

Course Code: HRT 118**Course Title:** Horticulture Equipment Operation**Department:** Agricultural Technologies**Effective Date:** Summer 2026**PCS Code:** 1.2 - Occupational/Technical Instruction**CIP Code:** 01.0601**Repeatability:** 0

Credit Hours

Catalog Notation: 2-2-3**Credit Hour Distribution:**

Lecture: 2

Lab: 2

Clinical: 0

Total: 3

General Course Information

Catalog Description

Introduction to operation, servicing, and preventative maintenance of commonly used landscape and horticulture equipment. Applied mechanical learning experiences in a practical horticultural services operation.

General Course Objectives

Train students in basic operation and maintenance of horticulture-related equipment, safe operation of landscape equipment, and basic engine operations and maintenance.

Minimum Placement Levels

English	Reading	Math
Placement out of ENG 098	Placement out of CCS 098	Placement into MAT 060

Prerequisites

None

Methods of Evaluation

The minimum methods of evaluation include: 8 quizzes, 8 equipment operation tests, homework assignments, 2 tests, and a final exam.

Instructional Materials and Additional Supplies

No textbook required.

Course Content

General Learning Outcomes (GLOs)

- Reasoning and Inquiry: Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Basic Engines	1. Explain basic theory of the diesel engine. 2. Identify parts of the 4-cycle engine and the function of each. 3. Outline the operation/strokes of 4-cycle and 2-cycle fuel systems, hydraulic control systems, and powertrain transfer systems.	5	5	0
Safety	1. Discuss safe equipment operation procedures. 2. Demonstrate knowledge of safety and protective equipment. 3. Demonstrate proper pre-operational safety equipment check. 4. Demonstrate safe handling and storage of fuel. 5. Explain fire safety principles.	4	2	0
Tools and Implements	1. Demonstrate the tools used in landscape maintenance and the application of each. 2. Explain the attachments/implements used in horticulture equipment operation and the application of each.	8	6	0
Operation	1. Demonstrate small engine troubleshooting. 2. Identify different types of mowers. 3. Describe the tractor pre-start procedure.	5	9	0
Maintenance	1. Explain the steps in servicing cooling systems. 2. Demonstrate the proper sharpening of mower blades, service oil lubrication, and engine air cleaner system. 3. Explain the steps in servicing a 12-volt battery system. 4. Discuss the reasons for proper equipment tire inflation.	6	6	0
Performance	1. Safely operate a low horsepower tractor, skid loader, 2-wheel trailer (backing), weed-eater trimmer, chainsaw, mowers, sod cutter, grass edger, tiller, attachments of 3-point hitch equipment, and utility vehicles.	2	2	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	30	0