

# CERTIFICATE COURSES IN FOUR WHEELER MECHANISMS

(623-624 & 723-724)

The institution having the following requisite infrastructure, may apply for accreditation:

**A. Class Room :**

Class room for 20 students (minimum area 225 sq. ft.) should have proper ventilation, well-illuminated black board/white board and availability of adequate furniture and ceiling fans.

**B. Workshop :**

The size of workshop for 20 students should be at least 25ft. x 20 ft. with adequate lighting, exhaust & ceiling fans. The workshop should have the following Tool/Machinery Equipments/Apparatus or material for Practical Training:

### List of machinery & Equipment

S. No.	Description	Details	Quantity
1.	Petrol Vehicle	In good working	1
2.	Diesel Vehicle	In good working condition	1
3.	Petrol engine	In running condition and stand mounted	1
4.	Diesel engine	In running condition and stand mounted	1
5.	Gear Box assembly	Synchromesh type	1
6.	Rear Axle assembly	Full floating type	1
7.	Steering gear with linkages	Rack & pinion type	1
8.	Car hoist	Hydraulic or platform	1
9.	Arbour press	1 ton	1
10.	Bench grinder	7" smooth & rough wheels	1
11.	Drilling machine	½" capacity, bench mounted	1
12.	Portable electric drill	12mm capacity	1
13.	Hydraulic jack	3 ton capacity	2
14.	Mechanical jack	Screw type	2
15.	Air compressor	Single stage with 1 hp motor	1
16.	Work bench	7'x7'	2
17.	Bench vice	4" jaws	4
18.	Steel almirah	For tools storage	1+1
19.	Fire extinguisher		1
20.	Fire buckets	With sand	2
21.	G.I tray	12" x 8 "	2
22.	G.I. tray	18" x 12"	4
23.	G.I. tray	28" x 24"	4
24.	Hydrometer		1
25.	High rate discharge tester		1
26.	Multi-meter		1

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27.	Taco-meter		1
28.	Timing light		1
29.	Compression gauge	With corresponding adaptors	1
30.	Injector tester		1
31.	Grease gun	Hand operated of ½ kg capacity	1
32.	Oil gun	½ lts.	1
33.	Oil can	¼ lts	1
34.	Oil drum		1
35.	Micrometer	0 to 25mm	1
36.	Micrometer	25 to 50 mm	1
37.	Inside micrometer	With extension rods	1
38.	Feeler gauge	With 25 blades	1
39.	Vernier calipers	0 to 200 mm	1
40.	Torque wrench	20 to 50 nm	1
41.	Torque wrench	50 to 250nm	1
42.	Wheel alignment gauge	Magnetic type	1
43.	Socket spanners set	10mm to 38mm	1
44.	Tubular spanners set	12mm to 50mm	1
45.	Tap and dies set	6mm to 12mm	1
46.	Adjustable reamers	6 to 15mm hand operated	1
47.	High speed drill bits set	3mm to 12mm	1
48.	Surface plate	60cm x 60cm table	1
49.	Hollow punch	6mm to 15mm	1
50.	Straight edge	24" or 600mm	1
51.	Stud remover		1
52.	Piston ring compressor		1
53.	Valve spring compressor		1
54.	Piston ring expander		1
55.	Valve seat cutter		1

### Tool kit

5 kits are required for 20 students

S. No.	Description	Details	Quantity
1.	D. E. spanner set metric	6/7 to 16/17	1
2.	D. E. spanner set metric	18/19 to 33/34	1
3.	Ring Spanner set metric	6/7 to 33/34	1
4.	Plug spanner	10mm & 14mm	1
5.	Combination pliers	150mm	1
6.	Combination pliers	200mm	1
7.	Round nose pliers	150mm	1
8.	Flat nose pliers	150mm	1
9.	Cir clip (lock) pliers	100mm	1
10.	Screw driver	100mm	1
11.	Screw driver	150mm	1
12.	Screw driver	200mm	1

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13.	Screw driver	250mm	1
14.	Cross screw driver (Philips)	150mm	1
15.	Cross screw driver (Philips)	250mm	1
16.	Hammer (ball peen)	1kg	1
17.	Sledge hammer	2kg	1
18.	Nylon hammer		1
19.	Flat chisel	150mm	1
20.	Centre punch		1
21.	Barring puller	200mm	1
22.	Flat File	200mm smooth cut	1
23.	Flat File	150mm smooth cut	1
24.	Flat File	200mm second cut	1
25.	Round file	200mm	1
26.	Half round file	200m smooth	1
27.	Hacksaw	300mm adjustable	1
28.	Scraper	200mm half round	1

C. **Physical Facilities** : The institution should have the facilities for Drinking water, Bathrooms & Toilets

D. **Library** : Library should have a minimum 20 books/articles/magazines etc. in related subject.

E.. **Faculty & Supporting Staff:**

Faculty & Supporting Staff	Educational/Professional Qualification	No.
Coordinator	Degree/Diploma in appropriate Branch with 5 years experience	01
Instructor	Diploma in Automobile Engineering with 1 year experience Or NIOS Course (Four Wheeler mechanism) with 5 years experience Or ITI¼motor mechanic) with 3 yrs. Experience	01
Receptionist cum clerk	Graduation and must have computer background	01

F. **Batch size** - Maximum 20 students in one batch.

**Note** : An institution can run maximum 2 batches for this course.

\*Age of the trainee : minimum 14 years or older