

BUTTE COLLEGE

COURSE OUTLINE

I. CATALOG DESCRIPTION

EH 20 - Introduction to Environmental Horticulture

3 Unit(s)

Prerequisite(s): NONE

Recommended Prep: Reading Level III; English Level II; Math Level II

Transfer Status: CSU

34 hours Lecture

51 hours Lab

This course is an introduction to environmental horticulture including nursery operations, landscaping, turf management and arboriculture. Topics include basic botany, cultural practices, propagation, structures and layout, pest management, planting, transplanting, container gardening, houseplants, plant identification, turfgrass installation and care, and a broad survey of the 'Green Industry' and other career opportunities.

II. OBJECTIVES

Upon successful completion of this course, the student will be able to:

- A. Identify various horticultural occupations and their employment requirements.
- B. Identify and safely use common tools and equipment.
- C. List and describe the major structures of plants and their functions.
- D. Formulate potting mixes and container media.
- E. Propagate plants by sexual and asexual methods.
- F. Explain the requirements of plant growth including watering needs, fertilizers requirements and pest control.
- G. Identify the various types of horticultural structures including shade structures, greenhouses, and cold frames.
- H. Describe the basic operations of various environmental horticulture businesses.
- I. Plant and care for horticultural crops.

III. COURSE CONTENT

A. Unit Titles/Suggested Time Schedule

Lecture	
<u>Topics</u>	<u>Hours</u>
1. The 'Green Industry' in Butte County and Around the World	2.00
2. Environmental Issues and Regulations	2.00
3. Horticultural Occupations and Their Employment Requirements	2.00
4. Tools, Equipment and Safety Practices	2.00
5. Plant Structures and Functions	2.00
6. Soils and Container Media	2.00
7. Plant Propagation	2.00
8. Requirements of Plant Growth	2.00
9. Irrigation and Fertilization	2.00
10. Pest and Disease Damage Identification	2.00
11. Horticultural Structures	2.00
12. Environmental Horticulture Businesses	2.00

13. Nursery and Greenhouse Crops – Planting and Care	2.00
14. Plants in the Landscape – Care and Pruning	2.00
15. Plant Identification and Nomenclature	2.00
16. Common Turf and Landscape Practices	2.00
17. Agriculture and Horticulture Policy concerns	2.00
Total Hours	34.00

Lab

<u>Topics</u>	<u>Hours</u>
1. The ‘Green Industry’ in Butte County and Around the World	3.00
2. Tools, Equipment and Safety Practices	3.00
3. Plant Structures and Functions	3.00
4. Soils and Container Media	3.00
5. Plant Propagation	6.00
6. Requirements of Plant Growth	3.00
7. Irrigation and Fertilization	3.00
8. Pest and Disease Damage Identification	3.00
9. Horticultural Structures	3.00
10. Nursery and Greenhouse Crops – Planting and Care	6.00
11. Plants in the Landscape – Care and Pruning	6.00
12. Plant Identification and Nomenclature	3.00
13. Common Turf and Landscape Practices	3.00
14. Vineyard and Orchard Pruning Practices	3.00
Total Hours	51.00

IV. METHODS OF INSTRUCTION

- A. Lecture
- B. Class Activities
- C. Field Trips
- D. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
- E. Discussion
- F. Demonstrations
- G. Reading Assignments
- H. Multimedia Presentations
- I. Laboratory Experiments

V. METHODS OF EVALUATION

- A. Exams/Tests
- B. Quizzes
- C. Oral Presentation
- D. Demonstration
- E. Homework
- F. Class participation
- G. Lab Projects

VI. EXAMPLES OF ASSIGNMENTS

A. Reading Assignments

1. Read the UC-IPM website covering one of each type of plant disorder and be ready to give an oral report to the class on proper care for the affected plant.
2. Read the text chapter on diagnosing plant disorders and complete the corresponding homework assignment. Be prepared for class discussion on the following:
 - a. Plant disorders caused by cultural practices.
 - b. Plant disorders caused by insect damages.
 - c. Plant disorders caused by diseases.

B. Writing Assignments

1. Write a two page essay on a plant of your choice. Give your reasons for choosing this plant, its history of association with humans and its future uses and value to mankind.
2. Write a two page essay on current employment trends for Horticulturists. Give regional data for trends and salary ranges.

C. Out-of-Class Assignments

1. Visit a local business that is in the ornamental horticulture category and be prepared to give an oral report to the class.
2. Visit a local or regional business in the agricultural or viticultural areas of horticulture and be prepared to give an oral report to your class.

VII. RECOMMENDED MATERIALS OF INSTRUCTION

Textbooks:

- A. Laura Williams Rice & Robert P. Rice. Practical Horticulture. 7th Edition. Prentice-Hall , 2011.

Materials Other Than Textbooks:

- A. Materials: three ring binder, pocket knife, pruning shears, water bottle, gloves, shade hat and boots. Warm clothing, when necessary.

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