

**Chemeketa Community College
4000 Lancaster Drive NE
PO Box 14007
Salem, OR 97309-7070**

Course Syllabus

(year 2019-20)

Course Title: Introduction to Horticulture (HOR 111)

CRN

3 credits

Class Location and Time:

Tuesday: 8:30-9:25 Wednesday: 9:30-10:25 Thursday: 11:00-11:25

Friday: 12:30-1:25

Instructor: Ryan Rowley

Phone: (503) 623-8336 (3212)

Email: ryan.rowley@dsd2.org

Office Hours/Location: Dallas High School rm 212. 8:00 to 8:30 A.M. & 3:25 - to 4:00 P.M.

Course Text/Materials:

Horticulture Principles and Practices, George Acquaah (not required)

“Introductory Horticulture” 6th edition, H. Edward Reiley, Carroll L. Shry, Jr.

Prerequisites:

None

Course Description

Provides a broad view of the horticulture industry, with emphasis on greenhouse and nursery production. Introduces the basic requirements for plant growth. Explores environmental and social aspects of horticulture.

Course Objectives:

As a result of taking this course the student will be able to:

1. discuss the key operational features of the following industry segments
 1. nursery and greenhouse
 2. landscaping / turf management
2. Identify and evaluate soil based on its components (texture / structure) and be able to describe how those soil qualities affect viable use options.
3. Identify advantages and disadvantages of soilless planting medium and describe proper sterilization techniques and equipment.
4. Discuss soil chemistry to include CEC, pH, and electrical conductivity and the effects on plant nutrition and growth.
5. Identify common anatomical structures of seeds and plants.
6. Explain the life processes involved in plant growth and reproduction to include nutrient uptake and the effects of deficiencies.
7. List plant hormones, their functions, and effects on plant growth.
8. List and describe common soil amendments and fertilizers and their effects on the soil and plant production.
9. Describe fertilizer recommendations for various horticultural crops and differentiate organic vs synthetic fertilizers.
10. Discuss a current horticulture industry topic of concern.
11. Schedule / create a cropping calendar for selected crops.
12. List and describe common greenhouse structures and equipment to include heating, cooling, watering, and fertilizing equipment as well as greenhouse framing and covering materials.
13. Identify common greenhouse plant containers.
14. Demonstrate proper grafting and budding techniques commonly used in the horticulture industry.
15. Demonstrate asexual propagation methods commonly used in the horticulture industry.
16. Create a greenhouse sanitation protocol.
17. Explain the components of binomial nomenclature and its importance.
18. Identify plants using a key based on leaf, stem, bud, and flower characteristics.
19. Describe management options for weeds, diseases, and insects to include a proper scouting program and the advantages and disadvantages of those control methods (biological, chemical, etc.)
20. Describe safety precautions, equipment, attitude, etc. involved in chemical application.
21. Properly demonstrate equipment safety in the use of agricultural equipment (tractors, chemical application equipment, etc.)
22. Discuss the aspects of a greenhouse watering system to include: materials, flow rates/pressure, fertilizer injection, etc.
23. Discuss various aspects of marketing a greenhouse crop.
24. Exhibit the proper industry safety attributes while working in a greenhouse setting.

Grading and Classroom Policies:

Student's final grade for each course will be broken down into two categories:

Academic: based on assessments, tests, projects and performances that measure learning.

Personal Management: Based on CRLS personal management standard.

The Final grade is calculated as follows: 75% of the course grade will be based on the **Academic** grade and 25% on the **Personal Management** grade.

- Any items included in the Academic grade (PA) may be retaken and the higher grade recorded. Teachers may extend the retake time period, but as a rule all retakes need to be done within **2 weeks** of the initial assessment.
- Students will complete extra preparation before retaking an assessment.
- Personal management work turned in late may be reduced by up to 50% credit.
- Retakes are not allowed on Personal Management assignments.
- Students must schedule performance retakes at their teacher's convenience. (Speech, drama, labs.)
- All projects/assignments must be completed within the Dallas High School AST program facility. You may not make up labs and or projects at home.

