

Small Gas Engines

Course Syllabus

1. Course Description

One term (1/2 credit). Elective open to grades 9, 10, 11, and 12th. Small Engines is an introductory course on the four-stroke cycle, single cylinder engines. You will study the four strokes, engine parts identification, and engine operation. You will tear down a four-stroke engine, inspect and repair, reassemble, trouble shoot, and try to get the engine running.

2. Course Outcomes

A. Safety

1. Understand and demonstrate proper safety procedures in the area of dress, eye hazard, behavior, and accident procedures
2. Understand and demonstrate safe operation of equipment and tools.
3. Understand safe handling and disposal of hazardous materials.
4. Understand and demonstrate safe storage and handling of flammable materials.
5. Understand and demonstrate proper shop maintenance and organization.

B. Principles of Operation

6. Identification of the basic components of a small engine.
7. Understand and explain the operation of a gasoline-powered engine.
8. Understand and explain fuels that power the engine.
9. Understand and explain the operation of a four-stroke cycle engine and the purpose of each stroke.
10. Understand and explain the operation of two stroke cycle engines and the principle of two-cycle operation.
11. Understand and explain the advantages and disadvantages of two and four stroke cycle engines.
12. Demonstrate knowledge of operation on project engine.

3. Assessments

- a. 25% Quizzes, test and final exam.
- b. 50% Assignments and laboratory activities.
- c. 25% Attendance, clean up, cooperation and attitude.
- d. Extra Credit determined by instructor (Extra Engines)

A= 100-90%

B= 89-80%

C= 79-70%

D= 69-60%

F= 59% or below

4. Posting of Grades

- a. Grades will be posted on A-H Connect and updated every week or two depending on student workings.
- b. If more frequent grade identification is need it can be obtained threw e-mail. francis.kratochvill@ahschools.us
- c. 763-506-8479

5. Materials

- a. Notebook, folder, and writing utensil
- b. Clothing to wear during lab activates
- c. Four stroke engine (not mandatory)
- d. Gaskets and seals if required for engine