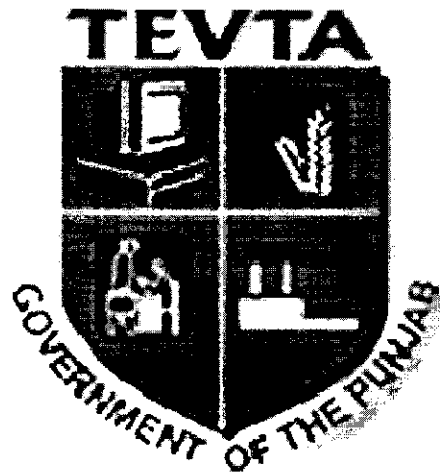


GOVERNMENT OF THE PUNJAB
TECHNICAL EDUCATION & VOCATIONAL
TRAINING AUTHORITY



CURRICULUM FOR
AUTO MECHANIC (PETROL)
Revised April 2016

(6 – Month Course)

APPROVED

Date: 7-4-16

Sign: 

CURRICULUM SECTION
ACADEMICS DEPARTMENT

96-H, GULBERG-II, LAHORE

Ph # 042-99263055-9, 99263064

gm.acad@tevta.gop.pk, manager.cur@tevta.gop.pk

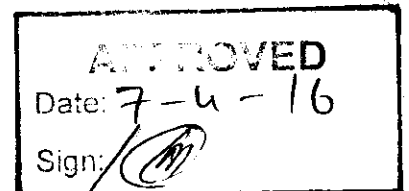
TRAINING OBJECTIVES

This curriculum is designed / developed to impart the skills of assemblies / sub assemblies of a petrol vehicle enabling the trainees for carrying out minor repairs and tuning of a petrol engine. The trainees also learn basic Functional English and I.T. fundamentals. In order to continue to produce skillful & capable workforce by more focusing on:

1. Use of cutting tools efficiently and effectively (hacksaw, files, drills etc)
2. Use of measuring / hand tools effectively and accurately.
3. Disassemble and assemble the assemblies/sub assemblies of a petrol vehicle.
4. Operations of the systems in the engine.
5. Circuit diagram of petrol fuel supply system and its principles.
6. Manual & Automatic power transmission system.
7. Suspension and steering system.
8. Brake system.
9. Tuning the petrol vehicle efficiently.

CURRICULUM SALIENTS:

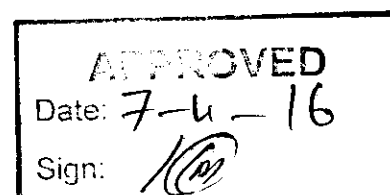
Entry Level	Middle
Total duration of course	6 – Months
Total Training Hours	800 Contact Hours
Training Methodology	Practical 80%
	Theory 20%
Medium of Instruction	English / Urdu



SKILL COMPETENCY DETAILS

On successful completion of this course, the trainee should be able to:

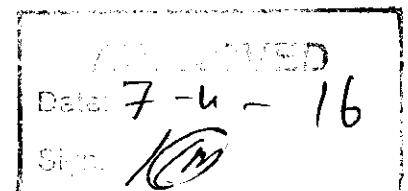
1. Use workshop tools/ equipment efficiently
2. Check and inspect all parts such as camshaft, rocker arm, valve mechanism, piston, connecting rod, crankshaft and cylinder bore according to workshop manual. They will decide confidently about the condition of parts and then they will assemble engine in a correct manner.
3. Work on lubricating and cooling systems
4. Set the engine timing and bleeding of the injection system.
5. Remove, identify the parts of inline and rotary type fuel injection pumps and Re-fix them.
6. Remove and re-fix the clutch plates and pressure plate and make adjustment
7. Inspect and maintain the power train (Gearbox, Propeller shaft and differential)
8. Remove and re-fix the brake system parts as master cylinder, wheel cylinder, brake shoe, Brake bleeding and adjustment.
9. Remove and refit suspension system Parts.
10. Remove and refit steering system Parts.



