



Syllabus

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What You Should Already Know

There is no prerequisite for this course.

Learning Outcomes

This course is not a “how to” course on rebuilding engines or improving performance. It is designed for you to look at a small engine and, with the help of the text, be able to figure out just what makes that engine run. You’ll achieve this through a series of readings and quizzes as well as a hands-on assignment. This is what you’ll be able to do when you are finished with this course:

1. Identify the key systems and components that enable small engines to operate.
2. Analyze mechanical problems to determine the best method of repair.
3. Summarize the skills needed in various small-engine-related careers.

Course Materials

To successfully complete this course you will need the following:

- The textbook *Small Gas Engines* (2004, Goodheart-Willcox Company, ISBN: 978-1590701836) by Alfred C. Roth (you'll want the hardcover version). It can be the 4th or the 11th edition for the purposes of this course.
- A small gas engine: You will need an old small engine to complete this course. You should not use a valuable running engine because

you will be taking it apart and you might not be able to put it back together. If you do not have an old lawn mower engine or other small engine around your house, talk to a neighbor or a small-engine repair shop. Tell them what you need and why you need it and they will probably give you an old engine to take apart. Do not tear the engine apart on the living room floor. Engines usually have old gas in the carburetor and oil in the crankcase. Drain the fluids and tear the engine apart where you can be a little messy. As you take it apart, you should answer the questions in the instructor-graded assignment. When you are done tearing it apart, try to reassemble the engine—use the textbook and your memory to help you.

Assignments

The unit quizzes consist of multiple-choice questions based on the reading assignment in the textbook from each lesson. Pay attention to the feedback you get on these quiz questions. Even if you choose the wrong answer, the feedback will help you understand why your answer was wrong and where in the lesson you can find the correct answer. This information will help you do well on the final exam.

Instructor-graded Assignment

For the instructor-graded assignment you will take a small engine apart and identify parts of the engine. The assignment has three parts: for the first part, you will find an adult mentor (preferably someone from your school or someone who is familiar with small-engine mechanics) who will verify that you completed your assigned work. In the second part, you will take apart a small engine and answer questions about that process. In the final part of the assignment, you will identify many of the important parts of a small engine.

Exams

The final exam is also multiple choice and will cover every lesson and reading assignment from the textbook.

Grading

The following tables show the weight for each graded event and the grading scale used for this course.

Assignment	Quantity	Weight
Unit Quizzes	8	7% each
Instructor Graded Assignment	1	24%
Final Exam	1	20%

Grade Scale

A	100–93
A–	92–90
B+	89–87
B	86–83
B–	82–80
C+	79–77
C	76–73
C–	72–70
D+	69–67
D	66–63
D–	62–60
E (FAIL)	59 or below