



Class Title: Red Auto Tech

Teacher Name: Omar Roman-Manriquez

Class Day: Friday

Class Size: 10

Class Cost: \$230

Class Fee: \$192

Ages or color group served: Red

What level is this class: Level 3

Prerequisites: NA

Graduation Requirements: NA

Homework Requirements: Homework will be assigned for students to complete at home.

Class Description:

This hands-on course introduces students to the exciting world of automotive technology while building real-world skills that can lead to future careers. Designed for both middle and high school students, the class combines foundational knowledge with practical experience in vehicle systems, maintenance, and repair.

Students will explore:

Major vehicle components such as engines, brakes, steering, suspension, tires, and batteries

How engines create power and how key systems work together

Basic maintenance skills like checking fluids, tire pressure, and performing inspections

Proper tool use and shop safety procedures

Introductory diagnostics

Students will be given a Socket set, eye pro, and tire pressure gauge.

Throughout the course, students develop problem-solving abilities, teamwork, responsibility, and technical skills through hands-on repair experience. No prior experience is required—just curiosity, a strong work ethic, and a willingness to learn by doing.

Week 1:

Introduction to Automotive Technology & Shop Safety

Focus: Safety and expectations

Topics:

- Course overview and career pathways
- Shop rules and safety procedures
- Personal protective equipment (PPE)

- Tool identification and proper usage

Week 2:

Automotive Tools & Equipment

Focus: Tool knowledge and application

Topics:

- Hand tools vs. power tools
- Measuring tools (torque wrench, tire gauge, multimeter intro)
- Tool care and storage

Week 3:

Introduction to Vehicle Systems

Focus: Major vehicle components

Topics:

- Engine, braking, steering, suspension, electrical basics
- How systems work together

Week 4:

How Engines Create Power

Focus: Engine fundamentals

Topics:

- 4-stroke engine cycle
- Basic engine components
- Gasoline vs. diesel overview

Week 5:

Engine Fluids & Preventative Maintenance

Basic maintenance skills

Topics:

- Oil, coolant, brake fluid, transmission fluid
- Importance of preventative maintenance

Week 6:

Brake System Basics

Focus: Brake system operation

Topics:

- Disc vs. drum brakes
- Brake components
- Signs of brake wear

Week 7:

Steering & Suspension

Focus: Vehicle control systems

Topics:

- Steering components
- Suspension parts
- Alignment basic

Week 8:

Automotive Electrical Basics

Focus: Introduction to electrical systems

Topics:

- Battery function
- Voltage, current, resistance (simple explanation)

Week 9:

Introduction to Diagnostics

Focus: Problem-solving skills

Topics:

- What is diagnostics?
- Common warning lights
- Introduction to scan tools

Week 10:

Team Maintenance Project

Focus: Apply learned skills

Week 11:

Review & Career Exploration

Week 12:

Final Project "What's wrong with this car?"