KNOWLEDGE PROFICIENCY DETAILS


On successful completion of this course, the trainee should be able to:

1. Explain correct use of tools / equipment in the shop.
2. Explain operation of Petrol engines.
3. Describe types and construction of petrol engine.
4. Explain the functions of various parts of engine.
5. Understand various system of engine as Fuel injection, air induction & exhaust system.
6. Explain Cooling and lubrication system.
7. Explain Turbo and superchargers.
8. Explain Working of power train.
9. Understand Working of suspension system
10. Describe Working of Power Steering and Electrical Power Steering System (EPS)
11. Conventional Mechanical steering gear box.
12. Explain Working of brake system. Especially power brakes, wheels and tyres



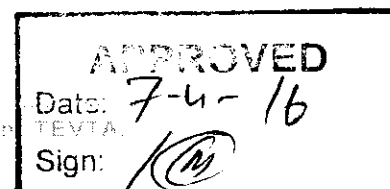
SCHEME OF STUDIES**Auto Mechanic (Petrol)
(6- Month Course)**

S. No.	Main Topics	Theory Hours	Practical Hours	Total Hours
1.	Basic Knowledge	20	92	112
2.	Engine	63	198	261
3.	Auto Electricity	10	55	65
4.	Power Train / Chassis System	25	145	170
5.	Review / Troubleshooting	18	54	72
6.	I.T Fundamentals	8	32	40
7.	Functional English	16	64	80
Total		160	640	800

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DETAIL OF COURSE CONTENTS**Auto Mechanic (Petrol)
(6 - Month Course)**

S. No.	Detail of Contents	Theory Hours	Practical Hours
1.	1. Basic Knowledge		
	1.1. Basic Terminology	5	
	1.1.1. Force		
	1.1.2. Torque		
	1.1.3. Pressure		
	1.1.4. Heat and heat transfer		
	1.1.5. Friction		
	1.1.6. Basic units of length, mass, volume		
	1.2. Tools and equipments	12	
	1.2.1. Fitting tools		
	1.2.2. Striking tools		
	1.2.3. Measuring tools		
	1.2.4. Cutting Tools		
	1.2.5. Special Tools		
	1.3. Fasteners (Temporary and Permanent)	3	
	1.4. Practical		92
	1.4.1. Safety Precautions		
	1.4.2. Identification / use of fitting tools		
	1.4.3. Use of striking tools		
	1.4.4. Use of jack		
	1.4.5. Measurement with Vernier caliper		
	1.4.6. Measurement with Micrometer		
	1.4.7. Measurement of dial gauge		
	1.4.8. Use of pullers		
	1.4.9. Making Gaskets		
	1.4.10. Bending and flaring pipes		
	1.4.11. Sawing exercise		
	1.4.12. Filing Exercise		




	1.4.13. Drilling exercise		
	1.4.14. Threading exercise		
2.	2. Engine		
	2.1. Basic Engine	6	
	2.1.1. Principal and operation of 4 stroke petrol engine		
	2.1.2. Two stroke petrol engine		
	2.1.3. Comparison of 4 and 2 stroke engines		
	2.1.4. Types of engines		
	2.1.5. Define compression ratio		
	2.2. Construction and function of main parts of engine:-	24	
	2.2.1. Cylinder head assembly		
	2.2.2. Cylinder block		
	2.2.3. Piston and piston rings		
	2.2.4. Connecting rod		
	2.2.5. Crank shaft and crank shaft bearing		
	2.2.6. Fly wheel		
	2.2.7. Valve mechanism		
	2.2.8. Valve timing		
	2.3. Fuel System	15	
	Introduction Purpose, Construction and function of fuel system		
	2.3.1. Fuel tank		
	2.3.2. Fuel pump		
	2.3.3. Carburetor		
	2.3.4. CNG System and its components		
	2.3.5. Purpose and functions of electronic fuel injection system		
	2.3.6. Introduction and identification of components of EFI		
	2.4. Cooling System	9	
	Introduction, Purpose Construction and		



	<p>function of cooling system</p> <p>2.4.1. Water jackets, water pump, radiator, radiator cap, thermostat valve, cooling fan etc.</p> <p>2.4.2. Engine overheating</p> <p>2.5. Lubrication System</p> <p>Introduction, purpose construction and function of lubrication system</p> <p>2.5.1. Oil Pumps, Oil Filter</p> <p>2.5.2. Oil viscosity</p> <p>2.5.3. Low oil pressure</p> <p>2.6. Ignition System</p> <p>Purpose, construction and function of ignition system</p> <p>2.6.1. Battery, Ignition Coil, Ignition switch, distributor and spark plugs</p> <p>2.6.2. Dwell angle</p> <p>2.6.3. Firing order</p> <p>2.6.4. Ignition timing</p> <p>2.6.5. Pickup coil type ignition system (components and their function)</p> <p>PRACTICAL:</p> <p>2.7. Identification of main components of Chassis, body and power train</p> <p>2.8. Identification of main parts of an engine</p> <p>2.8.1. Cylinder Head assembly</p> <p>2.8.2. Cylinder block</p> <p>2.8.3. Piston and piston ring</p> <p>2.8.4. Connecting rod assembly</p> <p>2.8.5. Crank shaft and bearing</p> <p>2.8.6. Cam shaft and valve mechanism</p> <p>2.9. Fuel Supply System</p> <p>2.9.1. Removal and installing fuel tank</p>	<p>3</p> <p>6</p>	<p>5</p> <p>15</p>
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2.9.2. Removal and installing fuel pump	20
2.9.3. Removal and refitting of carburetor	
2.9.4. Adjusting RPM and fuel mixture on carburetor	
2.9.5. CNG adjustments	
2.9.6. Identification of EFI components	
2.10. Ignition System	
2.10.1. Adjusting C.B. Point	
2.10.2. Adjusting Ignition Timing	20
2.10.3. Checking ignition timing with timing light	
2.10.4. Checking dwell angle	
2.10.5. Identification of electronics Ignition components	
2.11. Cooling System	
2.11.1. Replacing fan belt	20
2.11.2. Removal and refitting of hose pipes	
2.11.3. Removal and refitting of water pump	
2.11.4. Removal, checking and refitting of thermostat valve	
2.12. Lubrication system	
2.12.1. Changing oil and oil filter	20
2.12.2. Servicing oil pumps	
2.12.3. Checking oil pressure	
2.13. Exhaust System	
2.13.1. Removing checking and refitting of exhaust manifold	6
2.13.2. Replacing silencer	
2.14. Dismantling, checking and assembling of an engine	92
2.14.1. Cylinder Head and valve	

