

BUTTE COLLEGE

COURSE OUTLINE

I. CATALOG DESCRIPTION

EH 40 - Wine Grape Cultivation

3 Unit(s)

Prerequisite(s): NONE

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

Transfer Status: CSU

51 hours Lecture

This course is an introduction to the science and industry of viticulture including grape growing, history, distribution, biology, anatomy, propagation, cultivated varieties, rootstocks, climate, vineyard practices, common diseases and pests.

II. OBJECTIVES

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

- A. Define the importance of grapes both historically and currently.
- B. Describe the vineyard yearly growth cycle and relate it to timing of vineyard practices.
- C. Explain grapevine structures and functions.
- D. Describe and contrast development of a new vineyard vs. farming an established vineyard.
- E. Explain how climate, soils and vineyard practices affect vine growth and grape quality.
- F. Discuss the different cultivars and rootstocks.
- G. List the unique characteristics of the world's major grape growing areas.
- H. Define the important vineyard diseases & pests; explain integrated pest management for these problems.

III. COURSE CONTENT

A. General Goals

1. This course will expose students to fundamental knowledge of grape plant botany and cultural practices. It will also establish an understanding of the relationships between vine nurseries, vineyard managers, wine producers, product marketing and customers.

B. Unit Titles/Suggested Time Schedule

Lecture	
<u>Topics</u>	<u>Hours</u>
1. History and Evolution	6.00
a. Overview of world-wide importance of grapes and grapevines	
a. grapevine classification and <i>Vitis</i> species a. Origin of <i>Vitis vinifera</i> and it spread throughout the world	
2. Geographic Distribution of Grape Growing	6.00
a. European and American varieties	
a. Growing regions in California	
a. Growing regions world-wide	

3. <i>Vitis</i> Species and Cultivars	6.00
a. Wine grape, table grape and raisin cultivars	
a. Rootstock's	
a. Clones	
4. Climate and Soils	3.00
a. Heat Summation and Climatic Regions	
a. Vineyard Soils and 'terror'	
5. Vine Structure and Function	3.00
a. Vocabulary	
a. Shoot systems and vine canopy	
a. Root system and permanent wood	
a. Vine Physiology	
6. Vineyard Yearly Growth Cycle	6.00
a. Bud break	
a. grand period of growth	
a. Bloom and berry set	
a. Veraison and ripening	
a. Harvest	
a. Post-harvest	
a. Dormancy	
7. Vine Propagation	3.00
8. Vineyard Development	6.00
a. Site selection	
a. Natural resources habitat and environmental concerns	
9. Farming an Established Vineyard	6.00
a. Vineyard practices during the cycle of vine growth	
a. Canopy management	
a. Vine mineral nutrition	
a. Sustainable agricultural practices	
a. Methods to improve grape quality	
10. Grapevine Diseases and Pests	3.00
a. Identification and monitoring	
a. Control and integrated pest management	
11. Current Importance of Grape Growing and Economic Impacts	3.00
Total Hours	51.00

IV. METHODS OF INSTRUCTION

- A. Lecture
- B. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
- C. Assigned reading and discussions on readings
- D. Audiovisual aids
- E. Student Presentations

V. METHODS OF EVALUATION

- A. Oral Presentation
- B. Written Examinations and Quizzes
- C. Written Homework Assignments

VI. EXAMPLES OF ASSIGNMENTS

- A. Reading Assignments
- B. Writing Assignments
- C. Out-of-Class Assignments

VII. RECOMMENDED MATERIALS OF INSTRUCTION

Textbooks:

- A. Coombe & Dry. Viticulture, Vol. 2 Practices. -, 1992.
- B. UCDANR. Grapevine Physiology. -, 1981.
- C. R. Smart and M. Robinson. Sunlight into Wine. -, 1991.
- D. Winkler, A.J., Kliewer, W.M., Lider, L.A.. General Viticulture. 2nd Edition. University of California Press, 1974.
- E. Jeff Cox . Vines To Wines. -, 1999.

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