

Mission Valley ROP Small Engine Service Syllabus

Course Title: Small Engine Service

Course Code/Section #:

Units of Credit: 10

Meeting Times: Monday thru Friday, 1 class period, 2 Semester

Instructor Name: Kurt Shadbolt

Location/Room #: James Logan High School-Automotive Building #106

Office Hours: 7:40 AM thru 3:30 PM Monday thru Friday

Contact Info: kshadbolt@nhusd.k12.ca.us (510) 471-2520 ext 60338

Course Description:

This course stresses fundamental operations of two-cycle and four-cycle engines and their related components. Lawn mowers, chain saws and other small engines will be studied. Students will gain knowledge and skill through reading assignments, lectures, demonstrations and shop activities. Shop activities will include disassembly/assembly, troubleshooting and tune-up of a single cylinder type engine. Other activities will cover motorcycle maintenance. This will include tune-ups, troubleshooting, lubrication and tire and wheel maintenance. All equipment except for shop clothes will be provided. Students will be encouraged to bring in their own lawn mowers, motorcycles and other engines to work on. This course may be repeated for credit.

Prerequisites:

None

Course Objectives:

General shop, tool and equipment safety

Proper usage of basic hand tools and specific special tools

Types and usage of fasteners

Applied math

Reference materials and documentation usage

Understand the engine and component operation on 2 and 4 stroke engines

Understand the components and operation of fuel systems

Understand the components and operation of ignition systems

Understand the components and operation of electricity and electrical systems

Understand the components and operation of engine peripheral systems

Troubleshooting

Service and maintenance

Tire and wheel service and maintenance

Career development skills

Required Text, Material, Tools, and Resources:

All course text, handouts and tools will be provided by the instructor for use while enrolled in the course.

Small gas Engines, Alfred C. Roth, Goodheart-Wilcox
Industry developed handouts and materials
Instructor developed handouts and materials

It is expected that students come to class prepared each day with the following items:

Pen #2 pencil note paper issued safety glasses appropriate attire

Teaching Modalities:

Lecture Group Discussion Projects Reading Assignments
Oral Questioning Multi-Media Hands-on Practice Demonstration
Team Learning Simulations

Grading Policy:

Homework, Tests and Quizzes:

A= 100-90 B= 89-80 C= 79-70 D= 69-60 F= 59-below

Practical:

- 1: Exposure to the task that involves hands-on assistance
- 2: Completion of the task correctly with some assistance and instruction
- 3: Completion of the task correctly without help or instruction, unless the nature of the job requires help
- 4: Completion of the task correctly without help or instruction

Professionalism:

All students begin with 100 points; deductions for attendance, safety, work ethic and participation issues.

Overall Course Grades:

A= 100-90 B= 89-80 C= 79-70 D= 69-60 F= 59-below

Overall Course Grade Break-Down:

40% Theory (Finals, Mid-term, Quizzes, Homework)
40% Practical (Shop Based Finals, Mid-term, Specific Tasks)
20% Professionalism (Attendance, Safety, Work Ethic, Participation)

Weekly Assignment Schedule

Course Schedule:

Students will be advised of the schedule of planned classroom topics, shop days, quizzes / tests, and homework assignments. This schedule should be used for informational purposes only and can be changed at any time.

Late Work:

Students returning from an excused absence are expected to turn in assignments on the first day of return to class; failure to do so will result in the assignment being scored as late.

Late work will have the earned grade reduce by 1 grade level per day late

Make-Up Work:

Is available to students who have missed class / shop assignments due to an excused absence and are responsible for contacting the instructor to receive the materials or schedule time for shop work or test / quiz make-up.

Attendance Policy:

Mission Valley ROP's mission is to prepare students for employment, and career preparation via post-secondary educational opportunities. Just as in business and industry, where employees are expected to show up on time every day, Mission Valley ROP students are expected to be on time for classes every day.

Make up assignments will be given for excused absences only, which include medical, legal or bereavement circumstances. Failure to complete make up assignments will adversely affect your grade. If you are tardy or miss a Mission Valley ROP class multiple times, you will lose units of credit and your grade will be adversely affected. Be advised that credits are earned by attendance only and cannot be made up.

Students must arrive on time to class. Talking on a cell phone or having personal conversation outside the class is unproductive and will be considered a tardy. Tardiness reduces instructional time and is disruptive to the classroom. Tardies may prevent the student from receiving a course certificate.

Perfect attendance certificates will only be issued to students who have no absences or tardies. There are no exceptions.

Additional Policies and Procedures of the Classroom:

Students are expected to adhere to all existing James Logan High School policies while attending the Small Engine Training Programs and to contribute to a safe and productive learning environment. Any students whose actions place themselves or other students at risk or negatively impact the learning opportunities for others will face disciplinary actions and possible removal from the program.

All classes strive to prepare students for adult life by teaching skills and behaviors that will be valued in the workplace. The following expectations are stressed and graded in class:

- ❖ **Attendance:** Be here on time each day, prepared to work, dressed appropriately
- ❖ **Respect:** Use appropriate language, be honest and truthful, be respectful of peers and adults
- ❖ **Safety:** Follow safety rules and procedures, keep work area orderly

- ❖ **Responsibility:** Complete work on time, follow directions, use resources to answer questions, ask for help when needed, contribute to class discussion
- ❖ **Quality:** Show determination to complete tasks, be consistent in quality, focus on the task at hand
- ❖ **Team:** Work as a productive team member in a variety of roles, communicate in a sensitive way

Mission Valley ROP is committed to preparing students for the workforce. This preparation includes technical skills as well as business ethics. Mission Valley ROP does not condone cheating. Any student caught cheating on an exam or copying work from other students will be given one warning and a failing grade on that assignment. Any subsequent incident will result in termination from his/her Mission Valley ROP program, a failing grade, and loss of credits. No food or drinks will be allowed in the automotive building, including classroom and shop. Students violating this policy will receive one warning.

Students completing this course with a grade of “C” or better will receive a Mission Valley ROP Certificate of Completion listing competencies achieved in the course.”

In-Class Events: Visitors from industry, post secondary educational institutions and other areas related to course objectives may visit the class from time to time. Course related field trips may be planned and any associated costs would be notified in advance.

**INFORMATION
AND
PERMISSION LETTER**

I, _____ have read and understand the policies and procedures which includes the grading and attendance policies and the safety rules for the Small Engine Training Program and agree to abide by them.

STUDENT SIGNATURE

DATE

Students will be given instruction and demonstration on the safe and proper use of all the tools, equipment and materials used in the small engine service technology training facility which are common to the small engine service industry along with safe procedures for working on vehicles in the shop. If you would like a list of the tools, equipment and materials used in the shop or a copy of the MSDS (Material Safety Data Sheet) for those materials, please let the instructor know. Students are expected to read, understand and follow all safety rules pertaining to operation and use of tools and equipment and proper handling and storage of any hazardous materials found in the shop such as lubricants, brake fluid, solvents, antifreeze, and oil soaked rags and absorbents. The purpose of this letter is to inform you about the policies and procedures for the operation of the shop. If you have any questions feel free to call the instructor (Kurt Shadbolt) at 510-471-2520 x 60338.

As the parent or guardian of _____ I understand that he/she will be working with tools, equipment and materials that are common to the small engine service industry as well as completing live work on vehicles in the shop. I have read and understand the policies and procedures for the Small Engine Training Program and grant permission for my son/daughter to participate in the class.

PARENT OR GAURDIAN SIGNATURE

DATE

Emergency Contact Information

Name of emergency contact

Emergency phone number

Name of alternate emergency contact

Alternate emergency phone number