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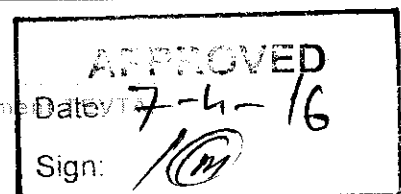
	<p>assembly</p> <p>2.14.2. Piston and Piston rings</p> <p>2.14.3. Connecting rod</p> <p>2.14.4. Main and big end bearings</p> <p>2.14.5. Setting value timing</p> <p>2.14.6. Adjusting Valve Clearance</p>		
3.	<p>Basic Electricity</p> <p>3.1. Conductors and insulator</p> <p>3.2. Current, voltage and resistance</p> <p>3.3. Magnet and its characteristics</p> <p>3.4. Series and parallel circuits</p> <p>3.5. Purpose and function of battery</p> <p>3.6. Purpose and function of starting motor</p> <p>3.7. Purpose and function of alternator</p> <p>3.8. Purpose of various gauges of an engine</p> <p>3.9. PRACTICALS</p> <p>3.9.1. Parallel & serious circuit</p> <p>3.9.2. Maintenance of battery</p> <p>3.9.3. Checking gravity of battery with hydrometer</p> <p>3.9.4. Battery charging</p> <p>3.9.5. Removal and installing self starter</p> <p>3.9.6. Removal and installing alternator</p>	10	55
4.	<p>Power Train and Chassis System</p> <p>4.1. Purpose, Operation and construction of clutch</p> <p>4.1.1. Types of clutch</p> <p>4.2. Purpose, construction and function of synchromesh gear box</p> <p>4.2.1. Gear Ratios</p> <p>4.3. Propeller shafts and joints</p> <p>4.4. Purpose, construction and function of: -</p> <p>4.4.1. Differential</p>	3 4 3 3	

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4.4.2. Rear axles	3	
4.5. Purpose and construction of wheel & tyre	3	
4.6. Purpose and construction of suspension system		
4.6.1. Coil spring, leaf spring, torsion bar and shock absorbers	3	
4.7. Purpose and construction of steering system		
4.7.1. Steering linkages		
4.7.2. Steering gear boxes	3	
4.8. Steering geometry		
4.8.1. Caster angle, camber angle, Toe in, Toe out on turns S.A.I (Steering axis inclination)		
PRACTICAL :		15
4.9. Adjusting clutch pedal free play		14
4.10. Dismantling, checking and assembling the clutch assembly		07
4.11. Bleeding hydraulic clutch		18
4.12. Dismantling, checking and assembling of 4 speed synchromesh gear box		10
4.13. Removal, checking and installing propeller shaft and joints		18
4.14. Dismantling, checking and assembling differential assembly		
4.15. Checking back lash		18
4.16. Removal, checking and refitting		
4.16.1. Coil spring		
4.16.2. Leaf Spring		
4.16.3. Torsion bar		
4.16.4. Shock absorber		17
4.17. Dismantling, checking and refitting of steering gear box		08
4.18. Checking of		

