**SMALL GAS ENGINES  
Selma High School   
Mr. Moz, Room 311  
lmoz@selma.k12.ca.us**

**Course Description**This class is designed to train students for entry-level jobs in the fast growing industry of small engine repair. Students will demonstrate ability to repair small engines such as lawn, garden, and small engines used in agriculture. Emphasis is placed on overhaul, repair, adjustment, troubleshooting, and small shop operation. This class prepares students for the Outdoor Power Equipment (OPE) Category 1 Two-and Four-Stroke Gasoline Engine Technician Certification- an industry recognized certification through the Outdoor Power Equipment & Engine Service Association (OPEESA) an approved certification through the Equipment & Engine Training Council (EETC).

**Student Learning Goals**

1. Learn and understand the functions of a small engine/ diesel engine. Identify and explain the basic components of a small engine/diesel engine.
2. Learn how to maintain and repair small engines.
3. Develop proficient safety practices in the shop.
4. Identify various systems including drive train systems, suspension and steering systems, brake systems and electrical systems.

**Course Outline**

*Semester One*

## Shop Equipment, Supplies, and Safety

1. Safety in the Small Gas Engine Shop
2. Tools and Measuring Instruments
3. Fasteners, Sealants, and Gaskets
4. Fundamentals of Electricity, Magnetism, and Electronics

## Basics of Engine Operation

1. Principles of Engine Operation, Two-Stroke/Four-Stroke Engines
2. Engine Components
3. Measuring Engine Performance

## Engine Systems

1. Fuel Supply, air Induction, and Emissions
2. Carburetion and Fuel injection
3. Ignition systems
4. Lubrication systems
5. Cooling systems

## Engine Service

1. Preventative maintenance and troubleshooting
2. Fuel system service
3. Ignition and electrical system service
4. Engine disassembly and inspection
5. Cylinder, crankshaft, and piston service
6. Camshaft and valve train service
7. Engine reassembly and break-in

## Applications

1. Lawn and brush equipment
2. Lawn and garden tractors
3. Snow throwers
4. Personal watercraft
5. Career opportunities and certification

**Course Requirements**

* **Materials/Supplies**
  + It is required that you bring a pencil and pen to class along with a notebook/paper in order to take notes.
  + 3 Ring Binder
  + Safety glasses with “Z” rating capability
* **Textbooks**
  + *Small Gas Engines Alfred C. Roth, Blake J. Fisher 11th Edition*
  + *Diesel Technology-Alfred C. Roth, 9th Edition.*

**Class Expectations**You are enrolled in a class to obtain a marketable skill that will enable you to better prepare yourself for future employment. Your attendance, behavior, and dress are expected to be the same as required in the workplace. If your classroom behavior creates an unsafe environment in the classroom and/or causes damage to the equipment, Mr. Moz reserves the right to remove you from the class.

**Attendance Policy**You must be in the classroom and seated before the tardy bell rings. Flying through the door as the bell rings is considered a tardy. It is very important that you are here on time and ready to work. You will not be able to finish your work otherwise. Think of this class as your job. You could not continuously be late to work without getting fired. Please maintain a satisfactory attendance as absences will affect your grade.

**Classroom Rules and Expectations**

Please note that these rules are in addition to the main rules of the campus.

**Respect:**

All members of the classroom will demonstrate respect to each other and all personal, private, and school property at all times.

**Responsibility:**

All members of the classroom will show responsibility for their own actions and accept consequences of their actions.

**Accountability:**

All members of the classroom will be held accountable for their own actions and accept the consequences given.

**Student Handbook:**

All members of the classroom are responsible to know and understand SHS expectations and policies as defined in the Student Handbook

**Attendance Policy:** Enforced as per Selma High School Attendance Policy

**Grading Policies:**

97-100%A+ 94-96% A 90-93% A-

80-89% B+ 84-86% B 80-83% B-

70-79% C+ 74-78% C 70-73% C-

60-69% D+ 64-68% D 60-63% D-

Below 59% F

**Each Students grade is broke down as follows:**

Projects and Reports: 25%

Test and Quizzes 35%

Daily Assignment and Worksheets 20%

Participation 20%

**Cheating/Plagiarism**Copying other people’s work is not only unethical, it is against school policy. If you are found to be cheating, copying work, or letting others copy from you, you will receive a zero grade on that assignment. If this persists you will be removed from my class and receive an “F” grade. Please, don’t take this chance. It is not worth the risk.

Due to unique schedule and function of this class we will be working with each other on a daily basis. We will read, write and discuss everything in class about shop safety before working in the shop. Students that are unable to pass the safety section of this course with 100% accuracy you will not be permitted to perform any shop activities. Students found not following shop rules will be asked to retake the safety section of this course before being permitted to perform regular shop projects. This class will prepare you for many situations in the Small Engine Repair Industry and Automotive Repair.

WELCOME TO SMALL ENGINES/DIESEL ENGINES!!!!!!!!!!!!!!!!!!!!!!!

**Class Contract**

I, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, have read and understand all the contents of the syllabus for the Small Gas Engines class. By signing below, I agree to follow the rules and give my best effort to achieve a passing grade.

X\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_

Student Signature Date

As the parent/guardian of the student listed above, I have read and understand all the contents of the attached syllabus. By signing below, I agree to encourage my student to follow the guidelines that have been set. I am now aware of what Mr. Moz expects from his students.

X\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_

Parent/Guardian Printed Name Date

X\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_

Parent/Guardian Signature Date

***Please return this contract signed to Mr. Moz   
on or before the first grading period.   
If I have not received it by that date, shop practices will not be permitted!!!***

**Parents may contact me at:**

[lmoz@selma.k12.ca.us](mailto:lmoz@selma.k12.ca.us)

**If you would like me to contact you through email, please write your email address below:**

**X\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**