

ATV (All-Terrain Vehicle) Fabrication – 15 Days Training Course Content.

DAYS	LECTURE	FABRICATION	DESIGN
DAY 1-4	Roll cage and chassis	Cutting members	Introduction to
	Types, usage and material	for roll cage	CAD/CAM/CAE
	selection	• Grooves, C cut and	• Basics of
	Load distribution patterns	grinding	SolidWorks
	Welding basics for roll cage	• Fixture preparation	Basics of 2D
	fabrication	and welding	Sketching
		Final touch up and	Sample Sketching
		testing	Practice
			• 3 D sketching
			Chassis
			 Design using
			Weldments module
			Practice through
			Daily Practice Sheet
DAY 4-6	Suspension system	• Engine mounting	Modeling
	Types and design	and fitting	components
	considerations	Required changes to	Feature Module
	Selection criteria	be done We Min	• Piston, crankshaft,
	Designing parameters for	• Transmission	connecting rod
	suspension	coupling	
	Chassis- suspension arm-	Testing	
	springs-knuckle		



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DAY 7-9	IC Engines & Transmission	• Suspension	Design of Helix
	system	assembly	Assembly in SWx
	Working theories and	• Suspension	Assembly features
	principles	Mounting	
	Major sub-assemblies and	Knuckle fitting and	
	their working in unison	welding	
	Engine-Flywheel-Clutch-		
	Gearbox-Differential		

DAY 10- 11 DAY 12- 13	•	Steering System Ackerman's Geometry Principle of Rack and Pinion Key Terms for geometry design Over steering and under steering causes Tyres and wheels Selection criteria	•	Steering column fitting Trailing arms and tie rods Adjustments Testing Coupling of wheels to drive shaft	•	Modeling complex components Drawings & reports generation TM Large assembly details
	•	Vehicle layout, 2 & 4 wheel drive Wheel alignment	•	Wheels to trailing arms Mounting tyres Alignment of wheels	M	Assembly visualization
DAY 14	•	Brakes in a vehicle Braking effort & traction Types and specific applications Electrical Systems in a vehicle	•	Mounting brakes Connection of paddles Mounting Electrical system Connections and testing	•	Large assembly details Assembly visualization



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DAY 15	•	Doubts and feedback	•	Test Run	

- *All modules will be demonstrated by the means of projects and practice exercises.
- *Practice sheets and a handbook will be given to each candidate.
- *The training can be customized as per the need of the batch. Any customizations can be discussed with the Technical Manager.
- *For any further details, kindly visit the website www.codexdesign.in or write to us at info@codexdesign.in Thanks,

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