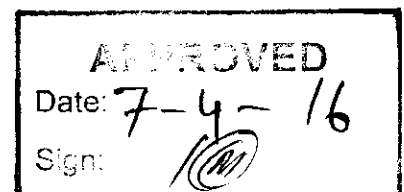


	4.18.1. Camber angle		
	4.18.2. Caster angle		
	4.18.3. Toe in		
	4.18.4. Toe out on turns		
	4.18.5. S.A.I (steering axis inclination)		20
	4.19. Brake System		
	4.19.1. Replacing and adjusting of brake shoes		
	4.19.2. Replacing master Cylinder Kit and wheel cylinder washers		
	4.19.3. Bleeding the brakes		
5.	Troubleshooting and Repair work	18	54
Total		136	544

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LIST OF PRACTICALS**Auto Mechanic (Petrol)**

1. **Identification of main components of Chassis, body and power train**
2. **Identification of main parts of an engine**
 - 2.1.1. Cylinder Head assembly
 - 2.1.2. Cylinder block
 - 2.1.3. Piston and piston ring
 - 2.1.4. Connecting rod assembly
 - 2.1.5. Crank shaft and bearing
 - 2.1.6. Cam shaft and valve mechanism
- 2.2. **Fuel Supply System**
 - 2.2.1. Removal and installing fuel tank
 - 2.2.2. Removal and installing fuel pump
 - 2.2.3. Removal and refitting of carburetor
 - 2.2.4. Adjusting RPM and fuel mixture on carburetor
 - 2.2.5. CNG adjustments
 - 2.2.6. Identification of EFI components
- 2.3. **Ignition System**
 - 2.3.1. Adjusting C.B. Point
 - 2.3.2. Adjusting Ignition Timing
 - 2.3.3. Checking ignition timing with timing light
 - 2.3.4. Checking dwell angle
 - 2.3.5. Identification of electronics Ignition components
- 2.4. **Cooling System**
 - 2.4.1. Replacing fan belt
 - 2.4.2. Removal and refitting of hose pipes
 - 2.4.3. Removal and refitting of water pump
 - 2.4.4. Removal, checking and refitting of thermostat valve
- 2.5. **Lubrication system**
 - 2.5.1. Changing oil and oil filter
 - 2.5.2. Servicing oil pumps
 - 2.5.3. Checking oil pressure



2.6. Exhaust System

- 2.6.1. Removing checking and refitting of exhaust manifold
- 2.6.2. Replacing silencer

2.7. Dismantling, checking and assembling of an engine

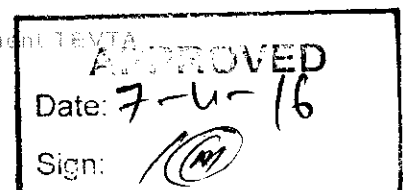
- 2.7.1. Cylinder Head and valve assembly
- 2.7.2. Piston and Piston rings
- 2.7.3. Connecting rod
- 2.7.4. Main and big end bearings
- 2.7.5. Setting valve timing
- 2.7.6. Adjusting Valve Clearance

3. Basic Electricity

- 3.1.1. Parallel & serious circuit
- 3.1.2. Maintenance of battery
- 3.1.3. Checking gravity of battery with hydrometer
- 3.1.4. Battery charging
- 3.1.5. Removal and installing self starter
- 3.1.6. Removal and installing alternator
- 3.1.7.

4. Power Train and Chassis System

- 4.1. Adjusting clutch pedal free play
- 4.2. Dismantling, checking and assembling the clutch assembly
- 4.3. Bleeding hydraulic clutch
- 4.4. Dismantling, checking and assembling of 4 speed synchromesh gear box
- 4.5. Removal, checking and installing propeller shaft and joints
- 4.6. Dismantling, checking and assembling differential assembly
- 4.7. Checking back lash
- 4.8. Removal, checking and refitting
 - 4.8.1. Coil spring
 - 4.8.2. Leaf Spring
 - 4.8.3. Torsion bar
 - 4.8.4. Shock absorber
- 4.9. Dismantling, checking and refitting of steering gear box



4.10. Checking of

4.10.1. Camber angle

4.10.2. Caster angle

4.10.3. Toe in

4.10.4. Toe out on turns

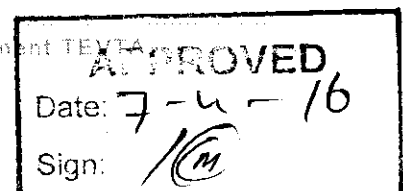
4.10.5. S.A.I (steering axis inclination)

4.11. Brake System

4.11.1. Replacing and adjusting of brake shoes


4.11.2. Replacing master Cylinder Kit and wheel cylinder washers

4.11.3. Bleeding the brakes



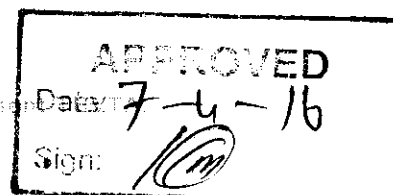
SCHEME OF STUDIES**I.T. Fundamentals**

S.No	Main Topics	Theory Hours	Practical Hours	Total Hours
1.	Introduction to Computers	2	6	8
2.	Typing - Microsoft Word	4	14	18
3.	Internet & Electronic Mail	2	12	14
Total		8	32	40