- You will be supplied sufficient materials for your assigned project, any project requiring additional materials beyond that which was originally supplied may result in additional fees.

Students will arrive to class on time and prepared (pencil, paper, etc), ready to participate in class activities and discussions, and take notes. Assignments will be turned in on time and complete.

Academic Integrity: We expect students to express academic integrity by doing their own work and properly documenting information gathered from other sources. Students who violate the principles of academic integrity will be subject to disciplinary consequences (see Insubordination section of the online student agenda).

Extra Credit: Extra credit is not offered, however students may be given additional opportunities to show mastery.

Tardies and Unexcused Absences:

- Tardies and Unexcused absences will be reflected in your Personal Management grade.
- 75% of your PM grade will be based on assignments, participation, and timeliness
- 25% of your PM grade will be based on being ON TIME, including attendance.
- For every Tardy, students will lose 10% of this grade.
- For every Unexcused Absence, students will lose 20% of this grade.
- There are no penalties for Excused Absences.

Course Content/Assignment Outline:

Week 1 & 2 Introduction to class, introduction to Oregon nursery industry

(Assignment – nursery career exploration)

Week 3	Soil components, texture, structure, and features Assignments: soil texture bottle, texture – lab activity Stoniness/rockiness estimation lab activity, unit 4 pages 35-49 and review questions.
Week 4	Media preparation and components Assignments – media component identification (lab) Quiz – media components
Week 5	Soil evaluation and land use classification Assignment – practice pits – 2 OSU soils judging cards, review sheet
Week 6	Soil evaluation and land use classification Assignment judging 4 soils pits – OSU soils judging cards
Week 7	Plant Anatomy and Physiology Leaf dissection lab, root dissection Unit 3 pages 24 to 33 and unit review
Week 8 & 9	Plant Anatomy and Physiology cont... Leaf and root review, seed parts lab activity, Stem structures, Plant anatomy and physiology test
Week 10	Turf management and careers Unit 35, 36, 37 pages 377 through 400 Sports field study and management lab, test
Week 11	Introduction to issues in agriculture/horticulture Research paper
Week 12	Issues in horticulture Research paper / rough draft
Week 13	Issues in horticulture Presentations / notes
Week 14	Crop scheduling Unit 5 pages 50 to 60, Unit 6 pages 61-72 / cropping calendar, Final
Week 15 & 16	Greenhouse structure and materials Texas A&M packet Models and presentations

	Quiz
Week 17	Plant propagation – seeds and seeding Seeding lab
Week 18, 19, & 20	Sexual propagation – layering, budding, grafting Grafting video – OSU extension units 7 & 8 pages 73 –90 all unit review questions Video demonstration unit 10, 11, & 12 pgs 99 – 121 all unit review questions, test
Week 21 & 22	Greenhouse sanitation Sanitation code
Week 23 & 24	Binomial nomenclature / Plant Identification Unit 2 page 15 to 19 Plant collection
Week 25 & 26	Integrated pest Management Unit 16 pgs 150-161,unit review. Disease identification/chemical safety Unit 17 pages 163 to 170
Week 27 & 28	Disease identification and Chemical safety Unit 18, 19, & 20 pages 171 through 194 all unit review questions quiz
Week 29 & 30	Introduction to floral designs & corsages and boutonnieres Units 49 and 50 pages 528 to 542 unit review questions Boutonnieres and center pieces, quiz
Week 31 & 32	Equipment Safety Accidents and why they happen, equipment maintenance and parts labeling lab Operational controls lab, safety lecture notes, Quiz
Week 33 & 34	Equipment Safety Tractor driving – trailering lab activity Test
Week 35 & 36	Crop Marketing, advertising and sales Timing, marketing scenario, and Advertisement Sales tips and techniques, sales scenario, plant sale

