

**AGMEC 163 Course Outline as of Fall 2024****CATALOG INFORMATION**

Dept and Nbr: AGMEC 163 Title: SMALL GASOLINE ENGINES

Full Title: Small Gasoline Engines

Last Reviewed: 11/25/2019

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	2.00	Lecture Scheduled	1.00	17.5	Lecture Scheduled	17.50
Minimum	2.00	Lab Scheduled	3.00	8	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	4.00		Contact Total	70.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 35.00

Total Student Learning Hours: 105.00

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly: AGMEC 63

**Catalog Description:**

The practical aspects of the repair and safe operation of small gasoline engines are emphasized. Troubleshooting, disassembly, repair, reassembly and appropriate use of engines found on equipment such as lawn mowers, rototillers, blowers, weed eaters, etc., are covered.

**Prerequisites/Corequisites:****Recommended Preparation:**

Eligibility for ENGL 100 OR EMLS 100 (formerly ESL 100) or equivalent

**Limits on Enrollment:****Schedule of Classes Information:**

Description: The practical aspects of the repair and safe operation of small gasoline engines are emphasized. Troubleshooting, disassembly, repair, reassembly and appropriate use of engines found on equipment such as lawn mowers, rototillers, blowers, weed eaters, etc., are covered. (Grade Only)

Prerequisites/Corequisites:

Recommended: Eligibility for ENGL 100 OR EMLS 100 (formerly ESL 100) or equivalent

Limits on Enrollment:

Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

**AS Degree:**      **Area**      Effective:      Inactive:

**CSU GE:**      **Transfer Area**      Effective:      Inactive:

**IGETC:**      **Transfer Area**      Effective:      Inactive:

**CSU Transfer:**      Effective:      Inactive:

**UC Transfer:**      Effective:      Inactive:

**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

**Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Identify the basic parts and operation of a common small gas engine.
2. Demonstrate the proper techniques for the operation and repair of common small gas engines.

**Objectives:**

At the conclusion of this course, the student should be able to:

1. Identify the basic parts of a small gas engine
2. Explain the proper operation of a gas engine
3. Analyze common small gas engine problems
4. Disassemble and reassemble a small gas engine
5. Outline the maintenance practices for one common small gas engine

**Topics and Scope:**

I. Introduction

- A. Overview of engine types
- B. Engine operation and safety
- C. Operating principles
- D. Definition and importance of maintenance and repairs
- E. Outline routine service and adjustment to engines
- F. Analyze engine problems.

II. Engine Operator Skills

- A. Safety checks
- B. Starting
- C. Basic operating principles

III. Disassemble the Engine

- A. Identify the parts of an engine
- B. Safe use of common tools for engine maintenance to disassemble

- C. Perform proper cleaning and lube procedures
- IV. Reassemble the Engine
  - A. Equipment maintenance procedures
  - B. Safe use of common tools for engine maintenance to reassemble
  - C. Adjust engine settings

All Topics are covered in the lecture and lab portions of the course.

**Assignment:**

Lecture-Related Assignments:

1. Reading 5-10 pages/week
2. Quizzes, midterm, final exam

Lab-Related Assignments:

1. Skill and performance exams: Disassemble and reassemble engines
2. Analyze engine problems

**Methods of Evaluation/Basis of Grade:**

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because skill demonstrations are more appropriate for this course.	Writing 0 - 0%
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**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Analyze engine problems	Problem solving 20 - 40%
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**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Skill and performance exams: Disassemble and reassemble engines	Skill Demonstrations 20 - 30%
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**Exams:** All forms of formal testing, other than skill performance exams.

Quizzes, midterm, final exam	Exams 30 - 40%
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**Other:** Includes any assessment tools that do not logically fit into the above categories.

Reading maintenance manuals. Attendance and participation	Other Category 10 - 20%
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**Representative Textbooks and Materials:**

Small Engines. 4th ed. Radcliff, R. American Technical Publishers. 2016