BUTTE COLLEGE
COURSE OUTLINE

I. **CATALOG DESCRIPTION**

EH 42 - Wine Growing Practices - Spring **3 Unit(s)**

Prerequisite(s): NONE
Recommended Prep: Reading Level IV; English Level III; Math Level II
Transfer Status: CSU
34 hours Lecture
51 hours Lab

This course will teach viticulture practices related to wine grapes for the spring and summer season including planning and planting a new vineyard, pest control, soils, frost control, irrigation practices, quality control measures and vineyard equipment use. Emphasis will be placed on practical applications of viticulture.

II. **OBJECTIVES**

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

A. Define appropriate process in designing a wine grape vineyard.
B. Illustrate the construction steps and techniques for building a vineyard.
C. Demonstrate proper training technique for young vines and canopy management of older vines.
D. Explain how soil and water quality, nutrition, weather, weeds, insects, diseases, and cultivar choice contribute to vine health and fruit development.
E. Identify various methods of irrigation and frost protection.
F. Coordinate sample collection and interpret tissue analysis results.
G. Distinguish practical management techniques for 'boutique' wineries versus 'industrial' level growers.

III. **COURSE CONTENT**

A. **General Goals**

1. This course will teach the steps in selecting rootstocks, trellising/training styles, irrigation systems and planting the vineyard. We will demonstrate proper training techniques for young vines, pruning of existing vines and cultural practices in the vineyard for winter and spring.

B. **Unit Titles/Suggested Time Schedule**

Lecture

Topics	Hours
1. Rootstock's and Planting	4.00
a. Rootstock's used b. Planting techniques and spacing c. Trellis systems for new grape plantings	
2. Pruning and Training of Young Vines	4.00
a. Dormant season training for young vines b. Theoretical aspects of pruning c. Pruning mature grapevines d. Training young vines after bud break	

3. Grapevine Anatomy and Physiology	2.00
a. Wine grape, table grape and raisin cultivars b. Internal and external structures c. Photosynthesis and it relationship to cultural techniques	
4. Soils and Fertilizers	2.00
a. Soil texture, structure and characteristics b. Fertilizer needs c. Fertilizer application techniques and equipment	
5. Pest Control	6.00
a. Insect identification and control measures b. Weed identification and control techniques c. C. Diseases of grapevines identification and control d. D. Glassy winged control e. Powdery mildew management f. Integrated pest management	
6. Irrigation Theory and Practice	2.00
a. Water needs of grapevines b. Irrigation system selection and installation c. Drip irrigation versus other systems	
7. Techniques of Frost Control	2.00
a. Mechanical Methods b. Cultural Methods	
8. Vineyard Development	4.00
a. Site selection b. natural resources, habitat and environmental concerns c. Vineyard design - trellises and irrigation systems d. installation and planting	
9. Farming an Established Vineyard	6.00
a. Vineyard practices during the cycle of vine growth b. Canopy management c. Vine mineral nutrition d. Sustainable agricultural practices e. Methods to improve grape quality f. Vineyard Floor Management	
10. Current Importance of Grape Growing	2.00
Total Hours	34.00

Lab

Topics	Hours

1. Rootstock's and Planting 6.00

    a. Rootstock's used
    b. Planting techniques and spacing
    c. Trellis systems for new grape plantings

2. Pruning and Training of Young Vines 6.00

    a. Dormant season training for young vines
    b. Theoretical aspects of pruning
    c. Pruning mature grapevines
    d. Training young vines after bud break

3. Grapevine Anatomy and Physiology 3.00

    a. Wine grape, table grape and raisin cultivars
    b. Internal and external structures
    c. Photosynthesis and it relationship to cultural techniques

4. Soils and Fertilizers 3.00

    a. Soil texture, structure and characteristics b. Fertilizer needs
    c. Fertilizer application techniques and equipment

5. Pest Control 9.00

    a. Insect identification and control measures
    b. Weed identification and control techniques
    c. C. Diseases of grapevines identification and control
    d. D. Glassy winged control
    e. Powdery mildew management
    f. Integrated pest management

6. Irrigation Theory and Practice 3.00

    a. Water needs of grapevines
    b. Irrigation system selection and installation
    c. Drip irrigation versus other systems

7. Techniques of Frost Control 3.00

    a. Mechanical Methods
    b. Cultural Methods

8. Vineyard Development 6.00

    a. Site selection
    b. natural resources, habitat and environmental concerns
    c. Vineyard design - trellises and irrigation systems
    d. installation and planting

9. Farming an Established Vineyard 9.00

    a. Vineyard practices during the cycle of vine growth
    b. Canopy management
    c. Vine mineral nutrition
    d. Sustainable agricultural practices

e. Methods to improve grape quality
f. Vineyard Floor Management

10. Current Importance of Grape Growing	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
D. Audiovisual
E. Class Discussion
F. Student Presentations

V. METHODS OF EVALUATION

A. Oral Presentation
B. Hands on work in the vineyards, individually and in groups.
C. Written examinations, quizzes and homework assignments

VI. EXAMPLES OF ASSIGNMENTS

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

VII. RECOMMENDED MATERIALS OF INSTRUCTION

Textbooks:

A. R. Smart and M. Robinson. Sunlight into Wine. -, 1991.
B. Winkler, A.J., Kliewer, W.M.. General Viticulture. -, 1974.
C. Coombe & Dry. Viticulture, Vol. 2 Practices. -, 1992.
D. UCDANR. Grapevine Physiology. -, 1981.

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