

SOUTHEAST COMMUNITY COLLEGE
COURSE SYLLABUS
ADVANCED TECHNOLOGIES & SKILLED TRADES
Horticulture & Turfgrass Management Program
Revision Date: November 2022

I. CATALOG DESCRIPTION

Course Number: HORT 1215
Course Title Horticulture Equipment Maintenance and Operation
Prerequisite(s): None

Catalog Description: Basic study of proper maintenance and repair of horticultural equipment including blade sharpening, small engine repair and scheduled maintenance. Course will also introduce students to the operation of equipment that is used daily in the horticulture and turfgrass professions.

Credit Hours: 3.0
Class Hours: 15
Lab Hours: 90
Total Contact Hours: Total of Class + Lab 105

II. COURSE OBJECTIVES: *Course will:*

- a. Introduce the maintenance techniques used on various pieces of horticulture equipment.
- b. Demonstrate the various maintenance practices used in the horticulture industry.
- c. Demonstrate the operation of the various types of mowers used in the horticulture industry.
- d. Demonstrate the operation of various pieces of horticulture utility equipment, including: skid steers, forklifts, and tractors.
- e. Demonstrate the proper use and operation of equipment with a 2-cycle engine.
- f. Demonstrate how to properly load and fasten down equipment to a trailer for transport.
- g. Demonstrate how to properly sharpen rotary mower blades.
- h. Demonstrate how to properly set up reel mowers.
- i. Introduce students to using equipment with a manual transmission.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. STUDENT LEARNING OUTCOMES: *Student will be able to:*

1. Practice the upkeep and repair of both reel and rotary mowers.
2. Understand the differences in working with a diesel engine versus a gasoline engine.
3. Understand the proper upkeep of other horticultural equipment.
4. Understand how to use an operator's manual of any type of equipment effectively.
5. Gain skills and knowledge of setting the height and cut of various types of reels used in the turfgrass industry.
6. Gain skills in sharpening rotary mower blades.
7. Understand how to operate rotary and reel mowers used in the horticulture industry.
8. Understand how to use various pieces of utility equipment including: skid steers, forklifts, and tractors.
9. Understand how to properly transport equipment from place to place

B. GENERAL EDUCATION LEARNING OUTCOMES

GELO #3: Critical Thinking & Problem Solving

Critical thinkers have the ability to evaluate a problem or assumption and determine an appropriate course of action. They use reason and evidence to make judgments and decisions. Critical thinking and problem-solving skills rank highly among employer expectations.

Outcomes:

- 1) Collect, identify, interpret and analyze data.
- 2) Synthesize information to arrive at reasoned solutions to problems.
- 3) Evaluate ideas presented in writing, medial, speech, or artistic presentations.
- 4) Evaluate the validity of arguments, alternatives, data, outcomes, and/or impacts of actions.
- 5) Acquire and integrate knowledge and construct relationships across disciplines.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

- A. Understanding Reel versus Rotary Mowers
- B. Sharpening both types of reel, bed knives, and blades
- C. Understanding Diesel Engines
- D. Understanding Gasoline Engines
- E. Upkeep of other Horticulture Equipment
- F. Welding

V. INSTRUCTIONAL MATERIALS

A. **Required Text(s): Small Gas Engines, 11th Edition, Roth, Fisher, and Gauthier.**
ISBN# 978-1-63126-390-3

B. **Other Resources:**

Each student will need to have **safety glasses, pliers**, welding gloves,
and coveralls or protective clothing. **NO SANDALS ALLOWED!!!**

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:

Methods will include, but are not limited to:

Laboratory or Field Assignments, Demonstration, Slide and Video Presentations,
Field Trips, Guest Speakers

VII. METHODS OF EVALUATION

Methods of evaluation typically include a combination of the following:

- a. Quizzes, tests, and exams
- b. Participation
- c. Daily Evaluation

SCC STANDARD GRADING SCALE POLICY:

A+ 95-100	C+ 75-79
A 90-94	C 70-74
B+ 85-89	D+ 65-69
B 80-84	D 60-64
	F Below 60

VIII. SPECIFIC COURSE REQUIREMENTS:

Successful completion of all exams, projects, and assignments.

- a. Participation in class and class activities; including field trips.
- b. Utilize proper safety eyewear at all times in lab.
- c. Achieve a passing grade of 60% or higher, based on SCC grading scale.