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DETAIL OF COURSE CONTENTS
I.T Fundamentals

S. No	Detail of Topics	Theory Hours	Practical Hours
1	<p>Introduction to Computers</p> <p>1.1 What is a computer- Definition, functions and general features?</p> <p>1.2 What is Hardware –</p> <p style="padding-left: 20px;">1.2.1 Computer parts and units</p> <p style="padding-left: 40px;">1.2.1.1 Input Unit - Keyboard, Mouse etc.</p> <p style="padding-left: 40px;">1.2.1.2 Central Processing Unit</p> <p style="padding-left: 40px;">1.2.1.3 Output Unit</p> <p>1.3 What is Software –</p> <p style="padding-left: 20px;">1.3.1 Electronic Parts of a Pc it is</p> <p style="padding-left: 40px;">1.3.1.1 Software and Its types</p> <p style="padding-left: 40px;">1.3.1.2 System Software, Application software and its functions</p> <p>1.4 Working with windows Operating System</p> <p style="padding-left: 20px;">1.4.1 How does windows desktops work?</p> <p style="padding-left: 20px;">1.4.2 Setting desktop, background and wall papers etc.</p> <p style="padding-left: 20px;">1.4.3 Viewing directories – List of files and folders different styles.</p> <p>1.5 What are the Icons, Shortcuts and other graphic,</p> <p style="padding-left: 20px;">1.5.1 How to see computer contents on different drives etc.</p>	2	6
2	<p>Typing and Word processing (MS Word)</p> <p>2.1 Proper way of typing correct and speedy - getting familiar with the keys</p> <p>2.2 Where to type in computer? How to save a file? How to get it back? Where to find your saved work?</p> <p>2.3 Formatting in MS Word Bold, Italic, page setup, setting shades and colors.</p> <p>2.4 Working with saved work, opening and moving files.</p> <p>2.5 How to get it printed?</p>	4	14

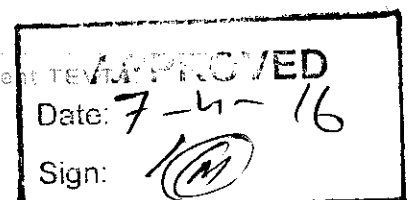


3	Emailing and Internet Surfing	2	12
3.1	How to go to Internet, what is required for an internet connection etc.		
3.2	How to use email? How to search on web? Etc		
3.3	How to make new email account, login and logout an email account etc.?		
3.4	Downloading and uploading attachments etc.		
Total		8	32

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LIST OF PRACTICALS
I.T Fundamentals

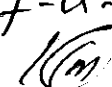
S. No.	Name of Practical
1.	Turn On/Off and setting of power supply
2.	Accessing The Desktop
3.	Using of Icons and Shortcuts
4.	Setting / customizing the desktop
5.	Viewing the contents of computer – Directory
6.	Setting the view of a folder
7.	Copying, Deleting and Moving Files in a folder
8.	Working with different Applications
9.	Opening MS Word for typing
10.	First lesson of Typing A S D F
11.	Second Lesson of typing J K L ;
12.	Third Lesson U I O P
13.	Fourth Lesson R E W Q
14.	Fifth Lesson N M , .
15.	Sixth Lesson V C X Z
16.	Seventh Lesson All letter using R index Finger
17.	Eighth Lesson All letter using L index Finger
18.	Formatting in MS Word Bold, Italic etc.
19.	Page Setting/ Page Layout
20.	Using Internet
21.	Opening Email, making new account
22.	Sending Receiving Emails
23.	Downloading and uploading attachments etc.



SCHEME OF STUDIES

Functional English

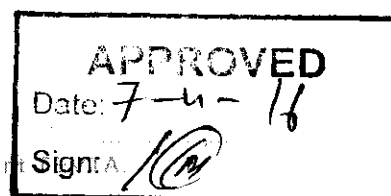
S.No	Main Topics	Theory Hours	Practical Hours	Total Hours
1.	Use of past indefinite tense	2	6	8
2.	Use of 'was' 'were' ' questions and negatives	3	6	8
3.	Explaining a situations/ analysis	2	6	8
4.	Communication in writing	2	6	8
5.	Comprehension	1	6	7
6.	Application/ C.V.	1	6	7
7.	Dialogues	1	9	10
8.	Understand vocabulary	1	3	4
9.	Writing complaints/ answers to complaints	1	9	10
10.	Interviews	2	7	10
Total		16	64	80

