

**Clackamas Community College**  
Online Course/Outline Submission System

**Consent Agenda Requests**

**Section #1 General Course Information**

**Department:**Horticulture

**Submitter**

First Name: Renee

Last Name: Harber

Phone: 3294

Email: rharber

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**Course Prefix and Number:**HOR - 223

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**# Credits:**3

**Contact hours**

Lecture (# of hours): 33

Lec/lab (# of hours):

Lab (# of hours):

Total course hours: 33

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.

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**Course Title:**Horticulture Science

**Course Description:**

An overview of the practical aspects of plant growth and development, classification systems, plant breeding and environmental factors that impact plant growth.

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**Type of Course:**Career Technical Preparatory

**Reason for the new course:**

Landscape program revision.

**Is this class challengeable?**

**Yes**

Can this course be repeated for credit in a degree?

**No**

Is general education certification being sought at this time?

**No**

Does this course map to any general education outcome(s)?

**No**

Is this course part of an AAS or related certificate of completion?

**Yes**

**Name of degree(s) and/or certificate(s):**Horticulture AAS & Certificate, Landscape AAS

Are there prerequisites to this course?

**No**

Are there corequisites to this course?

**No**

Are there any requirements or recommendations for students taken this course?

**No**

Are there similar courses existing in other programs or disciplines at CCC?

**No**

Will this class use library resources?

**No**

Is there any other potential impact on another department?

**No**

Does this course belong on the Related Instruction list?

**No**

GRADING METHOD:

A-F or Pass/No Pass

**Audit:Yes**

When do you plan to offer this course?

**✓ Fall**

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. appropriately use terminology associated with plant anatomy, physiology and development to communicate with horticulture workers;
2. identify the various parts of a plant and their functions,
3. describe the factors that contribute to microclimates and their possible impacts on plant growth,
4. describe the influence of plant hormones on plant growth and development,
5. explain the potential ramifications of climate change on horticulture in the pacific northwest, and how industry professionals could prepare for these changes;
6. apply an understanding of how environmental factors influence plant growth and development in a greenhouse, nursery, landscape or farm setting.

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***This course does not include assessable General Education outcomes.***

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**Major Topic Outline:**

1. Plant anatomy.
2. Plant classification systems.
  - a. Botanical.
  - b. Life Cycle.
3. Plant growth and development.
  - a. Phases of development (seed, juvenile, reproductive, senescence).
  - b. Plant hormones and growth regulators.
  - c. Photosynthesis, respiration, transpiration.
  - d. Photoperiod, dormancy, vernalization, tropisms.
4. Climate.
  - a. Hardiness zones.
  - b. Microclimates.
  - c. Climate change.
5. Environmental factors.
  - a. Light.
  - b. Temperature.
  - c. Atmospheric Gases.
  - d. Water.
  - e. Nutrients.
  - f. Soil.
6. Pollination and genetics.
  - a. Hybrids.
  - b. Genetically modified organisms.

- c. Self-pollinated.
- d. Open-pollinated.
- e. Self-sterile.

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

- |                                      |            |
|--------------------------------------|------------|
| 1. Increased energy efficiency       | <b>No</b>  |
| 2. Produce renewable energy          | <b>No</b>  |
| 3. Prevent environmental degradation | <b>Yes</b> |
| 4. Clean up natural environment      | <b>No</b>  |
| 5. Supports green services           | <b>No</b>  |

Percent of course:10%

First term to be offered:

**Specify term:** Fall 2014

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