BASIC AUTO TECHNICIAN COURSE OUTLINE

1  Program Introduction
   Careers in Auto Technologies

2  Overview of Automobile Systems – Past and Present

3  Safety First
   Personal safety equipment
   Shop safety
   Flammable Liquids and other Fluid Hazards in the Shop

4  Workplace Skills
   Teamwork, Soft Skills and Customer Service

5  Tools and Fasteners
   Basic Hand Tools
   US and Metric Fasteners
   Shop Tools
   Diagnostic Equipment and Special tools

6  Basic Math Review

7  Reading and Understanding Shop Service Manuals
   Charts and Graphs
   Exploded views and Diagrams

8  Preventive Maintenance and Basic Services
   Oils and Lubricant Identification and Applications.
   Checking Fluid Levels – Engine, Trans, Brakes, Steering, Battery, Coolant, Etc.
   Changing Engine Oil and Filter
   Removing and Replacing Belts
   Remove, Clean, Identify and Replace Car Battery
9 Jacking and Hoisting
   Using a Hydraulic Jack, Safety Stands and a Hoist
   Identify Lifting Points on an Automobile

10 Changing and Rotating Tires
   Use of a Torque Wrench to Properly Secure the Tires
   Tire Identification and Nomenclature
   Mounting and Dismounting a Tire from the Rim using Tire Changing Equipment
   Tire Balancing – Static and Dynamic
   Introduction to Front End Alignment – Front End Geometry

11 Automotive Brakes
   Hydraulic Brake Fundamentals
   Disc Brakes – Changing Brake Pads
   Drum Brakes – Changing Brake Shoes
   Wheel Bearings – Packing and Adjusting
   Brake Boosters – Type and Operation
   Observe Machining of Drums and Rotors

12 Overview of Automotive Engines and Drivetrains
   Gasoline Engines
   Diesel Engines
   Transmissions – Automatic and Manual
   Differentials
   U-Joints

13 Basics of Automotive Electrical Systems