

Basic Internal Combustion Engines

Includes Hands-on Lab Instruction

Schedule: September 22, 2011 to December 15, 2011 (except scheduled school district breaks)

Thursday, 9:00 a.m. to Noon

3 hours of class plus 3 hours of home studies per week (for 1/2 High School Credit)

Educator: Mike Vigueria**

To sign up, call: (970) 527-4559

Components of “Basic Internal Combustion Engines” Class

- Safety: shop rules, safety equipment, safe use of hand tools
- How to identify hazardous chemicals and materials
- General uses of the internal combustion engine
- Types of internal combustion engines
- How the internal combustion engine works
- Components of the internal combustion engine
- Servicing, maintaining, and troubleshooting the internal combustion engine
- Comprehensive dismantling with analysis of each component
- Tools and bolts: standard and metric
- Use of the torque wrench—converting in/lbs to ft/lbs
- Measurement tools: vernier caliper, dial indicator, standard ruler to 32nds
- Decimal to fraction conversion
- Particular Engine Analysis: reading part numbers, serial numbers, and engine codes-How to calculate wear analysis of the internal components

Required Materials: gloves and safety glasses

Optional materials: apron, shop coat or coveralls

Age Recommendation: Middle School/High School

Fees: \$12.00 per hour (includes tuition and lab fees)

****Mike’s Background, Education and Experience**

- Associate of Applied Science degree in Propulsion Technology from Yavapai College, Prescott, AZ
- Twenty-nine years experience in the mining fields, about half as a heavy equipment mechanic, with the remainder as a supervisor in the large shops that provided all phases of maintenance (mechanical, machine shop, electrical) for both large copper and large coal operations.
- I am committed to share my mechanical knowledge and experience in a concise manner and comfortable classroom environment with students who are dedicated and willing to learn.