

**VIT 111 Course Outline as of Spring 2010****CATALOG INFORMATION**

Dept and Nbr: VIT 111                      Title: ORGANIC VITICULTURE  
 Full Title: Organic Viticulture  
 Last Reviewed: 4/19/2004

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	9	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 122

**Catalog Description:**

Introduction to professional organic wine grape production with ecological production methods. Theory and practice with an emphasis on regional growing conditions. Includes appropriate stock, planting, maintenance, soil fertility, biodiversity, and ecological pest management. Survey of economic outlook.

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

Eligibility for ENGL 100 or ESL 100

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

Description: Introduction to professional organic wine grape production and ecological production methods. Theory and practice with an emphasis on regional growing conditions. Includes appropriate stock, planting, maintenance, soil fertility, biodiversity, and ecological pest management. Survey of economic outlook. (Grade or P/NP)

Prerequisites/Corequisites:

Recommended: Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Transfer Credit:

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

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

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

**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Outcomes and Objectives:**

After completion of the class the student will be able to:

1. Accurately define and discuss ecological wine production in terms of purpose, principles and applied techniques.
2. Correctly identify primary criteria for a successful ecological grape vine operation.
3. Successfully analyze strengths and weaknesses of ecological production in terms of yield, pest resistance and economic viability.
4. Analyze and discuss the economic outlook for ecological production in our region.
5. State and discuss key criteria in choosing land for ecological grape production.
6. Define and discuss soil fertility in terms of grape vine growth.
7. Distinguish the role of macro and micronutrients.
8. Define and discuss the role of microorganisms.
9. Analyze the importance of nutrient availability in ecological grape production.
10. Distinguish, compare and contrast the various kinds of fertility programs.
11. Define the components of a healthy soil and discuss methods to achieve it.
12. List and describe criteria for an optimal ecological fertility program in our region.
13. Define and discuss soil bio-diversity both above and below vineyard soil.
14. Define and discuss the role of composting for grape production.
15. Define the three major kinds of composting and their methods of production.

16. Discuss vine nutrient needs, and how soil provides these nutrients.
17. Assess the needs and timing of compost applications for wine grapes.
18. Define and discuss the role of mulching.
19. List and analyze various kinds of mulch.
20. Define and discuss the role of cover crops.
21. Discuss the benefits of cover cropping.
22. Discuss methods of cover crop maintenance and tillage, and evaluate each.
23. Discuss various tillage techniques and their role in soil building.
24. List and analyze various common weed control methods.
25. Describe and discuss the negative impact of poorly managed weed control.
26. Define, discuss and analyze the role of foliar sprays in fertilization and pest management.
27. Define and discuss ecological pest management.
28. List and describe five major foliar sprays commonly used in ecological production.
29. Define Integrated Pest Management.
30. Discuss simple steps to take to increase beneficial insect populations.
31. Describe and discuss the career outlook in ecological wine and table grape production.
32. Identify and discuss pros and cons of the long-term economic outlook of organic/ecologically produced grapes.

### **Topics and Scope:**

1. Introduction to Organic Viticulture
  - a. History of organic viticulture regionally and worldwide
  - b. Focus of organic agriculture, their similarities and differences
  - c. History of organic agriculture
  - d. Ecological farming systems theory
  - e. Traditional systems
  - f. Industrial systems
  - g. Organic systems
  - h. Ecological systems
  - i. Comparative analysis
2. Ecological Systems in the Vineyard
  - a. Locally appropriate production
  - b. Enhanced biodiversity
  - c. Improved soil fertility
  - d. Immunological response capacity
  - e. Ecological pest management
3. Soil Fertility
  - a. Plant nutrition
  - b. Macronutrients
  - c. Micronutrients
  - d. Role of microorganisms
  - e. Availability of nutrients
4. Humification
  - a. Humus and the process of humification
  - b. Complex organic compounds

- c. Natural humification versus composting
- d. Hot, cold, and warm composting
- e. Application rates
- f. Application methods and timing
- 5. Economics of Grape Production
  - a. Installation costs
  - b. Maintenance costs
  - c. Other costs
  - d. Yield and pricing
- 6. Selecting Vines for Planting
  - a. Vine types
  - b. Planting dates
  - c. Rootstocks
  - d. Clones
  - e. Matching of soil/variety/rootstock/trellis
- 7. Seasonal Maintenance
  - a. Mulching
  - b. Cover crops
  - c. Foliar sprays
  - d. Integrated pest management
  - e. Irrigation
  - f. Shade
  - g. Leafing
  - h. Weeding
- 8. Pest Control Overview
  - a. Biological control versus chemical control
  - b. Preventative versus acute remediation
  - c. Reduction versus eradication
  - d. Broad spectrum versus targeted
  - e. Least toxic solutions
  - f. Foliar sprays
  - g. Beneficial insects
  - h. Biologicals
  - i. Microbiologicals
- 9. Common Diseases of Grapevines and their Management
  - a. Powdery mildew
  - b. Botrytis
- 10. Vertebrate Pests and their Management
  - a. Gophers
  - b. Deer
  - c. Others
- 11. Economics and Careers
  - a. Current economic conditions for organic production
  - b. California developments
  - c. Sonoma County
  - d. Career outlook
  - e. Marketing and sales
- 12. Organic Certification
  - a. State versus federal law
  - b. Certification versus compliance
  - c. Definitions and requirements

## Assignment:

1. Specific reading assignments from texts and handouts.
2. Research projects on production related topics.
3. Internet study assignments.
4. Vineyard evaluation sheets.

## 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.

Written homework, Essay exams, Term papers, Semester project

Writing  
40 - 60%

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

Homework problems, Field work, Quizzes, Exams

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.

Multiple choice, True/false, Completion

Exams  
20 - 40%

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

None

Other Category  
0 - 0%

## Representative Textbooks and Materials:

SUNLIGHT INTO WINE: by Smart and Robinson (authors)  
Wine Titles (Publisher), 1996