JANUARY	5th Week	27,28,29	Introduction to Entrepreneurship and Start-Ups	Definitions, Traits of an entrepreneur, Intrapreneurship, Motivation.	
2	FEBRUARY	1st Week	2,3,4,5		Types of Business Structures	
3		2nd Week	9,10,11,12		Similarities/differences between entrepreneurs and managers.	
4		3rd Week	16,17,18,19	Business Ideas and their implementation	Discovering ideas and visualizing the business	
5		4th Week	23,24,25,26		Activity map	
6	MARCH	1st Week	2,3,5	Idea to Start-up	Business Plan	
7		2nd Week	9,10,11,12		Market Analysis-Identifying the target market	
8		3rd Week	16,17,18,19		Competition evaluation and Strategy Development	
9		4th Week	23,24,25		Marketing and accounting	
10		5th Week	30,31		Risk analysis	
11	APRIL	1st Week	1,2	Management	Company's Organization Structure	
13		2nd Week	6,7,8,9		Recruitment and management of talent	
14		3rd Week	13,16		Financial organization and management	
15		4th Week	20,21,22,23		Financing methods available for start-ups in India	
16		5th Week	27,28,29,30	Financing and Protection of Ideas	Communication of Ideas to potential investors-Investor Pitch, Patenting and Licenses	
17	MAY	2nd Week		HOUSE TEST		
18		3rd Week	11,12,13,14	Exit strategies for entrepreneurs	Exit strategies for entrepreneurs, bankruptcy succession and harvesting strategy	
19		4th Week	18,19,20,21			
20		5th Week	25,26		Revision	

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# LESSON PLAN

Name of Teacher :- Virender Kumar

Subject: Indian Constitution

Class: 6th Semester Automobile Engg.

S. No.	Month	Week	Date	Name of Chapter	Contents to be taught	Remarks
1	JANUARY	5th Week	30,31	Introduction to Constitution	History of making of the Indian Constitution	
2	FEBRUARY	1st Week	6,7		Meaning and importance of the Constitution.	
3		2nd Week	13,		Salient features and Preamble of Indian Constitution.	
4		3rd Week	20,21		Fundamental rights- meaning and limitations.	
5		4th Week	27,28		Directive principles of state policy and Fundamental duties -their enforcement and	
6	MARCH	1st Week	6,7	Union Government	Structure of Union Government.	
7		2nd Week	13,		Union Executive- President, Vice-president, Prime Minister, Council of Ministers.	
8		3rd Week	20,		Union Legislature- Parliament and Parliamentary proceedings.	
9		4th Week	27,28		Union Judiciary-Supreme Court of India – composition and powers and function.	
11	APRIL	1st Week	4	State and Local Governments	Structure of State Government., State Executive- Governor, Chief Minister, Council of Ministers.	
13		2nd Week	10		State Legislature-State Legislative Assembly and State Legislative Council.	
14		3rd Week	17,18		State Judiciary-High court.	
15		4th Week	24,25		Local Government-Panchayat raj system with special reference to 73rd and Urban, Local Self Govt. with special reference to 74th Amendment.	
17	MAY	1st Week	2,	Election provisions, Emergency provisions, Amendment of the constitution	Election Commission of India-composition, powers and functions and electoral process	
18		2nd Week				
19		3rd Week	15,16	Election provisions, Emergency provisions, Amendment of the constitution	HOUSE TEST Types of emergency-grounds, procedure, duration and effects. Amendment of the constitution- meaning, procedure and limitations	
20		4th Week	22,23		Revision	

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