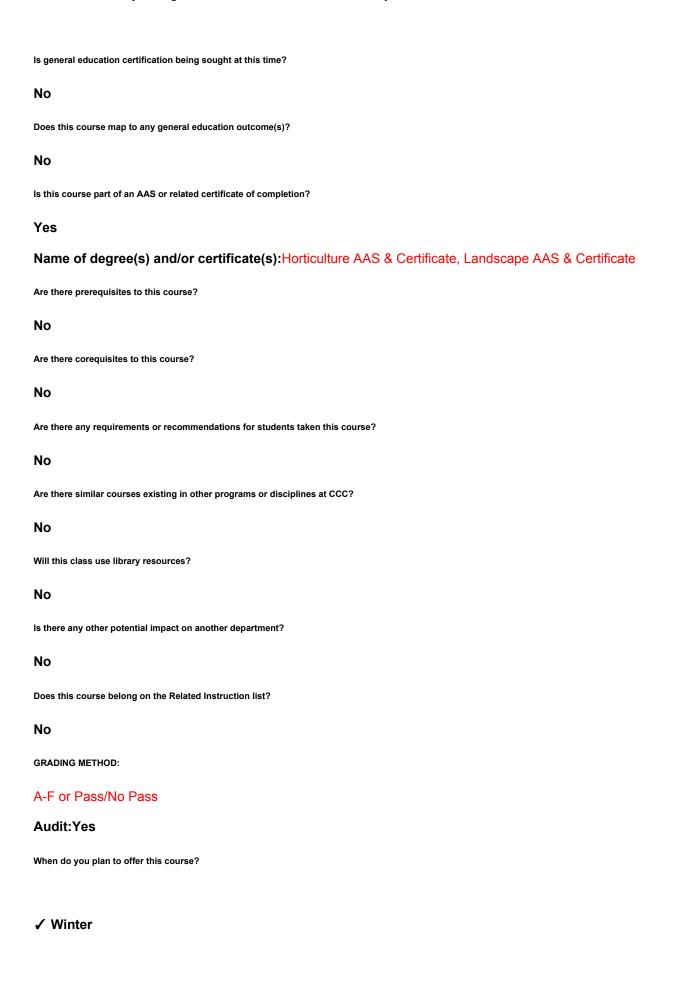
Clackamas Community College

Online Course/Outline Submission System

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Section #1 General Course Information
Department:Horticulture
Submitter
First Name: Renee
Last Name: Harber
Phone: 3294
Email: rharber
Course Prefix and Number:HOR - 230
Credits:2
Contact hours
Lecture (# of hours): 22
Lecture (# of hours):
Lab (# of hours): 22
Total course hours: 44
For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.
Course Title: Equipment Operation & Maintenance
Course Description:
Selection, operation, and maintenance of power driven machines, such as mowers, rototillers, chain saws, edgers, sprayers, tractors, and related equipment for nursery and landscape applications. Class includes a lab component.
Type of Course:Career Technical Preparatory
Is this class challengeable?
Yes
Can this course be repeated for credit in a degree?

No



Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

Upon successful completion of this course, students should be able to:

- 1. demonstrate the fundamentals of small 2 and 4-cycle engine operation,
- 2. evaluate common engine problems to keep small engines operating,
- 3. operate and perform basic maintenance of power equipment common to the industry,
- 4. demonstrate the safety procedures for equipment operation.

This course does not include assessable General Education outcomes.

Major Topic Outline:

- 1. Fundamentals of gas and diesel engines operation and maintenance.
- a. Engine parts identification.
- a1. 4 cycle.
- a2. 2 cycle.
- b. Air filtering systems.
- c. Fuel and fuel systems.
- d. Lubrication and cooling systems.
- e. Ignition and electrical systems.
- f. Clutches, power trains, PTO.
- 2. Preventative maintenance.
- a. General maintenance.
- a1. Schedules.
- a2. Procedures.
- b. Winterizing engines and equipment.
- 3. Troubleshooting.
- 4. Equipment safety.
- a. Tractors and equipment safety.
- b. Landscape equipment safety.
- 5. Tool identification.
- a. Mechanic hand tools.
- b. Selection of equipment price and quality.
- 6. Equipment Operation.
- a. Tractor.
- b. Loader.
- c. Rototiller.
- d. Midmower.
- e. String trimmer.
- f. Edger.
- g. Chain saw.
- h. Riding mower.
- i. Blower.

- j. Fork lift.
- k. Sprayer.
- 7. Gas and diesel powered equipment.
- a. Small tractors.
- a1. Models and their features.
- a2. Parts of small tractors.
- a3. Levers and controls.
- a4. Indicators.
- a5. Function of specific equipment.

Does the content of this class relate to job skills in any of the following areas:

Increased energy efficiency
 Produce renewable energy
 Prevent environmental degradation
 Clean up natural environment
 Supports green services

No

Percent of course:10%

First term to be offered:

Specify term: Winter 2015