

GOVT. POLYTECHNIC BOLANGIR			LESSON PLAN
Discipline : AUTOMOBILE	Semester: 6TH	Name of the Teaching Faculty :	KUMAR GYANDEEP
Subject : AUTOMOTIVE SYSTEM & HEAVY EQUIPMENTS	No. of Days / per week class allotted :	Semester From date : 10.03.2022 No. of Weesks : 13	To Date : 10.06.2022
Week	Class Day	Topics	
2ND MAR	1st	FRONT AXLE - Introduction & study of front axle assemblies	
	2nd	Front axle function, construction	
	3rd	Types of stub axle	
	4th	Front wheel assembly	
3RD MAR	1st	STEERING & STEERING GEOMETRY - Introduction of steering system, function of steering	
	2nd	Principle of correct steering & Components of steering system	
	3rd	Types of steering gear.	
	4th	Steering geometry i.e. camber, caster, king-pin,	
4TH MAR	1st	king-pin Inclination, understeer,	
	2nd	oversteer, combined angle	
	3rd	Toe-in Toe-out, wheel alignment	
	4th	Effects of incorrect wheel alignment, steering turning angle and turning radius	
1ST APRIL	1st	SUSPENSION SYSTEM Introduction & function & requirement of suspension system	
	2nd	Types of suspension spring like leaf spring, coil spring,	
	3rd	rubber torsion unit, Torsion bar	

	4th	Types of suspension system
2ND APRIL	1st	independent suspension system, rigid axle
	2nd	Suspension system,
	3rd	its advantages and disadvantages.
	4th	Stabilizer bar & shock absorber.
3RD APRIL	1st	BRAKE SYSTEM Introduction, Principle of operation and requirements of brakes
	2nd	Types of brakes such as drum brakes and its leading & trailing shoes
	3rd	Disc brakes
	4th	Brake fade
4TH APRIL	1st	Hydraulic brakes and its components like master cylinder,
	2nd	tandem master cylinder, wheel cylinder,
	3rd	brake fluid and brake fluid grades.
	4th	Advantages and disadvantages of hydraulic brakes
1ST MAY	1st	Power brake types,
	2nd	working and construction of air brake
	3rd	Handbrake
	4th	Adjustment and bleeding of brake
2ND MAY	1st	Internal Assement
	2nd	Question Answer Discussion
	3rd	Common brake problems
	4th	Anti-lock braking system
3RD MAY	1st	WHEEL & TYRES - Introduction
	2nd	Basic construction of a tyre
	3rd	Tyre dimension
	4th	Classification of tyre, advantages and disadvantages of radial ply tyres over cross ply tyre. Tyre size designation

4TH MAY	1st	Different types of tyre damages
	2nd	Wheel, and its type
	3rd	Wheel dimensions
	4th	Wheel designation
1ST JUNE	1st	CHASSIS & HEAVY EQUIPMENTS - Introduction
	2nd	lay out of chassis showing its main components
	3rd	Types of chassis, frame and important chassis layouts
	4th	Types of chassis, frame and important chassis layouts
2ND JUNE	1st	Tractor and its construction,
	2nd	Classification, construction and description of dump truck
	3rd	grader, road roller, dozer, loader, cranes, scraper
	4th	Revisison