

**VIT 53 Course Outline as of Fall 2022****CATALOG INFORMATION**

Dept and Nbr: VIT 53 Title: ADV VINEYARD PRODUCTION

Full Title: Advanced Vineyard Practices for Quality Production

Last Reviewed: 9/13/2021

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	8	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly: AG 57E

**Catalog Description:**

Course presents principles and cultural practices utilized in the vineyard to produce high quality North Coast wines. A thorough look at the practices of fertilization, irrigation, trellis design, and canopy management as they relate to wine quality factors. Includes lectures, guest speakers, and field trips to local vineyards and wineries.

**Prerequisites/Corequisites:****Recommended Preparation:**

Completion of VIT 52, and Eligibility for ENGL 100 or ESL 100

**Limits on Enrollment:****Schedule of Classes Information:**

Description: Course presents principles and cultural practices utilized in the vineyard to produce high quality North Coast wines. A thorough look at the practices of fertilization, irrigation, trellis design, and canopy management as they relate to wine quality factors. Includes lectures, guest speakers, and field trips to local vineyards and wineries. (Grade or P/NP)

Prerequisites/Corequisites:

Recommended: Completion of VIT 52, and Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Transfer Credit: CSU;

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:

<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
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<b>CSU Transfer:</b>	Transferable	Effective:	Fall 1987	Inactive:
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<b>UC Transfer:</b>		Effective:		Inactive:
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**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Critique various vineyard management practices and discuss their resulting effects on fruit and wine quality.
2. Identify and explain current technologies and strategies utilized to produce premium quality wine grapes.
3. Develop a comprehensive fruit quality assurance plan.

### **Objectives:**

At the conclusion of this course, the student should be able to:

1. Identify factors affecting vineyard yield and wine quality.
2. Summarize principles for the production of wine grape quality.
3. Evaluate the effects of trellis design and canopy management on wine quality.
4. Identify and describe the most important canopy management systems in use around the world.
5. Calculate and apply formulas for pruning and balancing the vine.
6. Classify basic wine characteristics in grape varieties.
7. Summarize the principles of fertilization and irrigation management for premium wine production.
8. Show the relationship between grapevine physiology and grape quality.
9. Adopt quality assurance procedures to improve wine quality.

### **Topics and Scope:**

#### **I. Introduction**

- A. Vineyard practices and wine quality
- B. Factors affecting vineyard yield and wine quality
- C. Principles of production of wine grape quality

## II. Trellis Design and Wine Quality

## III. Canopy Management and Wine Quality

- A. Physiological basis for canopy management
- B. Effect of sunlight on vine photosynthesis, fruit ripening, and bud initiation
- C. Optimal utilization of available sunlight
- D. Deleterious effects of canopy shade on wine grape composition
- E. Canopy microclimate effects on important diseases
  - 1. Botrytis bunch rot
  - 2. Powdery mildew
- F. Choice and management of wine grape training systems
  - 1. Vertical Shoot Position VSP systems
  - 2. Vertically split systems
  - 3. Horizontally split systems
  - 4. Trellises used to improve yield and quality
  - 5. Trellises used to reduce shoot vigor
  - 6. Trellises used to facilitate mechanization
  - 7. Guidelines for selecting a training system

## IV. Advanced Pruning Techniques

- A. Cordon pruning
  - 1. Balancing crop load
  - 2. Fine tuning the vine
- B. Cane pruning
  - 1. Balancing crop load
  - 2. Fine tuning the vine
- C. Hybrid pruning styles

## V. Fertilization (Nutrition Management) for the Production of Premium Wines

## VI. Irrigation Management for the Production of Premium Wines

## VII. Grapevine Physiology and Wine Quality - Grapevine and Berry Physiology

- A. Relevance to grapevine performance and grape quality
- B. Growth cycle stages

## VIII. Vineyard Quality Assurance

- A. Record keeping requirements of modern viticulture
- B. Quality assurance procedures to improve quality

## IX. Future Industry Trends

## X. Special Topics

- A. Using climatic data for determining grape varieties to plant
- B. Soils for premium grape quality
- C. Pesticide recommendations for specific pest and disease problems

### **Assignment:**

- 1. Weekly reading (15-20 pages)
- 2. Four homework problems: pruning formulas, pesticide recommendations for pest and disease control
- 3. Ten written summary reports for each guest speaker (2-5 pages)
- 4. Seven written reports on the practices that are implemented on the site visits (2-5 pages)
- 5. One midterm and one final exam

### **Methods of Evaluation/Basis of Grade:**

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Guest speaker reports, site visit reports

Writing  
30 - 40%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems

Problem solving  
20 - 40%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations  
0 - 0%

**Exams:** All forms of formal testing, other than skill performance exams.

Midterm and final exam

Exams  
25 - 40%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

None

Other Category  
0 - 0%

### **Representative Textbooks and Materials:**

Instructor prepared materials