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DETAIL OF COURSE CONTENTS

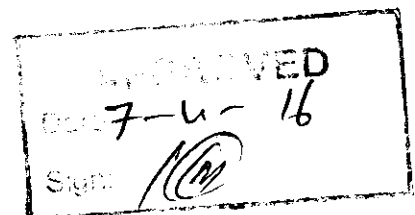
Functional English

S. No	Detail of Topics	Theory Hours	Practical Hours
1	Use of past indefinite tense 1.1 Describing past events	2	6
2	Use of 'was' 'were' ' questions and negatives	2	6
3	Explaining a situations/ analysis 3.1 Making a plan 3.2 Visiting factory area 3.3 Giving justifications	2	6
4	Communication in writing 4.1 Asking for list of stationery items 4.2 Submitting report of performance of team of technicians 4.3 Submitting joining report	2	6
5	Comprehension: practice sets	2	6
6	Job application/C.V.	1	6
7	Dialogues	1	9
8	Understand vocabulary	1	3
9	Writing complaints/ answers to complaints	1	9
10	Interviews	2	7
Total		16	64



LIST OF PRACTICALS
Functional English

S. No.	Practical
1.	Group discussion
2.	Interviews
3.	Role play



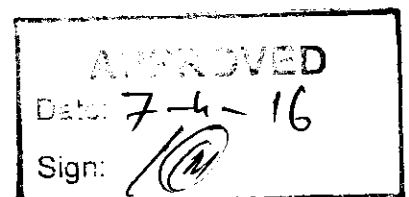
LIST OF LABS

Auto Mechanic (Petrol)

- Engine Lab
- Metal Shop
- Auto Electricity Lab
- Chassis Lab

I.T Fundamentals

- Computer Lab

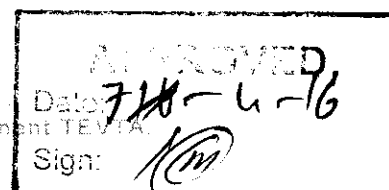


LIST OF MACHINERY / EQUIPMENT / TOOLS ETC

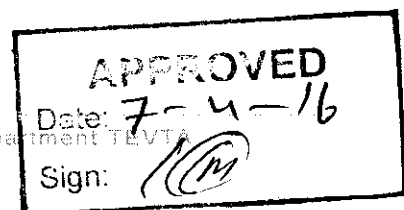
(For a Class of 25 Students)

Name of Trade	Auto Mechanic (Petrol)
Duration of Course	6-Months


Sr. No.	Nomenclature of Equipment / Tools	Quantity
1.	Tool Box (Empty) (Trolley type) (Standard)	10 Nos.
2.	Double Open end Spanner Set (6-32 mm)	10 set
3.	Open end & ring spanner Set (6-32 mm)	10 set
4.	Double end offset ring spanner Set (6-32 mm)	10 set
5.	Socket set (10-32mm)	10 set
6.	Adjustable wrench (12")	10 each
7.	Allen key set (2mm to 18mm)	10 sets
8.	Torque wrench	5 Nos.
9.	Oil filter wrench	5 Nos.
10.	Screw driver (flat) (4,6,8,12, inch)	10 each
11.	Screw driver (Philips) (4,6,8,12, inch)	10 each
12.	Circlip plier (external & internal)	10 each
13.	Nose plier (20cm)	10 Nos.
14.	Gripping plier (Medium size)	10 Nos.
15.	Combination plier (20cm)	10 Nos.
16.	Flat File (smooth and bastard) (150-300cm)	20 Nos.
17.	Round file (150-300 cm)	10 Nos.
18.	Square file (150-300cm)	10 Nos.
19.	Triangular file (150-300 cm)	10 each
20.	Hammer (ball peen)(250-500gram)	10 Nos.
21.	Hammer (cross peen) (1000 gram)	5 Nos.
22.	Rubber Hammer (Medium)	5 Nos.
23.	Hand Hacksaw (30cm)	10 Nos.
24.	Steel foot rule (12 inch)	25 Nos.
25.	Try square (12 inch)	10 Nos.
26.	Punch set (number)(0-9) 3mm & 5mm)	2 sets each



27.	Punch set (letter) (A-z 3mm & 5mm)	2 sets each
28.	Hollow punch set (gasket punch) (4mm-12mm)	2 Sets
29.	Center punch	10 Nos.
30.	Piston ring compressor for cars	02 Nos.
31.	Valve compressor (C-type) (Large size)	02 Nos.
32.	Bearing puller 6", 8"	02 Sets
33.	Hydraulic floor jack (03ton)	02 Nos.
34.	Hydraulic trolley jack (03ton)	02 Nos.
35.	Safety stand 1" to 1 ½" adjustable 1' to 1 ½'	08 Nos.
36.	Service creeper	2 Nos.
37.	Bench vice (8")	25 Nos.
38.	Work bench (Wooden) 3' x 6' x 3' feet	10 Nos.
39.	Parts tray M/S (containers)	05 Nos.
40.	Vernier Caliper (1/20 m) (170mm)	10 each
41.	Vernier Caliper (Digital) (170mm)	2 Nos.
42.	Out side micrometer (0-25, 25-50, 50-75, 75-100 mm)	02 Each
43.	Dial indicator (cylinder bore measuring gauge)	02 Nos
44.	Feeler Gauge (10 leaves mm and inches)	10 Nos
45.	Tire air pressure Gauge	02 Nos
46.	Digital Multi-meter	02 Nos
47.	Bench Grinder	02 Nos
48.	Drill Machine (Pedestal type)	1 No.
49.	Electric Hand drill Machine ½"	02 Nos.
50.	Oil can (pressure type)	10 Nos.
51.	Hammering Screw driver set	05 Nos
52.	Puller (for wheel drum)(Hammer Type)	02 Nos.
53.	Scraper (triangular & flat type)	10 each
54.	Cleaning Brush (wire type)	10 Nos.
55.	Magnet rod (pick up tool)	02 Nos
56.	Compression gauge (for Petrol)	02 Nos.
57.	Petrol timing gun	One
58.	Radiator pressure cap tester	One
59.	Wheel Spanner (Cross type) for cars	04 Nos.




60.	Flaring tools and pipe bender kit	1 No.
61.	Flat chisel (150mm)	10 each
62.	Line scribe	10 Nos
63.	Twist drill (parallel Shank) (3mm to 12mm)	10 sets
64.	Air compressor (Regular Garage size)(Heavy duty)	1 No.
65.	Engine Hoist (3 Ton Capacity) Hydraulic	1 No.
66.	Tool locker for trainees	25 Nos.
67.	Model of 4 stroke Petrol engine	1 No.
68.	Model of 2 stroke Petrol engine	1 No.
69.	Petrol engine (complete)(1.Toyota, 2.Honda car, 3. Suzuki Car)	3 each
70.	Steel Almirah	Five
71.	Vehicle Toyota x L1	01 No.
72.	Hydro Meter	05 Nos.
73.	Battery Charge	01 No.

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COMPUTER LAB

S. No.	Tools / Equipment	Quantity
1.	Desktop computer (Specifications as per notification issued by MIS Section, TEVTA)	26 (1 for each student & 1 for the teacher)
2.	Printer (Laser)	01
3.	Scanner	01
4.	Internet Connection (At least 1 MB speed)	01
5.	UPS 10 KVA	01
6.	Air Conditioner 1 ½ Ton	02
7.	Multimedia Projector	01

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CONSUMABLE MATERIALS**Auto Mechanic (Petrol)**

S. No.	Nomenclature of Equipment / Tools	Quantity
1.	Cotton Waste	100 kg
2.	Hacksaw Blades Double edge	50 Nos.
3.	M/s Flat 2 ½" x ½" x 4"	25 kg
4.	Petrol	75 liters
5.	Grease	5 kg
6.	Shellac Tube	25 Nos.
7.	Engine Oil 30/40 (Loose Packing)	25 liters
8.	Emery paper	50 Nos.
9.	Petrol Oil Filter	5 Nos.
10.	Air Filter	5 Nos.
11.	Engine Overhauling Kit	5 Nos.
12.	Piston Rings set for available engine	2 Sets
13.	Emery Paste	2 Nos.
14.	Gasket Sheet 4' x 4' x 1/16"	10 Nos.
15.	Copper Pipe dia 10mm	10 ft
16.	Brake Oil bottle	5 Nos.
17.	Smad Bond 1 kg Tin	2 Nos.
18.	Insulation Tape	10 Nos.
19.	Distilled Water Bottles	10 Nos.
20.	Auto Wires 3mm and 5mm	One Roll each
21.	Thimbles (Male and Female)	One Packet each
22.	Bulbs 12 Volt with holders	25 Nos.
23.	Switches different types	20 Nos.
24.	Sealing Washes 9,6,9,10,12,14 mm	25 Nos. each
25.	Master Cylinder Kit and wheel cylinder kit	5 Nos.
26.	Kerosene Oil	30 liters


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Functional English

S. No.	Item	Quantity
1.	Stationary	As per requirement
2.	Board Markers	As per requirement

I.T Fundamentals

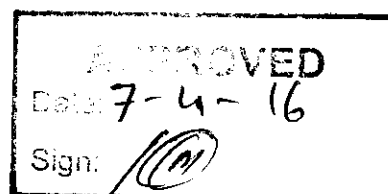
S. No.	Item	Quantity
1.	Printing Paper	As per requirement
2.	Printer Toner	As per requirement

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EMPLOYABILITY OF PASS OUTS

The Pass outs of this course can find jobs / employment opportunities in the following areas / sectors.

1. Auto parts manufacturing industries, vendors etc.
2. Authorized sales / service dealers.
3. Parts manufacturing Firms
4. Petrol pumps/service stations.
5. Compressor maintenance workshops.
6. Workshops / service stations



REFERENCE BOOKS

Auto Mechanic (Petrol)

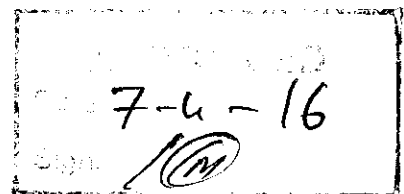
- 1 Trainee Manual of Auto Mechanic Course,
Developed by: Punjab Vocational Training Council, Lahore
- 2 Auto Servicing
Printed by: Allama Iqbal Open University, Islamabad
- 3 Auto Mechanics
Printed by: Allama Iqbal Open University, Islamabad
- 4 Auto Mechanics Fundamentals
By; Stockel, Marrtin W.
- 5 Automotive Mechanics
By W.H.Crouse/Angline.

Functional English

1. High School English Grammar By Wren & Martin
2. Oxford English Grammar

I.T Fundamentals

1. Introduction to Computer by Peter Norton
2. 2007 Microsoft® Office System Step by Step by Joyce Cox, Steve Lambert and Curtis Frye
3. Internet and E-mail with Windows 7 by Studio Visual Steps



MINIMUM QUALIFICATION OF INSTRUCTOR

Auto Mechanic (Petrol)

- D.A.E in Auto & Farm / Auto & Diesel Technology

OR

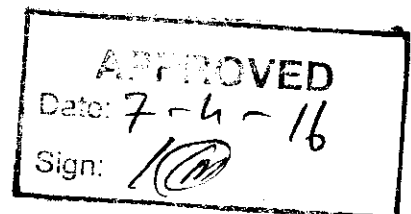
- Two Years proficiency certificate of Auto Mechanic/ Auto & Farm with 3-Years relevant experience.

Functional English

- MA. (English)


I.T Fundamentals

- DAE CIT/ BCS from HEC recognized university



List of Trade Related Jargon
GENERAL VOCABULARY WORDS

1. Safety precautions	حفاظتی تدابیر	1. Cooling system	نظام ٹھنڈک
2. Tools	اوزار	2. Viscosity	گاڑھا پن
3. Equipment	آلات	3. Rusting	زنگ آلودگی
4. First Aid	ابتدائی طبی امداد	4. Ignition switch	چابی سوئچ
5. Bleeding	خون بہنا	5. Muffler	سلنسر
6. Fracture	بڈی ٹوٹنا	6. Heat	حرارت
7. Measurement	پیمائش	7. Technical	تکنیکی
8. Tri Square	گنیا	8. Check up	معائنہ
9. Plier	پلاس	9. Conductor	موصل
10. Screw Driver	بیچ کس	10. Non conductor	غیر موصل
11. Divider	پرکار	11. Resistance	رکاوٹ
12. Files	ریتی	12. Parallel	متوازی
13. Hack saw	آری	13. Series	سلسلہ وار
14. Scissor	قینچی	14. Magnet	مقناطیس
15. Spanner	پانا	15. Tread	گڈی
16. Socket	گوٹی	16. Parking brake	ہینڈ بریک
17. Bench vice	بانک	17. Hood	بونٹ
18. Chain Hoist	چین کپی	18. Trunk	ٹنگی
19. Length	لمبائی	19. Automobile	گاڑی
20. Volume	حجم	20. Fuel feed pump	لغتی پمپ
21. Mass	کیمیت	22. Lubrication system	ہیٹر
22. Work	کام	23. Electrical System	نظام چکنائی
23. Power	طاقت		برقی نظام
24. Energy	توانائی		
25. Kinetic energy	حرکی توانائی		
26. Friction	رگڑ		
27. Fuel	ایندھن		
28. Combustion	اختراک		
29. Reciprocating	متقافی		

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Sign: 

Curriculum Revision Committee

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AMTS, Sargodha

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HOI,
AMTS, Faisalabad

Member

Shaukat Ali Rana
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Lahore

Member

